FEE PAID 9/16/99

REI DUE 10/15/99

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

0510004-002-AC

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **A. Duda & Sons, Inc. / Citrus Belle**	
2. Site Name: **Duda / Citrus Belle**	
3. Facility Identification Number: **0510004** [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **6000 SR 29 South** City: **LaBelle** County: **Hendry** Zip Code: **33975**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **John B. Koogler**
2. Application Contact Mailing Address: Organization/Firm: **Koogler & Associates** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **FL** Zip Code: **32609**
3. Application Contact Telephone Numbers: Telephone: **(352) 377-5822** Fax: **(352) 377-7158**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:_____

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:_____

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[X] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Charles H. Harvey, General Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **A. Duda & Sons, Inc. / Citrus Belle**
   Street Address: **6000 SR 29 South**
   City: **LaBelle** State: **FL** Zip Code: **33975**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(941) 675-0336** Fax: **(941) 675-0231**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

   _____ _____

   Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **John B. Koogler**
   Registration Number: **12529**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Koogler & Associates**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **FL** Zip Code: **32609**

3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 377-5822** Fax: **(352) 377-7158**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Date 9/2/99

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
003	Boiler 2	ACM1	(1)
Not Assigned	Boiler 3	AC1D	(1)
Not Assigned	Peel Dryer	AC1D	(1)
Not Assigned	Pellet Cooler	ACM1	(1)
Not Assigned	Unregulated emissions units and facility-wide fugitive emissions	ACM1	(1)
	(1) Fee associated with plant modification of $4500, based on emissions increase < 100 tpy.		

Application Processing Fee

Check one: [X] Attached - Amount: $ **4500** [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The proposed project consists of the following improvements to increase the fruit processing capacity of the existing plant up to 7.5 million boxes per year:

1. Replace the existing 30,000 pound per hour peel dryer and 20, 000 pound per hour waste heat evaporator with a 1973-built 40,000 pound per hour dryer and 60,000 pound per hour waste heat evaporator.
2. Replace the existing 600 HP boiler with a 1977 built 1000 HP unit.
3. Replace the existing 5 ton per hour pellet cooler with a new 14 ton per hour unit.
4. Install additional centrifuges to enhance citrus oil recovery.
5. Install additional frit and peel dewatering presses to improve citrus oil recovery.

2. Projected or Actual Date of Commencement of Construction: **NA**

3. Projected Date of Completion of Construction: **NA**

Application Comment

The application is prepared in accordance with FDEP's suggested format for plant modifications.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **456.5** North (km): **2950.3**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **26/40/30** Longitude (DD/MM/SS):**81/26/14**			
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **20**	6. Facility SIC(s): **2037**
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: **Henry Heisler, Plant Manager**
2. Facility Contact Mailing Address: Organization/Firm: **A. Duda & Sons / Citrus Belle** Street Address: **6000 SR 29 South** City: **LaBelle** State: **FL** Zip Code: **33935**
3. Facility Contact Telephone Numbers: Telephone: **(941) 675-0336** Fax: **(941) 675-0231**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source? [ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?
4. [ ] Major Source of Hazardous Air Pollutants (HAPs)?
5. [ ] Synthetic Minor Source of HAPs?
6. [ ] One or More Emissions Units Subject to NSPS?
7. [ ] One or More Emission Units Subject to NESHAP?
8. [ ] Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters):

List of Applicable Regulations

FDEP Core List	
F.S. 120, 403	
FAC 62-4, 204, 210, 213, 214, 252, 256, 257, 281, 296, 297.	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
PM10	**B**		**21.9**	**ESCPSD**	
SO2	**A**		**129.0**	**ESCPSD**	
NOX	**B**		**70.9**	**ESCPSD**	
CO	**A**		**155.0**	**ESCPSD**	
VOC	**A**		**478.9**	**ESCPSD**	

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID:_____ [X] Not Applicable
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:_____ [X] Not Applicable

9. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID:_____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [X] Not Applicable

10. Alternative Methods of Operation:
    [ ] Attached, Document ID:_____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID:_____ [X] Not Applicable

12. Identification of Additional Applicable Requirements:
    [ ] Attached, Document ID:_____ [X] Not Applicable

13. Risk Management Plan Verification:
    [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_____) or previously submitted to DEP (Date and DEP Office:_____)
    [ ] Plan to be submitted to CEPPO (Date required:_____)
    [X] Not Applicable

14. Compliance Report and Plan:
    [ ] Attached, Document ID:_____ [X] Not Applicable

15. Compliance Certification (Hard-copy Required):
    [ ] Attached, Document ID:_____ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Boiler No. 2, 750 HP

4. Emissions Unit Identification Number: ID: [X] No ID [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**1978**	**20**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
   NA

2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit:
   Manufacturer: **Johnston** Model Number: **509**
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**31.05** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **Back-up boiler. Expected hours of operation < 876 per year.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **Boiler 2**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **40** feet	7. Exit Diameter: **2.5** feet
8. Exit Temperature: **400** °F	9. Actual Volumetric Flow Rate: **10,600** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Residual fuel firing**		
2. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.21**	5. Maximum Annual Rate: **1500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **The maximum annual fuel oil usage for the two boilers is capped in order to avoid PSD review.** COMBINED		

225×10^9 BTU/YR

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural gas firing**		
2. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **million cubic feet burned**	
4. Maximum Hourly Rate: **0.03**	5. Maximum Annual Rate: **263**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1025**
10. Segment Comment (limit to 200 characters): **Maximum annual fuel use for the two boilers combined is 622 MMCF.**		

269.6×10^9 BTU/YR

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM10	**000**	**000**	**EL**
SO2	**000**	**000**	**EL**
NOX	**000**	**000**	**EL**
CO	**000**	**000**	**EL**
VOC	**000**	**000**	**EL**

Emissions Unit Information Section ___1___ **of** __5____

Pollutant Detail Information Page ____1__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.6** lb/hour **9.3** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **12.41 lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **PM/PM10, hourly = 12.41 lb/1000 gal x 210 gal/hr = 2.6 lb/hr** **PM/PM10, annual = 12.41 lb/1000 gal x 1,500,000 gal/yr x ton/2000 lbs = 9.3 tpy**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel use for the two boilers combined limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2.6 lb/hr**	4. Equivalent Allowable Emissions: **2.6** lb/hour **9.3** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____2__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **33** lb/hour **70.9** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **157(s) lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **SO2, hourly max = 157(1) lb/1000 gal x 210 gal/hr = 33.0 lb/hr** **SO2, annual max= 70.9 tpy** @ 1.5×10^6 GAL/yr → 118 TPY	
10. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel oil quantity for the two boilers combined and sulfur content will be limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

2. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **33 lb/hr**	4. Equivalent Allowable Emissions: **33** lb/hour **70.9** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel oil analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____3__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **11.6** lb/hour **41.3** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **55 lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **NOX, hourly = 55 lb/1000 gal x 210 gal/hr = 11.6 lb/hr** **NOX, annual = 55 lb/1000 gal x 1,500,000 gal/yr x ton/2000 lbs = 41.3 tpy**	
11. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel use for the two boilers combined limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

3. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **11.6 lb/hr**	4. Equivalent Allowable Emissions: **11.6** lb/hour **41.3** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 7E**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____4__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **2.5** lb/hour **11.0** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **84 lb/MMCF** Reference: **AP-42**		7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

CO, hourly = 84 lb/MMCF x 0.03 MMCF/hr = 2.5 lb/hr
CO, annual = 84 lb/MMCF x 263 MMCF/yr x ton/2000 lbs = 11.0 tpy

1359 Boiler #3

OIL FIRING?

12. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions ___1___ of __1____

4. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **2.5 lb/hr**	4. Equivalent Allowable Emissions: **2.5** lb/hour	**11.0** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 10

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___1___ **of** __5____

Pollutant Detail Information Page ____5__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.1** lb/hour **0.4** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **2.8 lb/MMCF** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **VOC, hourly = 2.8 lb/MMCF x 0.03 MMCF/hr = 0.1 lb/hr** **VOC, annual = 2.8 lb/MMCF x 263 MMCF/yr x ton/2000 lbs = 0.4 tpy** + 359 Boiler #3	
13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

OIL FIRING?

Allowable Emissions Allowable Emissions ___1___ of __1____

5. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.1 lb/hr**	4. Equivalent Allowable Emissions: **0.1** lb/hour **0.4** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 25A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: **40%** Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **FDEP has information on file for this existing source. Additional information will be submitted, as necessary.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

4. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Boiler No. 3, 1000 HP

4. Emissions Unit Identification Number: [X] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C	**1978**	**20**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)
This 1977-built 1000 HP boiler will replace the existing 600 HP Boiler No. 1

Emissions Unit Control Equipment

3. Control Equipment/Method Description (Limit to 200 characters per device or method):
   NA

2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit:
   Manufacturer: **Johnston** Model Number: **538**
2. Generator Nameplate Rating: MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**42** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8.

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **Boiler 3**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
6. Discharge Type Code: **V**	6. Stack Height: **45** feet	7. Exit Diameter: **2.75** feet
8. Exit Temperature: **420** °F	9. Actual Volumetric Flow Rate: **15,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

Emissions Unit Information Section ___2__ of ___5___

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Residual fuel firing**		
4. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.28**	6. Maximum Annual Rate: **1500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **The maximum annual fuel usage for the two boilers combined is capped in order to avoid PSD review.**		

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural gas firing**		
3. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **million cubic feet burned**	
4. Maximum Hourly Rate: **0.041**	5. Maximum Annual Rate: **359**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	10. Million Btu per SCC Unit: **1025**
10. Segment Comment (limit to 200 characters): **Maximum annual fuel use for the two boilers combined is 622 MMCF.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM10	**000**	**000**	**EL**
SO2	**000**	**000**	**EL**
NOX	**000**	**000**	**EL**
CO	**000**	**000**	**EL**
VOC	**000**	**000**	**EL**

Emissions Unit Information Section ___2___ **of** __5____

Pollutant Detail Information Page ____1__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.5** lb/hour **9.3** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **12.41 lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **PM/PM10, hourly = 12.41 lb/1000 gal x 280 gal/hr = 3.5 lb/hr** **PM/PM10, annual = 12.41 lb/1000 gal x 1,500,000 gal/yr x ton/2000 lbs = 9.3 tpy**	
14. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel use for the two boilers combined limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

6. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3.5 lb/hr**	4. Equivalent Allowable Emissions: **3.5** lb/hour **9.3** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit volunteered to avoid PSD. BACT, under FAC Rule 62-296 applies. Natural gas, when available in the near future, and 1% sulfur content residual fuel oil in the interim, and later as secondary fuel, represents BACT for this unit.** NO.	

SUBMIT COST EFFECTIVENESS FOR RED TO 0.7%, 0.5%, 0.05% S.

Emissions Unit Information Section ___2___ **of** __5____

Pollutant Detail Information Page ____2__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **44** lb/hour **70.9** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **157(s) lb/1000 gal** Reference: **AP-42**		7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

SO2, hourly max = 157(1) lb/1000 gal x 280 gal/hr = 44.0 lb/hr
SO2, annual max= 70.9 tpy

$157(.1)/1000 \times 1.5 \times 10^6$ gal/yr $\times \frac{1}{2000} = 118$ TPY

15. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Fuel oil quantity for the two boilers combined and sulfur content will be limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

7. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **44 lb/hr**	4. Equivalent Allowable Emissions: **44** lb/hour	**70.9** tons/year

5. Method of Compliance (limit to 60 characters):
Fuel oil analysis

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):
Emission limit volunteered to avoid PSD. BACT, under FAC Rule 62-296 applies. Natural gas, when available in the near future, and 1% sulfur content residual fuel oil in the interim, and later as secondary fuel, represents BACT for this unit.

Emissions Unit Information Section ___2___ **of** __5____

Pollutant Detail Information Page ____3__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **15.4** lb/hour **41.3** tons/year	4. Synthetically Limited? [X]

5. Range of Estimated Fugitive Emissions:
[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **55 lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

NOX, hourly = 55 lb/1000 gal x 280 gal/hr = 15.4 lb/hr
NOX, annual = 55 lb/1000 gal x 1,500,000 gal/yr x ton/2000 lbs = 41.3 tpy

16. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Fuel use for the two boilers combined limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

8. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **15.4 lb/hr**	4. Equivalent Allowable Emissions: **15.4** lb/hour **41.3** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 7E

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___2___ **of** __5____

Pollutant Detail Information Page ____4__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **3.4** lb/hour **15.1** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **84 lb/MMCF** Reference: **AP-42**		7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

CO, hourly = 84 lb/MMCF x 0.041MMCF/hr = 3.4 lb/hr
CO, annual = 84 lb/MMCF x 359 MMCF/yr x ton/2000 lbs = 15.1 tpy

x 263 For Boiler #2

OIL ?

17. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions ___1___ of __1____

9. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3.4 lb/hr**	4. Equivalent Allowable Emissions: **3.4** lb/hour **15.1** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 10

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___2___ **of** __5____

Pollutant Detail Information Page ____5__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **0.1** lb/hour **0.5** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **2.8 lb/MMCF** Reference: **AP-42**		7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

VOC, hourly = 2.8 lb/MMCF x 0.041 MMCF/hr = 0.1 lb/hr
VOC, annual = 2.8 lb/MMCF x 359 MMCF/yr x ton/2000 lbs = 0.5 tpy

+ 263 for Boiler #2

O/C ?

18. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions ___1___ of __1____

10. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.1 lb/hr**	4. Equivalent Allowable Emissions: **0.1** lb/hour **0.5** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 25A

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1__ of __1__

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: **40%** Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **FDEP has information on file for similar source. Additional information will be submitted, as necessary.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

5. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Peel Dryer

4. Emissions Unit Identification Number: [X] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C	**1978**	**20**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)
This 40,000 pound per hour evaporative capacity dryer will replace the existing 30,000 pound per hour unit.

Emissions Unit Control Equipment

5. Control Equipment/Method Description (Limit to 200 characters per device or method):
Waste heat evaporator inherently controls particulate matter BECAUSE OF SPRAY SCRUBBER

2. Control Device or Method Code(s): **003**

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**54** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **35 tph peel at 65 percent moisture**		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **Rate is equivalent to 12.3 tph bone dry peel**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **Dryer**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
7. Discharge Type Code: **V**	6. Stack Height: **100** feet	7. Exit Diameter: **3.16** feet
8. Exit Temperature: **158** °F	9. Actual Volumetric Flow Rate: **25,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __3___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Residual fuel firing**		
6. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.36**	7. Maximum Annual Rate: **1500**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **Estimated fuel usage**		

~4167 HRS/YR

225 x 10^9 Btu/YR

Segment Description and Rate: Segment __2___ of __3___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural gas firing**		
4. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **million cubic feet burned**	
4. Maximum Hourly Rate: **0.053**	5. Maximum Annual Rate: **462**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	11. Million Btu per SCC Unit: **1025**
10. Segment Comment (limit to 200 characters):		

~8769 HRS/YR

473.6 x 10^9 Btu/YR

Segment Description and Rate: Segment __3___ of __3___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Peel drying**		
5. Source Classification Code (SCC): **3-02-008-99**	3. SCC Units: **Tons processed**	
4. Maximum Hourly Rate: **35**	5. Maximum Annual Rate: **61,072**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	12. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Equivalent to 12.3 tph bdp (bone dry peel) or 21,375 tpy bdp.**		

WHY SUCH DIFF?

~1745 HRS/YR

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM10	**003**	**000**	**EL**
SO2	**000**	**000**	**EL**
NOX	**000**	**000**	**EL**
CO	**000**	**000**	**EL**
VOC	**000**	**000**	**EL**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **11.9** lb/hour **10.4** tons/year	4. Synthetically Limited? **[X]**

5. Range of Estimated Fugitive Emissions:
[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **0.97 lb/ton bdp** Reference: **Process knowledge**	7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

PM/PM10, hourly = 0.97 lb/ton bdp x 12.25 tph bdp = 11.9 lb/hr
PM/PM10, annual = 0.97 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 10.4 tpy

19. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Peel input limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **11.9 lb/hr**	4. Equivalent Allowable Emissions: **11.9** lb/hour **10.4** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 5

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___3___ **of** __5____

Pollutant Detail Information Page ____2__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **66.6** lb/hour **58.1** tons/year	4. Synthetically Limited? **[X]**

5. Range of Estimated Fugitive Emissions:
[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **5.44 lb/ton bdp** Reference: **Process knowledge**	7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

SO2, hourly = 5.44 lb/ton bdp x 12.25 tph bdp = 66.6 lb/hr
SO2, annual = 5.44 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 58.1 tpy

REQ. 53.5% CONTROL EFF.

1.5×10^6 GAL/YR @ 8.33 LB/GAL → 125 TPY

HOW?

LIME IN PEEL?

MAX. LIME FEED RATE?

20. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Peel quantity will be limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

12. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **66.6 lb/hr**	4. Equivalent Allowable Emissions: **66.6** lb/hour **58.1** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 6C

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___3___ **of** __5____

Pollutant Detail Information Page ____3__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **33.9** lb/hour **29.6** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **2.77 lb/ton bdp** Reference: **Process knowledge**		7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

NOX, hourly = 2.77 lb/ton bdp x 12.25 tph bdp = 33.9 lb/hr
NOX, annual = 2.77 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 29.6 tpy

VS. Boilers @ 41.3 tpy NO_x REQ. 28% Control (Reduction) How?

21. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Peel input limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

13. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **33.9 lb/hr**	4. Equivalent Allowable Emissions: **33.9**lb/hour **29.6** tons/year	
5. Method of Compliance (limit to 60 characters): **EPA Method 7E**		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**		

Emissions Unit Information Section ___3___ **of** __5____

Pollutant Detail Information Page ____4__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **147.7** lb/hour **128.9** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **12.06 lb/ton bdp** Reference: **Process knowledge** TESTS?		7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

CO, hourly = 12.06 lb/ton bdp x 12.25 tph bdp = 147.7 lb/hr
CO, annual = 12.06 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 128.9 tpy

22. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Peel input limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

14. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **147.7 lb/hr**	4. Equivalent Allowable Emissions: **147.7** lb/hour **128.9** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 10

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___3___ **of** __5____

Pollutant Detail Information Page ____5__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **539.0** lb/hour **470.3** tons/year		4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: ~~**44.0 lb/ton bdp**~~ Reference: **Process knowledge** TESTS ?		7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **VOC, hourly = 44.0 lb/ton bdp x 12.25 tph bdp = 539.0 lb/hr** **VOC, annual = 44.0 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 470.3 tpy**		
23. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Peel input limited by annual cap to avoid PSD.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

15. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **539.0 lb/hr**	4. Equivalent Allowable Emissions: **539.0**lb/hour	**470.3** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 25A**		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**		

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **FDEP has information on file for similar existing source. Additional information will be submitted, as necessary.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Pellet Cooler

4. Emissions Unit Identification Number:
ID:
[X] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **C**	6. Initial Startup Date: **10/99**	7. Emissions Unit Major Group SIC Code: **20**	8. Acid Rain Unit? [ ]

9. Emissions Unit Comment: (Limit to 500 Characters)
Proposed pellet cooler to replace existing cooler.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Cyclone**
2. Control Device or Method Code(s): **009**

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate: **12.3 tph bone dry peel**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Page 8.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram?	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters): **To be submitted.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of ___1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Pellet Cooler**		
2. Source Classification Code (SCC): **3-02-008-06**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **12.3 tph bdp**	5. Maximum Annual Rate: **21,375 tpy bdp**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Cap on total peel processed to avoid PSD.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM10	**009**	**000**	**EL**
VOC	**000**	**000**	**EL**

Emissions Unit Information Section ___4___ **of** __5____

Pollutant Detail Information Page ____1__ **of** __2____

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **2.6** lb/hour **2.2** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.21 lb/ton bdp** Reference: **Process knowledge**	7. Emissions Method Code:**2**

8. Calculation of Emissions (limit to 600 characters):

PM/PM10, hourly = 0.21 lb/ton bdp x 12.25 tph bdp = 2.6 lb/hr
PM/PM10, annual = 0.21 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 2.2 tpy

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Cap on annual peel processed to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of ___1___

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2.6 lb/hr**	4. Equivalent Allowable Emissions: **2.6** lb/hour **2.2** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 5

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Cap on annual peel processed to avoid PSD.

Emissions Unit Information Section ___4___ **of** __5____

Pollutant Detail Information Page ____2__ **of** __2____

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **8.8** lb/hour **7.7** tons/year		4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **0.72 lb/ton bone dry peel (ton bdp)** Reference: **Process knowledge**		7. Emissions Method Code:**2**

8. Calculation of Emissions (limit to 600 characters):

VOC, hourly = 0.72 lb/ton bone dry peel x 12.25 tph bdp = 8.8 lb/hr
VOC, annual = 0.72 lb/ton bone dry peel x 21,375 tpy bdp x ton/2000 lbs = 7.7 tpy

10. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Cap on annual peel processed to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of ___1___

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
4. Requested Allowable Emissions and Units: **8.8 lb/hr**	4. Equivalent Allowable Emissions: **8.8** lb/hour **7.7** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 25A

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Cap on annual peel processed to avoid PSD.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of __1____

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:**Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **Information to be submitted as necessary.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Unregulated Emission Units and Facility-wide Fugitive Emissions**

4. Emissions Unit Identification Number: ID: [X] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **NA**	7. Emissions Unit Major Group SIC Code: **20**	8. Acid Rain Unit? [ ]

9. Emissions Unit Comment: (Limit to 500 Characters) **Includes unregulated and facility-wide fugitive emissions.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **NA**
2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

NA	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **NA**	2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

SEGMENT INFO?

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **NA**		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM10	**000**	**000**	**NS**
SO2	**000**	**000**	**NS**
NOX	**000**	**000**	**NS**
CO	**000**	**000**	**NS**
VOC	**000**	**000**	**NS**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NA**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: **NA**	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **NA**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

UNREGULATED & EXEMPT ACTIVITIES

The following activities are considered to be unregulated or exempt from permitting requirements:

- Fruit storage and handling
- Juice extraction
- Juice processing
- Lime storage and handling ← PTE FOR PM?
- Pellets storage and handling
- Fuel oil storage tank
- Emergency generator ← FUEL USAGE?
- Facility maintenance activities
- ~~EPA list of trivial activities~~ WASTE WATER TREATMENT SYSTEM ← PTE FOR VOC

REPORT IN SUPPORT OF

CONSTRUCTION PERMIT APPLICATION

BY

A. DUDA & SONS, INC. / CITRUS BELLE

APPLICATION PREPARED BY

KOOGLER & ASSOCIATES
4014 NW 13TH STREET
GAINESVILLE, FL 32609
TEL: (352) 377-5822
FAX: (352) 377 7158

SEPTEMBER 2, 1999

PROJECT SUMMARY

This application is being submitted to Florida Department of Environmental Protection (FDEP) for obtaining a construction permit for A. Duda & Sons, Inc. / Citrus Belle (Citrus Belle) to install a boiler, peel dryer and pellet cooler at the existing citrus processing facility in Hendry County, Florida.

PROPOSED PROJECT

The proposed project will allow an increase in the fruit processing capacity of the existing facility up to 7.5 million boxes per year. The proposed plant changes include:

1. Replacing the existing 30,000 pound per hour dryer and 20,000 pound per hour waste heat evaporator with a 1973-built 40,000 pound per hour dryer and 60,000 pound per hour waste heat evaporator.

2. Replace the existing 600 HP boiler with a 1977-built 1000 HP boiler.

3. Replace the 5 ton per hour pellet cooler with a 14 ton per hour unit.

4. Install additional centrifuge capacity to enhance citrus oil recovery.

5. Install additional frit and peel dewatering presses to improve plant efficiency and citrus oil recovery.

6. Allow for natural gas usage as soon as it is available for the site.

RULE APPLICABILITY

The existing facility is classified as PSD major based on the potential-to-emit volatile organic compounds (VOCs) above 250 tons per year (tpy). The VOCs are contained in the citrus oils. Although a significant portion of the citrus oils are recovered in the process some are released to the atmosphere during fruit processing.

The proposed plant upgrade is subject to FDEP air permitting requirements in accordance with Chapter 62-210 of the Florida Administrative Code (FAC). The proposed project will result in increases in emissions below significant levels, as defined in Rule 62-212, FAC. Consequently, the proposed project will not be subject to PSD review requirements.

The peel dryer and pellet cooler are subject to particulate matter emission standards under the process weight table pursuant to Rule 62-296, FAC. However, more restrictive particulate matter emission limits are being requested by the applicant to avoid PSD review requirements. The units are also subject to the general visible emission standard, of 20 percent opacity, in accordance with Rule 62-296, FAC.

The 1977-built 1000 HP boiler is not subject to Standards of Performance for New Stationary Sources (NSPS) under 40 CFR 60, Subpart Dc, as it was built before the NSPS applicability date. However, the boiler is subject to Best Available Control Technology (BACT), for control of particulate matter and sulfur dioxide emissions, in accordance with Rule 62-296, FAC. In this particular case, burning residual fuel oil with a maximum sulfur content of 1 percent, constitutes BACT as the boiler was permitted prior to 1985. It should be noted that the facility will fire natural gas, expected to be available for the site in the near future, at which time the residual fuel oil will become a secondary/back up fuel.

The existing No. 2 Boiler, which will serve as a back-up boiler, will be subject to the fuel cap for the two boilers combined in order to avoid PSD review.

The attached figures include a facility location map, plant layout map, process flow diagram and air pollution control equipment drawings.

The attached tables contain the emission calculation for the proposed project. The emissions summary table indicates that the proposed project is expected to result in an increase in emissions of particulate matter (PM/PM10), sulfur dioxide (SO2), nitrogen oxides (NOX) and carbon monoxide (CO). The proposed project is expected to result in a decrease in the emissions of VOCs from the proposed enhancements to citrus oil recovery.

The $4500 permit application fee is based on the maximum expected pollutant increase, of 98.2 tpy of CO, from the proposed project.

CONCLUSION

Upon permitting, the proposed project will be in compliance with the applicable air regulations.

BASELINE EMISSIONS AND PROPOSED EMISSION CAPS

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

Pollutant	1997 (tpy)	1998 (tpy)	Avg. (tpy)	Increase (tpy)	Proposed Cap (tpy)
CO	45.5	68.0	56.8	98.2	155.0
NOx	33.9	29.0	31.5	39.4	70.9
PM10	8.0	6.9	7.5 7.1	14.4 14.8	21.9
SO_2	96.6	82.9	89.8	39.2	129.0
VOC	505.0	491.7	498.4	-19.5	478.9

ANNUAL OPERATING REPORT SUMMARY

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

	Boiler No. 1	Boiler No. 2	Dryer	Total
1997			3802706 BOXES	
Hours	3043	192	2968	
Fuel (gal)	583,478	36,815	609,933	1,230,226
CO (tpy)	1.5	0.1	43.9(1)	45.5
NOx (tpy)	16.1	1.0	16.8	33.9
PM (tpy)	3.8	0.2	4.0	8.0
SO_2 (tpy)	45.8	2.9	47.9	96.6
VOC (tpy)	0.1	0.1	504.8(2)	505.0
1998			3072400 BOXES	
Hours	2927	288	2831	
Fuel (gal)	452,100	55,200	549,650	1,056,950
CO (tpy)	1.1	0.1	66.8(1)	68.0
NOx (tpy)	12.4	1.5	15.1	29.0
PM (tpy)	2.9	0.4	3.6	6.9
SO_2 (tpy)	35.5	4.3	43.1	82.9
VOC (tpy)	0.1	0.1	491.5(2)	491.7

BOILERS 620293 GAL/BOX = 0.163

DRYER GAL/BOX = 0.160

BOILERS 507300 GAL/BOX = 0.165

AVG = 0.164

DRYER GAL/BOX = 0.179

AVG = 0.170

(1) Stack test data from dryer
(2) Material balance on dryer

FUTURE: 7.5×10^6 BOXES

BOILERS 1.5×10^6 GAL } ⇒ 0.20 GAL/BOX

DRYER 1.5×10^6 GAL } ⇒ "

AT PASTAVGS:

1.23×10^6 GAL

1.28×10^6 GAL

WHY ADD'L FUEL?

PEEL OIL BALANCE

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

SEASON	-	**1997/98**		
Total Fruit Processed (boxes)	-	3,802,706		
Available Oil (lb)	-	1,571,550		
Accountable Recovery/Losses/Destruction (lb)				
Essence oil	-	37,593		
Cold press oil	-	399,458		
D-limonene	-	88,380		
Fugitive losses	-	Unquantifiable		
Pellets (Oil content 0.0015 lb oil/lb) FCPA 156,918	-	36,532	Stack Emissions	FCPA
Cooler Stack (0.64 lb VOC/ton pellets) (78 tpy)	-	7,793	3.9 tpy	47 tpy
Dryer/WHE Stack	-	1,001,794	500.9 tpy	377 tpy
Total Recovery/Losses/Destruction (lb)	-	1,571,550	504.8 tpy	424 tpy

BASIS & SUPPORTING INFO.

PEEL OIL BALANCE

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

SEASON	-	**1998/99**		
Total Fruit Processed (boxes)	-	3,072,400		
Available Oil (lb)	-	1,430,338		
Accountable Recovery/Losses/Destruction (lb)				
Essence oil	-	77,346		
Cold press oil	-	212,307		
D-limonene	-	128,180		
Fugitive losses	-	Unquantifiable		
Pellets (Oil content 0.0015 lb oil/lb) FCPA 151876 (76 TPY)	-	29,517	Stack Emissions	FCPA
Cooler Stack (0.64 lb VOC/ton pellets)	-	6,297	3.2 tpy	46 TPY
Dryer/WHE Stack	-	976,691	488.3 tpy	364 TPY
Total Recovery/Losses/Destruction	-	1,430,338	491.5 tpy	410 TPY

PEEL OIL BALANCE

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

SEASON	-	**2000/2001**	
Total Fruit Processed (boxes)	-	7,500,000	
Available Oil (lb)	-	3,294,338	
Accountable Recovery/Losses/Destruction (lb)			
BEFORE DRYER: Essence oil	-	38,480	
BEFORE DRYER: Cold press oil	-	630,933	
BEFORE DRYER: d-limonene	-	827,320	
BEFORE DRYER: Fugitive losses	-	Unquantifiable	
AFTER DRYER: Pellets (Oil content 0.0015 lb oil/lb)	-	72,052	Stack Emissions
AFTER DRYER: Cooler Stack (0.64 lb VOC/ton pellets)	-	15,371	7.7 tpy
Dryer/WHE			
Total to dryer ~~1,710,182~~ 1797605 1383622			
Combusted (50% recirculated gas and 90% VOC destruction)	-	769,582 808922 622630	(404 TPY) 311
Emissions (10% from recirculated gas and 100% from unrecirculated gas	-	940,600 988683 760922	470.3 tpy 494 TPY 380
Total Recovery/Losses/Destruction	-	3,294,338	478.0 tpy 501.7 TPY (905.7) 388

FCPA 135 TPY

58% 58% 58%

TOTAL TO DRYER IS TOTAL OIL ESSENCE, COLD PRESS & D-LIMONENE

699

PROPOSED EMISSION LIMITS

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

Boilers

Fuel required @ 0.2 gal/box
7.5 mm boxes x 0.2 = 1,500,000 gal/yr
and/or 622 MMCF of natural gas

Emissions

Pollutant	Factor (Oil) (lb/1000 gal)	Factor (Gas) (lb/MMCF)	Emissions (Oil) (tpy)	Emissions (Gas) (tpy)	Emissions Max (tpy)
CO	5.0 AP-42 (A)	84 AP-42 (B)	3.8	26.1	26.1 (gas)
NOx	55.0 AP-42	100 AP-42 (B)	41.3	31.1	41.3 (oil)
PM10	12.41 AP-42	6.2 ?	9.3	1.9	9.3 (oil)
SO_2	157(S) AP-42	0.6 AP-42 (A)	70.9	0.2	70.9 (oil)
VOC	0.28 AP-42 B	2.8 ?	0.2	0.9	~~0.9~~ 1.0 (gas)

9.19(S)+3.22

Dryer/Cooler

PM_{10} 7.6 AP-42 (B) → 2.4

VOC 5.5 − 2.3 = 3.2 (Total Meth.) AP-42 (C & B) → 1.0

Emissions

Pollutant	Emission Cap (tpy)	Boiler (tpy)	Dryer/Cooler (tpy)	Dryer/Cooler (lb/b.d. ton)
CO	155.0	26.1	128.9	12.06
NOx	70.9	41.3	29.6	2.77
PM10	21.9	9.3	12.6	1.18
SO_2	129.0	70.9(1)	58.1	5.44
VOC	478.9	0.9	~~478.0~~ 501.7	39.22

Pollutant	Dryer (tpy)	Dryer (lb/b.d. ton)	Cooler (tpy)	Cooler (lb/b.d. ton)
PM10	10.4	0.97	2.2	0.21
VOC	470.3	44.00	7.7	0.72

(1) SO_2 emission cap will be met by restricting fuel oil use for the two boilers combined and fuel sulfur content.

1997/98 SEASON

CITRUS BELLE
LABELLE, FLORIDA

Total Fruit Processed - 3,802,706 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	2,179,437	57.3	98,076	7.75	760,089
Val	881,077	23.2	39,648	14.5	574,896
Gpft	742,156	19.5	31,542	7.5	236,565
TOTAL	3,802,706	100.0			1,571,550

85 lb/Box

3,802,670

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng	369,935	369,935		399,458
	Gpft	29,523		29,523	
Essence	Orng	36,226	36,226		37,593
	Gpft	1,367		1,367	
d-limonene		88,380	82,133	6,247	88,380
TOTAL		525,431	488,294	37,137	525,431

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng	1,334,985	488,294	846,691	36.6
Gpft	236,565	37,137	199,428	15.7
TOTAL	1,571.550	525,431	1,046,119	33.4

Fruit and Peel Summary

Total Fruit (boxes)	-	3,802,706 boxes
Raw Peel @ 38 lb/box and 85% moisture	-	72,251 tons
Bone Dry Peel	-	10,838 tons
Press Cake @ 70% moisture	-	36,126 tons
Dry Peel @ 13% moisture	-	12,457 tons
Pellets @ 11% moisture	-	12,177 tons

1998/99 SEASON

CITRUS BELLE
LABELLE, FLORIDA

Total Fruit Processed - 3,072,400 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	1,457,803	47.4	65,601	9.0	590,409
Val	696,620	22.7	31,348	16.8	526,646
Gpft	916,977	29.9	39,014	8.03	313,282
TOTAL	3,072,400	100.0			1,430,338

85 lb/box
88.5 lb/box

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng	180,988	180,988		212,307
	Gpft	31,319		31,319	
Essence	Orng	70,629	70,629		77,346
	Gpft	6,717		6,717	
d-limonene		128,180	111,348	16,832	128,180
TOTAL		417,833	362,965	54,868	417,833

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng	1,117,055	362,965	754,090	32.5
Gpft	313,282	54,868	258,414	17.5
TOTAL	1,430,338	417,833		29.2

✓

Fruit and Peel Summary

Total Fruit (boxes)	-	3,072,400 boxes
Raw Peel @ 38 lb/box and 85% moisture	-	58,376 tons 42.3%
Bone Dry Peel	-	8,756 tons
Press Cake @ 70% moisture	-	29,188 tons
Dry Peel @ 13% moisture	-	10,065 tons
Pellets @ 11% moisture	-	9,839 tons

2000/2001 SEASON

CITRUS BELLE
LABELLE, FLORIDA

Total Fruit Processed - 7,500,000 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M (90 lb/bx)	3,500,000	46.7	157,500	8.38	1,319,850
Val (90 lb/bx)	1,750,000	23.3	78,750	15.65	1,232,438
Gpft (85 lb/bx)	2,250,000	30.0	95,625	7.76	742,050
TOTAL	7,500,000	100.0	331,875		3,294,338

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng				630,933
	Gpft				
Essence	Orng				38,480
	Gpft				
d-limonene					827,320
TOTAL					1,496,733

Oil Recovery Efficiency

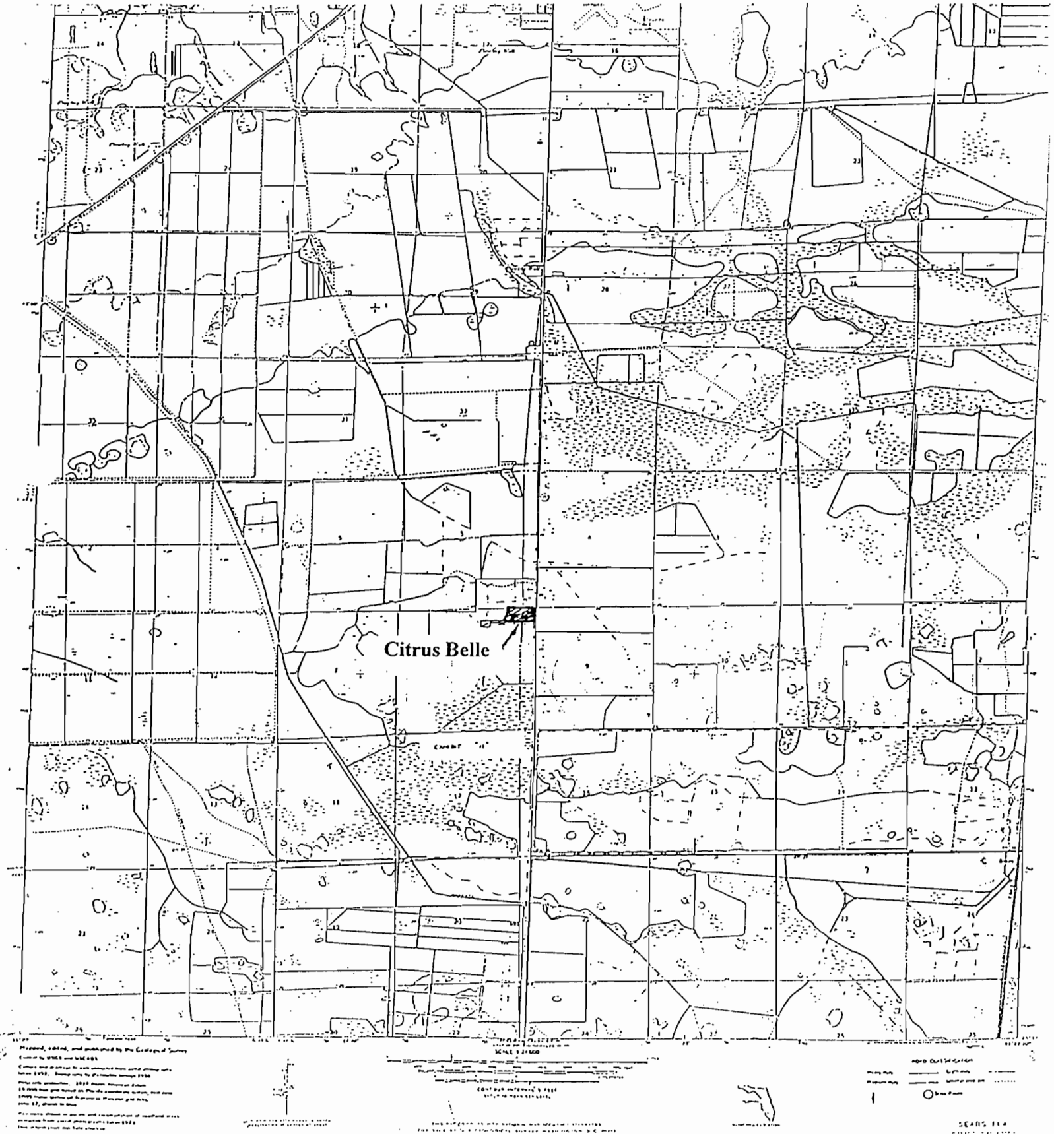
Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng				
Gpft				
TOTAL	3,294,338	1,496,733	1,797,605	45
		1,910,716	1,383,622	< 58% [illegible]

Fruit and Peel Summary

Total Fruit (boxes)	-	7,500,000 boxes
Raw Peel @ 38 lb/box and 85% moisture	-	142,500 tons
Bone Dry Peel	-	21,375 tons
Press Cake @ 65% moisture	-	61,072 tons
Dry Peel @ 13% moisture	-	24,569 tons
Pellets @ 11% moisture	-	24,017 tons

SITE LOCATION MAP

A. DUDA & SONS, INC. / CITRUS BELLE
LABELLE, FLORIDA



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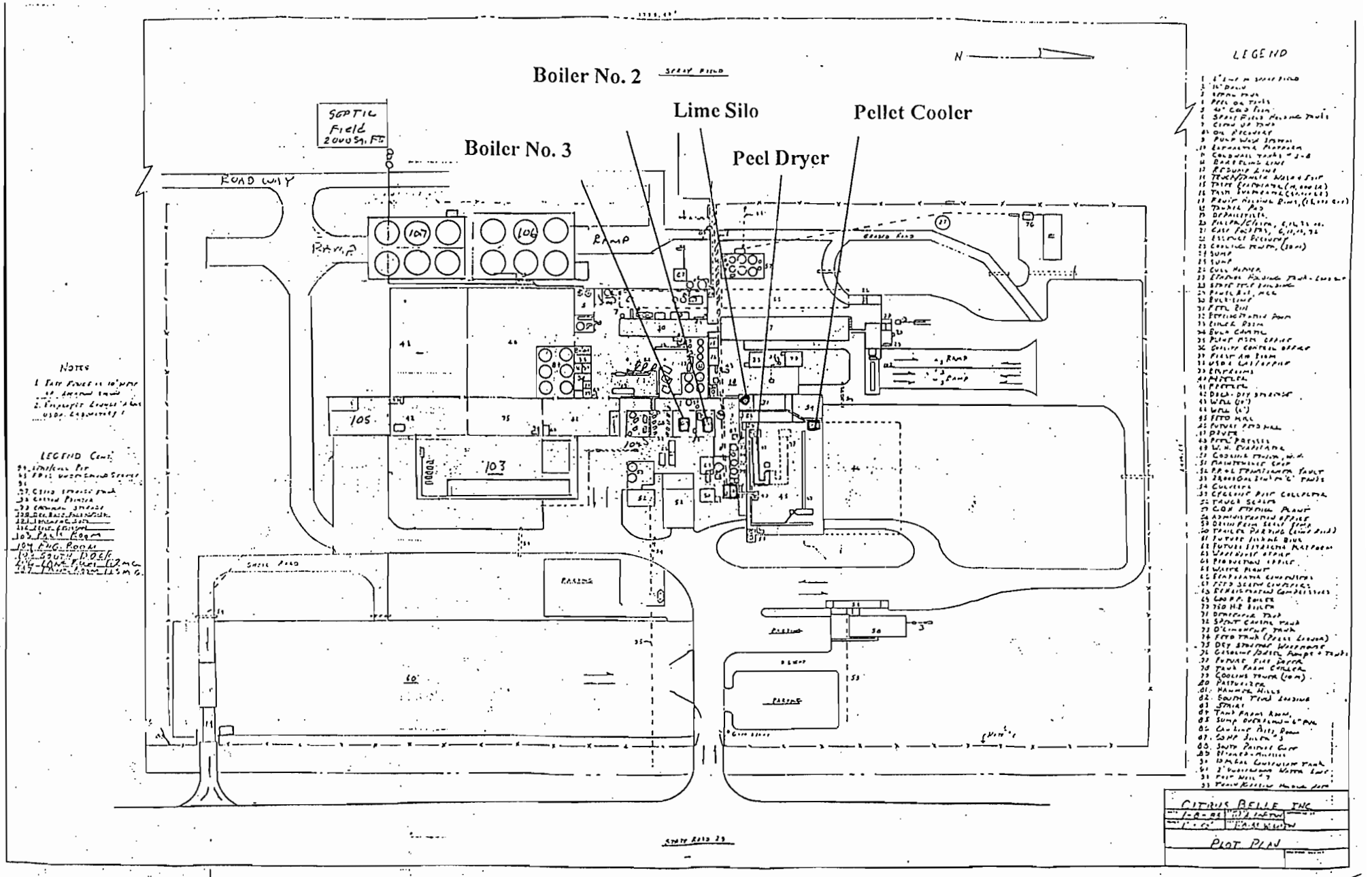
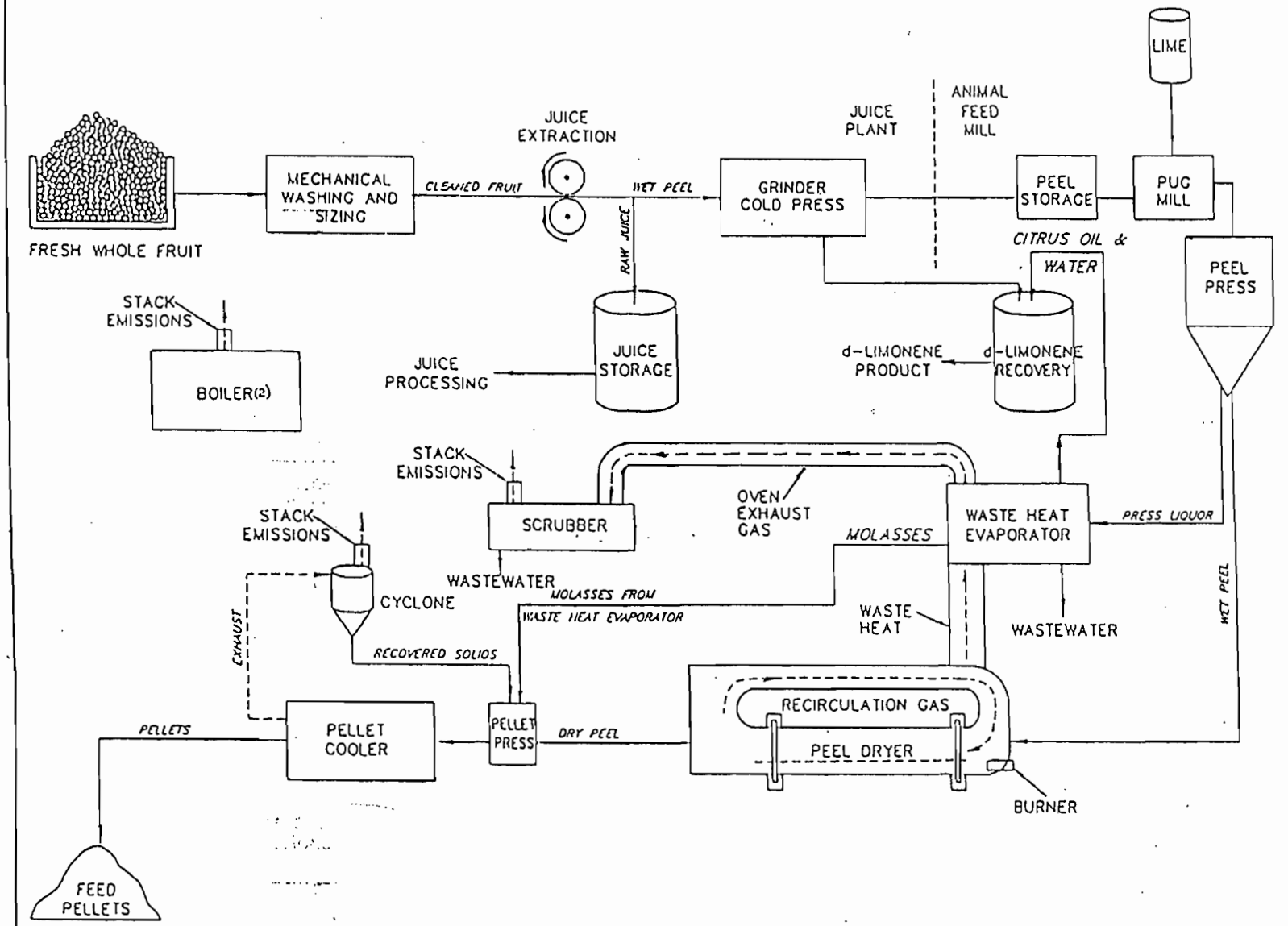
FACILITY LAYOUT MAP

A. DUDA & SONS, INC. / CITRUS BELLE
LABELLE, FLORIDA

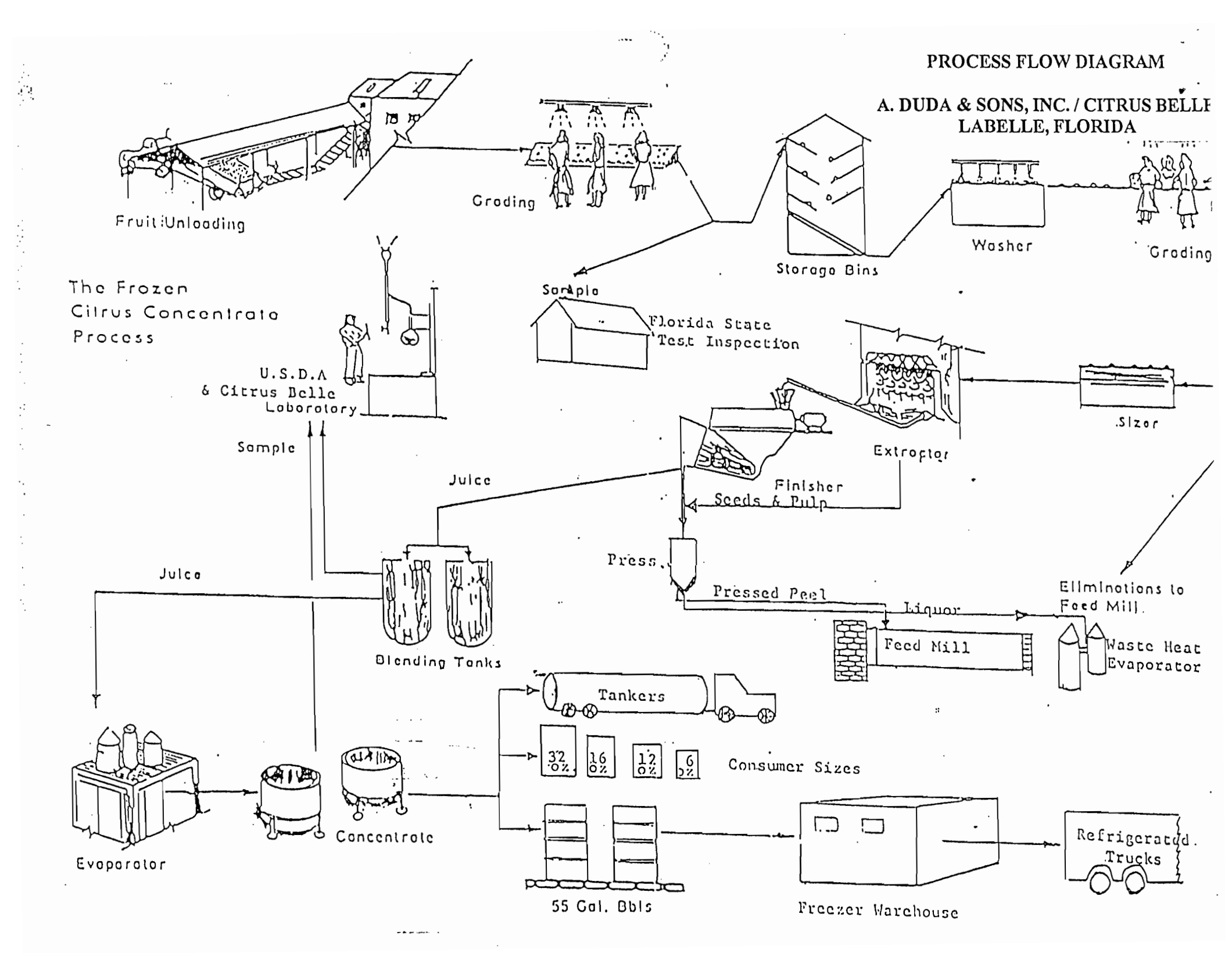


Generalized Citrus Plant Process Flow Diagram



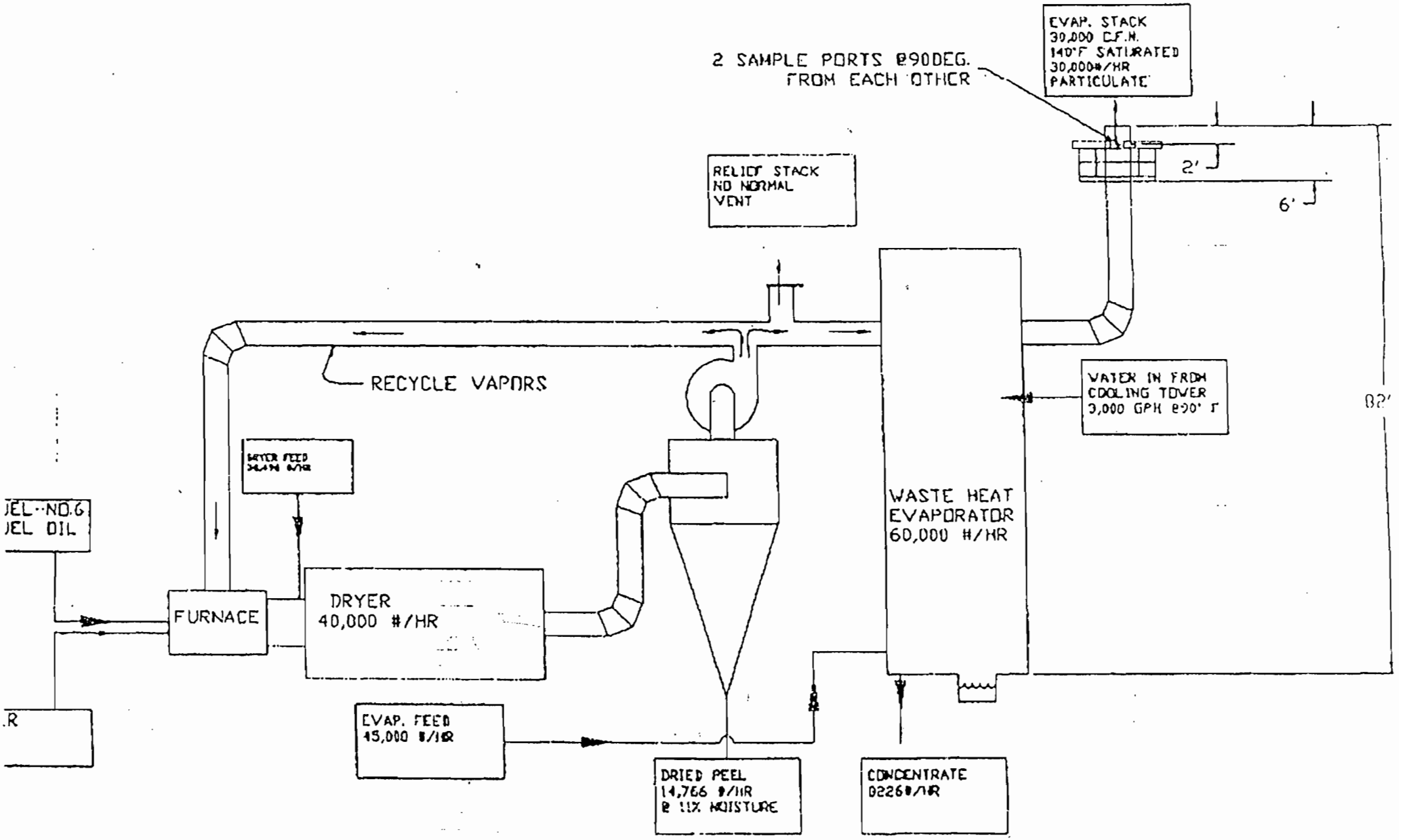
PROCESS FLOW DIAGRAM

A. DUDA & SONS, INC. / CITRUS BELLE
LABELLE, FLORIDA



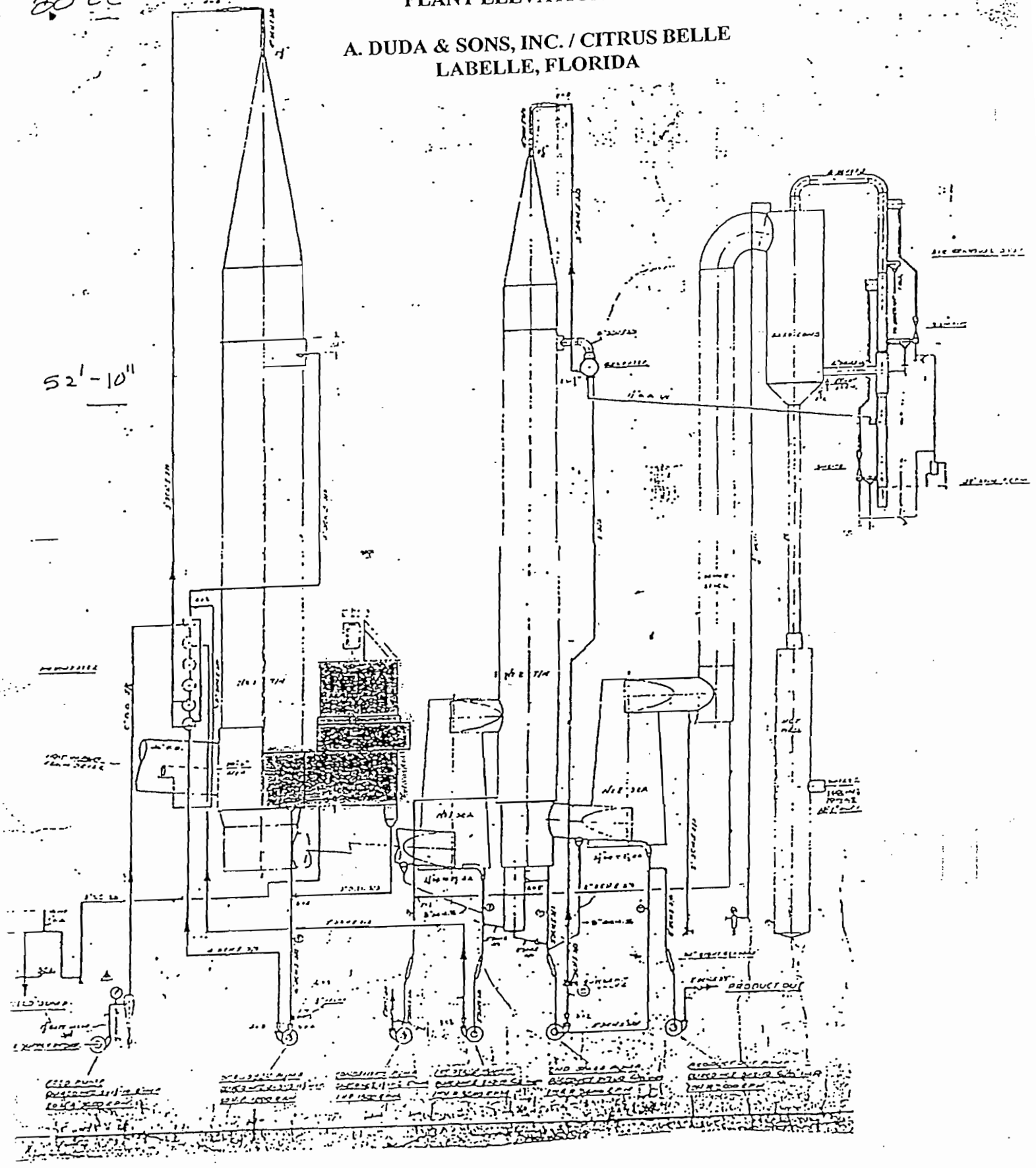
EQUIPMENT ARRANGEMENT

A. DUDA & SONS, INC. / CITRUS BELLE
LABELLE, FLORIDA



PLANT ELEVATION VIEW

A. DUDA & SONS, INC. / CITRUS BELLE
LABELLE, FLORIDA



JBH EQUIPMENT SALES, INC

4515 Walking Stick Lane, Gainesville GA 30506

TEL 770-983-0944 CELLULAR 404-557-4200 FAX 770-983-0946

MEMO TO: Doug Bateson Date: June 4, 1999

SUBJECT: Cooler air supply

Doug

Since our last discussion, I have picked up more information on the proper means of installing the duct from the cooler to the fan in the pellet system.

We worry that when we start up the system, we will be starting the fan for the cooler. At this point, there is nothing in the cooler, and the fan will thus see only cool air. It is possible that this cooler air could cause the fan motor to overload.

As a means of forestalling this possibility, we ask that a "knife" be installed in the duct between the cooler and the fan, to be closed before starting the fan. The "knife" can go in any convenient area – between the cooler and the cyclone or between the cyclone and the fan. This will preclude the fan seeing an in-rush of cold air.

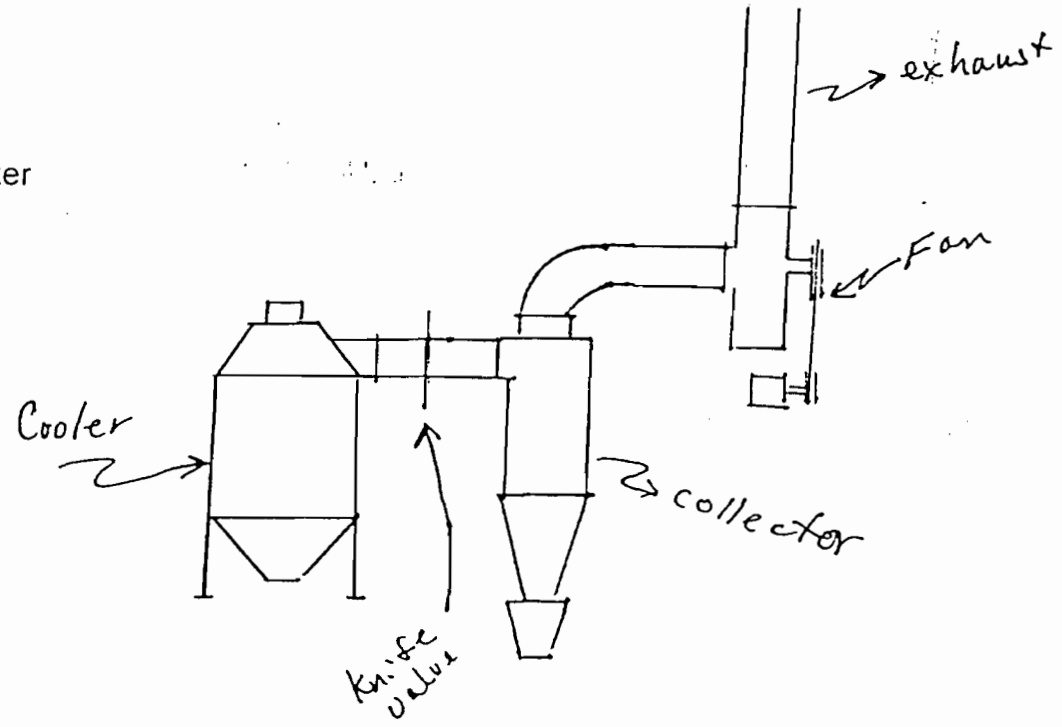
Once the system is in operation, this "knife" should be opened, allowing air to flow through the bed of pellets and into the fan. The "knife" in the duct could be opened with a manual rack and pinion or an air operated piston.

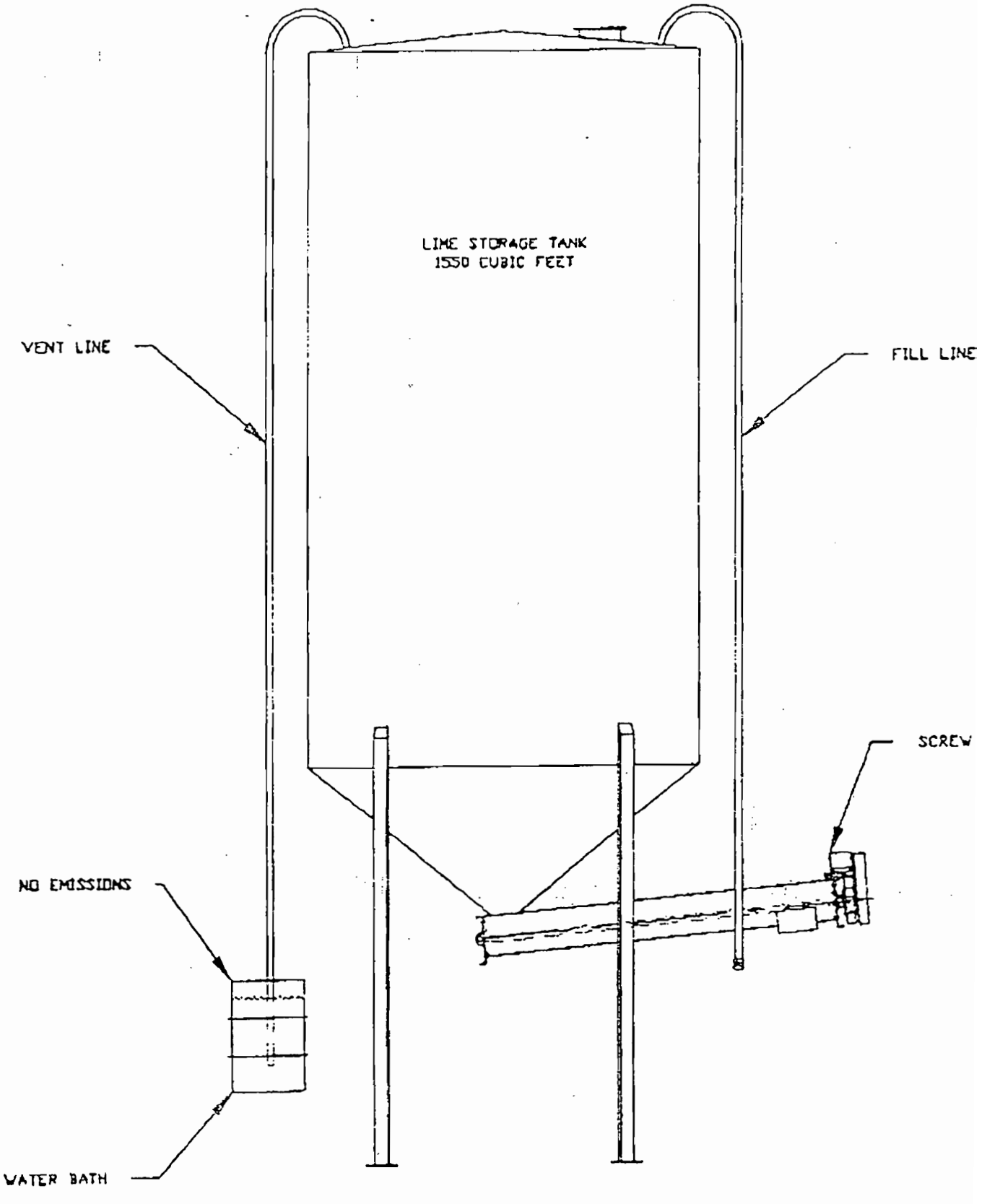
We would generally open this once the cooler has 12-15 inches of pellets in it.

I have sketched below the area under discussion. Please feel free to call me if you have any questions.

Regards

Jack Hilliker




LIME STORAGE TANK
1550 CUBIC FEET
VENT LINE
FILL LINE
SCREW
NO EMISSIONS
WATER BATH

TYPICAL FUEL OIL ANALYSIS

A. DUDA & SONS, INC. / CITRUS BELLE
LABELLE, FLORIDA

PRODUCT		610B
VOLUME		100.0
BLEND %		100.0
	UNITS	
SPECIFIC GRAVITY	60/60 F	1.0129
API GRAVITY	60 F	8.20
FLASH	DEG F	180
VISCOSITY (@122 F)	SFS	23.7
	cSt	45.0
POUR	DEG F	−27
SULFUR	% WT.	1.000
WATER	% VOL.	0.70
SEDIMENT	% WT.	0.060
GROSS HEAT OF COMBUSTION	BTU/GAL	151215
ASH	% WT.	0.089
ASPHALTINES	% WT.	7.33
CARBON RESIDUE	% WT.	8.62
VANADIUM	ppm	28.0
SODIUM	ppm	24.0
ALUMINUM	ppm	63.0
SILICON	ppm	86.0

Memorandum

Florida Department of
Environmental Protection

To: → Howard Rhodes 2/24
Clair Fancy, P.E.
Chief, Bureau of Air Regulation

BAR

From: Joseph Kahn, P.E.
New Source Review Section

Date: February 24, 2000

Re: Small Boiler BACT Determination for Duda Citrus Belle

Attached is the small boiler BACT determination for a replacement 1000 Hp boiler at Duda's Citrus Belle plant in Hendry County. The replacement boiler is part of a larger construction project, but only the boiler is subject to the BACT requirement of Rule 62-296.406, F.A.C. The construction permit application – for a PSD synthetic minor permit – is being processed by the South District office.

The applicant asked to burn the same fuel in all combustion sources. The BACT determination results in the level of SO_2 emissions equivalent to firing 0.05% sulfur fuel oil in the replacement boiler and 1% sulfur fuel oil (the facility's current fuel oil quality) in the other combustion sources. BACT is the use of 0.6% sulfur fuel oil in all sources with a total annual fuel limit of about 2.4 million gallons split equally between the peel dryer and the two boilers.

I recommend approval of this determination.

This BACT determination is required for the source as set forth in the Rule 62-296.406, Florida Administrative Code (F.A.C.), Fossil Fuel Steam Generators with less than 250 Million Btu per hour Heat Input, New and Existing Sources.

Description of Project:

The applicant is proposing to expand fruit processing capacity to 7.5 million boxes of citrus fruit per year, and this project includes construction of a replacement 40,000 lb/hr evaporative capacity citrus peel dryer with a 60,000 lb/hr waste heat evaporator, a replacement 14 TPH pellet cooler and a replacement 1000 Hp boiler. The construction permit application is being processed by the South District office. The application and fee was received by the South District office on September 16, 1999. The applicant finalized its BACT proposal in a letter to Joe Kahn dated February 21, 2000.

BACT Determination Requested by Applicant:

The applicant proposed to use the same fuel oil in all fuel combustion sources: existing boiler 2, the replacement 1000 Hp boiler, and the replacement peel dryer. Only the replacement 1000 Hp boiler is subject to the BACT determination per Rule 62-296.406, F.A.C. The applicant has been using 1% sulfur residual fuel oil in all fuel combustion sources, and the applicant originally proposed that this use be allowed in the future, and particularly that 1% sulfur fuel oil be considered to be BACT for the replacement 1000 Hp boiler. After discussion with the Department, the applicant ultimately revised its request to propose the use of up to 1,201,873 gallons per year of light residual or blended fuel oil with a sulfur content of 0.6% in the dryer, and up to 1,201,873 gallons per year of light residual or blended fuel oil with a sulfur content of 0.6% in the two boilers combined.[1] This amount of fuel oil will limit fruit processing capacity to approximately 6.5 million boxes per year, based on estimated heat input of 27,000 Btu per box in the dryer and 27,000 Btu per box in the boilers combined. When natural gas becomes available, the applicant may choose to burn natural gas as an alternate fuel or as an additional fuel to reach full fruit processing capacity. The applicant proposed an annual limit on natural gas consumption of 200 million cubic feet per year for the dryer and 200 million cubic feet per year for the boilers combined; this is equivalent to the full processing capacity of 7.5 million boxes per year.

BACT Determination by DEP:

Pursuant to Rule 62-296.406, F.A.C., particulate matter and sulfur dioxide emissions shall be limited by the use of the Best Available Control Technology (BACT). BACT is based on the maximum achievable reduction in emissions taking into consideration energy, environmental and economic impacts. BACT for the 1000 Hp replacement boiler shall be achieved by limiting the fuel oil sulfur content to less than or equal to 0.6% and limiting the fuel oil consumption rate in the dryer to 1,201,873 gallons per year and both boilers combined to 1,201,873 gallons per year. The annual limits shall be on a rolling 12-month basis. Compliance with these limitations shall be verified by certification from the fuel supplier for each delivery and by recording the monthly and rolling 12-month fuel oil consumption rate. No limitation on natural gas usage is required as part of this determination.

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[1] Per telephone conversation on 2/23/00 with John B. Koogler, Ph.D., P.E., annual emissions of SO_2 were estimated by the applicant assuming a fuel oil density of 7.62 lb/gal for blended fuel, derived from 40% number 6 oil with 1% S at 8.21 lb/gal plus 60% number 2 oil with 0.3% S at 7.21 lb/gal, as follows: 2 x 1,201,873 gal x 7.62 lb oil/gal x 0.006 lb S/gal oil x 2 lb SO_2/lb S x 1 ton/2000 lb = 110 tons per year.

BACT Determination Rationale:

Sulfur in fuel is a primary air pollution concern since most of the fuel sulfur becomes sulfur dioxide. Also, particulate matter emissions from fuel burning are related to the sulfur content. BACT for particulate matter and sulfur dioxide, the two pollutants regulated pursuant to Rule 62-296.406, F.A.C., is the use of a very low sulfur fuel such as fuel oil with a sulfur content of 0.05%. As discussed previously, based on information provided by the applicant in its application and AOR submittals, the previous boiler and other combustion sources were fired with fuel oil with a sulfur content of up to 1%. Natural gas is not currently available at this facility. Although the applicant proposed to fire the same fuel oil in all sources to avoid the cost of an additional tank and fuel lines, the Department insisted that the applicant evaluate the use of 0.05% sulfur fuel oil in the replacement 1000 Hp boiler. The applicant demonstrated that the annual sulfur dioxide emissions under this scenario could equal the emissions if the applicant fired the same fuel oil in all sources, if both the sulfur content and fuel consumption rate are limited as specified in the Department's BACT determination described above. The Department has also noted that the cost of distillate fuel oils have risen dramatically in the recent months, an economic impact that must be considered to some extent in making this determination. The BACT accepted by the Department allows the applicant to use blended or light residual fuel oil. Although PM_{10} emissions may be higher firing 0.6% sulfur fuel oil than firing 0.05% sulfur fuel oil, the applicant separately requested a limit on emissions from all sources to avoid PSD. In its construction permit application, the applicant's PM_{10} emission rate for the replacement boiler was estimated using an emission factor for residual oil, so PM_{10} emissions for the light residual or blended fuel oil should be less than estimated.

PSD Consideration:

PSD is not a consideration in this analysis because the applicant has separately requested emission limits on all sources to avoid PSD. While the applicant originally requested an annual cap on sulfur dioxide emissions of 129 tons per year to avoid PSD, the sulfur dioxide emissions will be limited to 110 tons per year by this BACT determination. Other pollutants are limited separately by limitations proposed by the applicant.

Details of the Analysis May be Obtained by Contacting:

Joseph Kahn, P.E.
Department of Environmental Protection
Division of Air Resources Management
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
850-921-9519

Recommended by: _____
C. H. Fancy, P.E., Chief
Bureau of Air Regulation

2/25/00
Date

Approved by: _____
Howard L. Rhodes, Director
Division of Air Resources Management

3/1/00
Date

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 633-99-01

February 21, 2000

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FEB 23 2000
BUREAU OF AIR REGULATION

VIA FAX AND MAIL

Mr. Joe Kahn
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Duda Citrus Belle
FDEP File No. 051004-002-AC
BACT for Boiler No. 3

Dear Joe:

The following summarizes our most recent conversations regarding the BACT limit for sulfur dioxide (SO_2) for Boiler No. 3 at the Duda Citrus Belle (Citrus Belle) citrus processing plant in LaBelle, Florida. The SO_2 BACT limit is one that is equivalent to burning fuel oil with a 0.05 percent sulfur content in Boiler No. 3.

The attached table summarizes the fuel use, fuel sulfur content and SO_2 emission caps for two scenarios. The first scenario is based on the dryer and existing No. 2 boiler firing No. 6 fuel oil with 1.0 percent sulfur (as historically has been the case) and Boiler No. 3 firing No. 2 fuel oil with 0.05 percent sulfur. Under this scenario, it is assumed that Boiler No. 3 will provide 90 percent of the steam requirement for the facility. This scenario establishes an annual SO_2 emission cap of 109.9 tons per year and is based on a BACT limit for new boilers traditionally applied by FDEP.

The second scenario represents a fuel firing scenario that results in an equivalent SO_2 emission cap and the scenario proposed as BACT for SO_2 for the facility. Under this scenario, the dryer and the two boilers will fire a common fuel. The fuel will be a blended fuel with a 0.6 percent sulfur content resulting in an annual SO_2 emission cap of 110.0 tons per year. It should be noted that this SO_2 emission cap is well below the cap of 129 tons of SO_2 per year required to avoid PSD applicability. The proposed scenario will limit the fuel use in the dryer to

1,201,873 gallons per year and the fuel oil use in the two boilers combined to 1,201,873 gallons per year. The sulfur content of all fuel oil will be 0.6 percent.

This fuel oil limit does not contradict, nor is not meant to supercede, the fruit throughput rate, the emission limits (pounds of pollutant per bone dry ton of peel) and/or the emission caps (tons per year of pollutant other than SO_2) already established. These limits have been established in the original permit application and/or in our correspondence dated October 22 and November 30, 1999. The fruit throughput limit based on these documents is 7.5 million boxes of fruit per year. The emission limits and emission caps of all pollutants other than SO_2 have been based on this fruit processing rate. The proposed limits on fuel oil will be independent limits that will restrict the amount and sulfur content of the fuel oil and provide assurance that the SO_2 cap of 110.0 tons per year (representative of BACT) is not exceeded. The fuel oil limits will probably restrict the fruit processing rate to something less than 7.5 million boxes of fruit per year; however, when natural gas is used as a fuel, SO_2 emissions will not be a factor and the fruit processing limit of 7.5 million boxes per year will control.

In summary, Citrus Belle will be limited either by a fruit throughput rate of 7.5 million boxes per year or the proposed fuel oil use limit; whichever is more restrictive. Regardless of the controlling factor, the pollutant emission caps including the cap of 110.0 tons per year for SO_2, will not be exceeded.

I appreciate your willingness to work with us in this matter and understand that you will transmit your final BACT determination for SO_2 to Mara Nasca so she can incorporate it into the final permit for Citrus Belle. If there are any questions regarding this information, please do not hesitate to contact me at 352-377-5822.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa
Enc.

C: Ms Mara Nasca, FDEP, Ft. Myers
Mr. Charles Harvey, Citrus Belle
Mr. Henry Heisler, Citrus Belle

Case	SO_2 Cap and Fuel Use with Boiler No. 3 firing 0.05% Sulfur Fuel Oil	SO_2 Cap and Proposed Fuel Use with Common Fuel to Dryer and Two Boilers
Dryer		
• Heat Req (MMBtu/yr)(1)	176,670	176,670
- Fuel	No. 6	Blend
Sulfur (%)	1.0	0.6
Use (gal/yr)	1,170,000	1,201,837(2)
- SO_2 (tpy)	96.1	55.0
Boilers		
• Heat Req (MMBtu/yr)(1)	176,670	176,670
• Boiler No. 2		
- Use Factor (%)	10	100 (both boilers)
- Fuel	No. 6	
Sulfur (%)	1.0	0.6
Use (gal/yr)	117,000	1,201,873(2)
- SO_2 (tpy)	9.6	55.0
• Boiler No. 3		
- Use Factor (%)	90	(included with Boiler No. 2)
- Fuel	No. 2	
Sulfur (%)	0.05	
Use (gal/yr)	1,152,196	
- SO_2 (tpy)	4.2	
Total SO_2 (tpy)	109.9	110.0

(1) Fuel Requirements
- Dryer fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box
- Boiler fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box

(2) At 147,000 Btu/gal

KOOGLER & ASSOCIATES
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4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

PROJECT 633-99-01

FAX TRANSMITTAL FORM

TO: Joe Kahn

FAX NO.

FROM: John Koogler

DATE: 2/22/00 SENT BY: Wendy

The text being transmitted consist s of 3 page(s) PLUS this one. If you do not receive all of the pages or if there are difficulties with this transmission, please call (352) 377-5822.

REMARKS:

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

KA 633-99-01

February 21, 2000

VIA FAX AND MAIL

Mr. Joe Kahn
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Duda Citrus Belle
FDEP File No. 051004-002-AC
BACT for Boiler No. 3

Dear Joe:

The following summarizes our most recent conversations regarding the BACT limit for sulfur dioxide (SO_2) for Boiler No. 3 at the Duda Citrus Belle (Citrus Belle) citrus processing plant in LaBelle, Florida. The SO_2 BACT limit is one that is equivalent to burning fuel oil with a 0.05 percent sulfur content in Boiler No. 3.

The attached table summarizes the fuel use, fuel sulfur content and SO_2 emission caps for two scenarios. The first scenario is based on the dryer and existing No. 2 boiler firing No. 6 fuel oil with 1.0 percent sulfur (as historically has been the case) and Boiler No. 3 firing No. 2 fuel oil with 0.05 percent sulfur. Under this scenario, it is assumed that Boiler No. 3 will provide 90 percent of the steam requirement for the facility. This scenario establishes an annual SO_2 emission cap of 109.9 tons per year and is based on a BACT limit for new boilers traditionally applied by FDEP.

The second scenario represents a fuel firing scenario that results in an equivalent SO_2 emission cap and the scenario proposed as BACT for SO_2 for the facility. Under this scenario, the dryer and the two boilers will fire a common fuel. The fuel will be a blended fuel with a 0.6 percent sulfur content resulting in an annual SO_2 emission cap of 110.0 tons per year. It should be noted that this SO_2 emission cap is well below the cap of 129 tons of SO_2 per year required to avoid PSD applicability. The proposed scenario will limit the fuel use in the dryer to

1,201,873 gallons per year and the fuel oil use in the two boilers combined to 1,201,873 gallons per year. The sulfur content of all fuel oil will be 0.6 percent.

This fuel oil limit does not contradict, nor is not meant to supercede, the fruit throughput rate, the emission limits (pounds of pollutant per bone dry ton of peel) and/or the emission caps (tons per year of pollutant other than SO_2) already established. These limits have been established in the original permit application and/or in our correspondence dated October 22 and November 30, 1999. The fruit throughput limit based on these documents is 7.5 million boxes of fruit per year. The emission limits and emission caps of all pollutants other than SO_2 have been based on this fruit processing rate. The proposed limits on fuel oil will be independent limits that will restrict the amount and sulfur content of the fuel oil and provide assurance that the SO_2 cap of 110.0 tons per year (representative of BACT) is not exceeded. The fuel oil limits will probably restrict the fruit processing rate to something less than 7.5 million boxes of fruit per year; however, when natural gas is used as a fuel, SO_2 emissions will not be a factor and the fruit processing limit of 7.5 million boxes per year will control.

In summary, Citrus Belle will be limited either by a fruit throughput rate of 7.5 million boxes per year or the proposed fuel oil use limit; whichever is more restrictive. Regardless of the controlling factor, the pollutant emission caps including the cap of 110.0 tons per year for SO_2, will not be exceeded.

I appreciate your willingness to work with us in this matter and understand that you will transmit your final BACT determination for SO_2 to Mara Nasca so she can incorporate it into the final permit for Citrus Belle. If there are any questions regarding this information, please do not hesitate to contact me at 352-377-5822.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa
Enc.

C: Ms Mara Nasca, FDEP, Ft. Myers
Mr. Charles Harvey, Citrus Belle
Mr. Henry Heisler, Citrus Belle

E-MAIL DRAFT BACT TO JOHN K.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Mr. Joe Kahn
Florida Department of
Environmental Protection

Case	SO_2 Cap and Fuel Use with Boiler No. 3 firing 0.05% Sulfur Fuel Oil	SO_2 Cap and Proposed Fuel Use with Common Fuel to Dryer and Two Boilers
Dryer		
• Heat Req (MMBtu/yr)(1)	176,670	176,670
- Fuel	No. 6	Blend
Sulfur (%)	1.0	0.6
Use (gal/yr)	1,170,000	1,201,837(2)
- SO_2 (tpy)	96.1	55.0
Boilers		
• Heat Req (MMBtu/yr)(1)	176,670	176,670
• Boiler No. 2		
- Use Factor (%)	10	100 (both boilers)
- Fuel	No. 6	
Sulfur (%)	1.0	0.6
Use (gal/yr)	117,000	1,201,873(2)
- SO_2 (tpy)	9.6	55.0
• Boiler No. 3		
- Use Factor (%)	90	(included with Boiler No. 2)
- Fuel	No. 2	
Sulfur (%)	0.05	
Use (gal/yr)	1,152,196	
- SO_2 (tpy)	4.2	
Total SO_2 (tpy)	109.9	110.0

(1) Fuel Requirements
- Dryer fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box
- Boiler fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box

(2) At 147,000 Btu/gal

KOOGLER & ASSOCIATES
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KA 633-99-01

January 21, 2000

VIA FAX AND MAIL

Mr. Joe Kahn
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Duda Citrus Belle
Fuel Oil Sulfur Limit

Dear Joe:

I have finally had the opportunity to thoroughly review your memo of December 9, 1999, and would like to offer some thoughts for your consideration. First, I agree that a blanket fuel consumption limit for the dryer and two boilers is not a viable alternative because of differences in the NOx emission rates and second, I agree that a cost analysis with a "base case" forced by the SO_2 emission cap of 129 tons per year can result in incremental SO_2 control costs that are artificially high. Regarding the cost of SO_2 control, however, it is my opinion that if it is used for decision making, we should stick with the basic unit of "dollars per ton of pollutant removed" rather than a cost related to boxes of fruit processed or gallons of juice produced. This cost of control will allow a comparison of alternatives on the same basis that has consistently been used in the permitting process in the past. To use a control cost of "dollars per box of fruit" or "dollars per gallon of processed juice" would be plowing new ground and while we might say a control cost intuitively sounded reasonable or unreasonable, we would have no historical permitting record as a point of comparison.

Regarding the sulfur content of the fuel and the establishment of a "base case" to use as a point of comparison, I concur that this is not a straight forward exercise and suggest the following basic facts be recognized:

1. The Dryer and Boiler No. 2 can burn fuel oil with up to 1.0 percent sulfur (this is an artificial upper limit based on the sulfur content of fuel oil that Citrus Belle has historically burned).

2. The BACT determination for SO_2 applies only to Boiler No. 3; the replacement boiler.

If Citrus Belle did not operate Boiler No. 3 and used only fuel oil with 1.0 percent sulfur, the SO_2 emission cap (129 tpy) will limit the fruit processing rate to approximately 4.4 million boxes per year. This is well below the targeted fruit throughput rate of 6.5 million boxes per year. By using fuel oil with 0.7 percent sulfur in the Dryer and Boiler No. 2, 6.36 million boxes of fruit per year can be processed without exceeding the SO_2 emission cap. This operating scenario is unworkable, however, as Boiler No. 2 cannot supply the total steam demand for a fruit processing rate of 6.36 million boxes per year.

In establishing an operating scenario, the following objectives will have to be met:

1. Both boilers will have to operate during the season.

2. It is our objective to use the same fuel oil in both boilers and the dryer.

3. The sulfur content of the fuel oil will have to be such that the BACT objective for Boiler No. 3 is met.

You have stated that the Department has established a clear precedent that BACT for sulfur dioxide on industrial boilers is the use of 0.05 percent sulfur fuel oil and that you feel compelled to remain consistent with this precedent. That being the case, I suggest for a "base case" we examine some operating scenarios that allow the Dryer and Boiler No. 2 to burn 1.0 percent sulfur fuel oil (as historically burned by Citrus Belle) and require Boiler No. 3 to burn 0.05 percent sulfur fuel oil. In all scenarios, the assumption is made that the total heat input requirement at the plant is equally divided between the dryer and the two boilers.

The operating scenario that I proposed in our application and the scenario that you used in your memo had Boiler No. 2 providing 10 percent of the steam demand and Boiler No. 3 providing 90 percent of the steam demand. I will identify this scenario as Case 1 (see attached table). For Case 1, assuming the Dryer and Boiler No. 2 operate on 1.0 percent sulfur fuel oil and Boiler No. 3 operates on 0.05 percent sulfur fuel oil, the total SO_2 emissions will be 109.9 tpy and the annual fuel cost will be $1.74 million per year.

The second option (Case 2) available to Citrus Belle is to allow Boiler No. 2 to provide 30 percent of the steam demand and Boiler No. 3 to provide 70 percent of the steam demand. In this scenario (with the Dryer and Boiler No. 2 firing 1.0 percent sulfur fuel oil and Boiler No. 3 firing 0.05 percent sulfur fuel oil), the total annual SO_2 emissions will be 128.1 tpy and the annual fuel cost will be $1.68 million per year.

It is quite logical that if Citrus Belle is required to burn 0.05 percent sulfur fuel oil in Boiler No. 3, they will shift as much of the steam demand to Boiler No. 2 as possible for cost savings. The cost savings in shifting up to 30 percent of the steam demand to Boiler No. 2 (the maximum shift while still meeting the SO_2 emission cap) is approximately $55,400 per year.

A scenario (Case 3) that is almost equivalent to Case 2 in terms of annual SO_2 emissions is to use 0.7 percent sulfur fuel oil in the dryer and both boilers. This scenario will result in a slight reduction in fruit throughput (6.36 million boxes per year), an annual SO_2 emission rate of 129.0 tpy and a cost savings over Case 2 of approximately $195,000 per year. This is the same scenario suggested as BACT in our previous correspondence. To require a lower fuel sulfur content than 0.7 percent for the dryer and two boilers combined would be to require as BACT for Boiler No. 3 a fuel oil with a sulfur content even lower than 0.05 percent.

This analysis of BACT takes cost out of the equation because, as you pointed out, establishing a "base case" for cost is not straightforward. This approach utilizes as a base case an operating scenario that Citrus Belle can legitimately employ (assuming BACT for Boiler No. 3 is fuel oil with a 0.05 percent sulfur content) and develops an equivalent operating scenario.

I would appreciate it if you will give this line of reason some thought. Once you have had a chance to think about this, please give me a call so we can get this matter resolved.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

C: Ms Mara Nasca, FDEP, Ft. Myers
Mr. Henry Heisler
Mr. Chuck Harvey

Case	1	2	3
Dryer			
• Heat Req (MMBtu/yr)(1)	176,670	176,670	172,916(2)
- Fuel	No. 6	No. 6	No. 6
Sulfur (%)	1.0	1.0	0.7
Use (gal/yr)	1,170,000	1,170,000	1,160,515(2)
- SO_2 (tpy)	96.1	96.1	64.5
Boilers			
• Heat Req (MMBtu/yr)(1)	176,670	176,670	172,916(2)
• Boiler No. 2			
- Use Factor (%)	10	30	100 (both boilers)
- Fuel	No. 6	No. 6	No. 6
Sulfur (%)	1.0	1.0	0.7
Use (gal/yr)	117,000	351,000	1,160,515(2)
- SO_2 (tpy)	9.6	28.8	64.5
• Boiler No. 3			
- Use Factor (%)	90	70	(included with Boiler No. 2)
- Fuel	No. 2	No. 2	
Sulfur (%)	0.05	0.05	
Use (gal/yr)	1,152,196	896,152	
- SO_2 (tpy)	4.2	3.2	
Total SO_2 (tpy)	109.9	128.1	129.0
Boxes of Fruit (mmbox/yr)	6.50	6.50	6.36
Annual Fuel Cost ($/yr)	1,740,091	1,684,696	1,489,785

(1) Fuel Requirements
- Dryer fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box
- Boiler fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box

(2) Fuel use and fruit throughput reduced to achieve SO_2 emission goal.

BEST AVAILABLE COPY

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ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

PROJECT 633-99-01

FAX TRANSMITTAL FORM

TO: Joe Kahn

FAX NO.

FROM: John Koogler

DATE: 1/21/00 SENT BY: Mendy

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REMARKS:

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4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 - FAX/377-7158

KA 633-99-01

January 21, 2000

VIA FAX AND MAIL

Mr. Joe Kahn
Florida Department of
Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Duda Citrus Belle
Fuel Oil Sulfur Limit

Dear Joe:

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Regarding the sulfur content of the fuel and the establishment of a "base case" to use as a point of comparison, I concur that this is not a straight forward exercise and suggest the following basic facts be recognized:

1. The Dryer and Boiler No. 2 can burn fuel oil with up to 1.0 percent sulfur (this is an artificial upper limit based on the sulfur content of fuel oil that Citrus Belle has historically burned).

2. The BACT determination for SO_2 applies only to Boiler No. 3; the replacement boiler.

If Citrus Belle did not operate Boiler No. 3 and used only fuel oil with 1.0 percent sulfur, the SO_2 emission cap (129 tpy) will limit the fruit processing rate to approximately 4.4 million boxes per year. This is well below the targeted fruit throughput rate of 6.5 million boxes per year. By using fuel oil with 0.7 percent sulfur in the Dryer and Boiler No. 2, 6.36 million boxes of fruit per year can be processed without exceeding the SO_2 emission cap. This operating scenario is unworkable, however, as Boiler No. 2 cannot supply the total steam demand for a fruit processing rate of 6.36 million boxes per year.

In establishing an operating scenario, the following objectives will have to be met:

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3. The sulfur content of the fuel oil will have to be such that the BACT objective for Boiler No. 3 is met.

You have stated that the Department has established a clear precedent that BACT for sulfur dioxide on industrial boilers is the use of 0.05 percent sulfur fuel oil and that you feel compelled to remain consistent with this precedent. That being the case, I suggest for a "base case" we examine some operating scenarios that allow the Dryer and Boiler No. 2 to burn 1.0 percent sulfur fuel oil (as historically burned by Citrus Belle) and require Boiler No. 3 to burn 0.05 percent sulfur fuel oil. In all scenarios, the assumption is made that the total heat input requirement at the plant is equally divided between the dryer and the two boilers.

The operating scenario that I proposed in our application and the scenario that you used in your memo had Boiler No. 2 providing 10 percent of the steam demand and Boiler No. 3 providing 90 percent of the steam demand. I will identify this scenario as Case 1 (see attached table). For Case 1, assuming the Dryer and Boiler No. 2 operate on 1.0 percent sulfur fuel oil and Boiler No. 3 operates on 0.05 percent sulfur fuel oil, the total SO_2 emissions will be 109.9 tpy and the annual fuel cost will be $1.74 million per year.

Mr Joe Kahn
Florida Department of
Environmental Protection

January 21, 2000
Page 3

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It is quite logical that if Citrus Belle is required to burn 0.05 percent sulfur fuel oil in Boiler No. 3, they will shift as much of the steam demand to Boiler No. 2 as possible for cost savings. The cost savings in shifting up to 30 percent of the steam demand to Boiler No. 2 (the maximum shift while still meeting the SO_2 emission cap) is approximately $55,400 per year.

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I would appreciate it if you will give this line of reason some thought. Once you have had a chance to think about this, please give me a call so we can get this matter resolved.

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KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

C: Ms Mara Nasca, FDEP, Ft. Myers
Mr. Henry Heisler
Mr. Chuck Harvey

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Mr Joe Kahn
Florida Department of
Environmental Protection

Case	1	2	3
Dryer			
• Heat Req (MMBtu/yr)(1)	176,670	176,670	172,916(2)
- Fuel	No 6	No. 6	No. 6
Sulfur (%)	1.0	1.0	0.7
Use (gal/yr)	1,170,000	1,170,000	1,160,515(2)
- SO_2 (tpy)	96.1	96.1	64.5
Boilers			
• Heat Req (MMBtu/yr)(1)	176,670	176,670	172,916(2)
• Boiler No. 2			
- Use Factor (%)	10	30	100 (both boilers)
- Fuel	No. 6	No. 6	No. 6
Sulfur (%)	1.0	1.0	0.7
Use (gal/yr)	117,000	351,000	1,160,515(2)
- SO_2 (tpy)	9.6	28.8	64.5
• Boiler No. 3			
- Use Factor (%)	90	70	(included with Boiler No. 2)
- Fuel	No. 2	No. 2	
Sulfur (%)	0.05	0.05	
Use (gal/yr)	1,152,196	896,152	
- SO_2 (tpy)	4.2	3.2	
Total SO_2 (tpy)	109.9	128.1	129.0
Boxes of Fruit (mmbox/yr)	6.50	6.50	6.36
Annual Fuel Cost ($/yr)	1,740,091	1,684,696	1,489,785

(1) Fuel Requirements
- Dryer fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box
- Boiler fuel use @ 0.18 gal No. 6 oil (1.0% sulfur) per box

(2) Fuel use and fruit throughput reduced to achieve SO_2 emission goal.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Memorandum

Florida Department of Environmental Protection

To: John Koogler

From: Joe Kahn

Date: December 9, 1999

Re: Duda Citrus Belle, Fuel Oil Limit

I've reviewed your proposal to limit fuel oil sulfur concentration and consumption to comply with the requirements of small boiler BACT and I agree with the concept, but I have concerns about the fuel consumption you've proposed. You have proposed to limit fuel consumption to the "base" case, or essentially the maximum level of consumption that will conform with the SO_2 limit requested to avoid PSD. I don't believe that this level of emissions constitutes BACT. Following are my comments, some of which will be incorporated into the small boiler BACT determination. I have proposed below two alternatives which accommodate the request to fire the same %S fuel in all sources, but which result in emission reductions that I believe meet BACT. Basically, your client needs to select from the alternatives I present here, and whatever alternative is selected will be the BACT limit. Note that we cannot approve a blanket fuel consumption limit for the dryer and boilers combined because the emission rates of NOx are not the same in the boilers and dryer. We can limit fuel consumption for the boilers combined, because they are similar, with a separate limit for the dryer, with half of the total fuel consumption limit going to the boilers and half to the dryer.

Because total SO_2 emissions are proposed to be capped at or below 129 tons per year, the base case analysis is constrained by the SO_2 cap and must already account for some measure of control of SO_2. Using this "controlled" base case results in an inordinately high control cost for firing 0.05% S fuel in boiler #3, in terms of $/ton controlled. The applicant cannot simultaneously request a cap on emissions and benefit from that cap in performing its cost analysis. Clearly, some measure other than $/ton controlled is needed to make the BACT determination; in this case I believe it should be based on the incremental cost of control per box of fruit or gallon of juice.

The degree of emissions reduction should be determined as the difference between a base case – essentially the maximum allowable emissions that will avoid PSD per the applicant's request – and a controlled case. Considering the cap, the base case must be the highest level of emissions from boiler #2 and the dryer firing essentially all of the fuel oil, and this case will determine the maximum sulfur content that could be used by the applicant in any scenario. Considering the latest fuel information you supplied, firing fuel oil of 0.7% sulfur at the 6.5 million box level (351,000 million Btu per year, derived from 54,000 Btu/box times 6.5 million boxes) will result in SO_2 emissions that exceed the 129 ton per year emission cap. (Stoichiometrically, SO_2 emissions are approximately 135 tons per year in that scenario.) Limiting total fuel consumption to 2,247,000 gallons per year, at 0.7% sulfur, (334,800 million Btu/year, or about 6.2 million boxes of fruit at the applicant's current Btu/box estimate) will reasonably assure compliance with the cap. So this level of emissions, 129 tons per year, will be used as the base case. The controlled case is the level of emissions assuming that the dryer produces half of the base-case heat input from firing 0.7% sulfur fuel, boiler #3 produces 90% of the remaining heat input from firing 0.05% sulfur fuel, and boiler #2 produces the other 10% of the remaining heat input, firing 0.7% sulfur fuel. This controlled level of emissions is about 75 tons per year, a reduction of 54 tons per year. Based on the latest fuel costs, the incremental cost associated with this scenario is $222,800 per year ($1,665,148 – 1,442,336).

Memo to John Koogler
Re: Duda Citrus Belle
December 9, 1999

On a production basis, the incremental cost of control using the controlled case is $222,800 divided by 6.2 million boxes of fruit, or $0.036/box. If each box produces approximately 52.5% juice, or approximately 5 gallons of single strength juice, the incremental cost is 0.72 cents per gallon. To provide a simple basis for comparison, the least expensive 64 ounce carton of grapefruit juice costs $2.39 at the Winn-Dixie store next to the division's offices, so the incremental cost of control would add 0.36 cents to this cost, or raise the cost some 0.15%. This seems reasonable to me.

The equivalent level of emissions could be attained by firing the same fuel oil in all three combustion sources, per the applicant's request. Using 0.7% sulfur fuel oil, fuel consumption would have to be limited to 1,305,000 gallons per year (the equivalent of about 3.6 million boxes of fruit) to have equivalent emissions. The incremental cost associated with this scenario is not calculable because fuel consumption and expense are less than the base case. At 0.5% sulfur, the fuel consumption limitation could be raised to 1,862,000 gallons per year (equivalent to about 5.0 million boxes of fruit).

While fruit processing capacity would not be limited to these low numbers, any additional fruit processing capacity desired by your client would have to come from improvements in fuel efficiency or obtaining additional heat from firing natural gas. (We will have to separately evaluate whether a cap on natural gas usage is required ensure the facility will not exceed the requested NOx cap. To simplify the accounting for NOx, it may be advisable for us to express any NOx limits in terms of lb/mmBtu for both the boilers and the dryer.)

Please consult with your client and advise me of the choice between these alternatives. You can reach me at 850-921-9519. Thanks.

Copy to: Mara Nasca, SD

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

MEMORANDUM

KA 633-99-01

RECEIVED
DEC 06 1999
BUREAU OF AIR REGULATION

VIA FAX AND MAIL

TO: Joe Kahn

FROM: John Koogler

DATE: December 3, 1999

SUBJECT: Duda Citrus Belle
DEP File No. 0510004-002-AC
Fuel Oil Limit

To confirm our telephone conversation of this date, Citrus Belle is willing to accept a fuel oil use cap for their citrus processing plant of 2,371,850 gallons per year with the sulfur content of this fuel oil being limited to 0.7 percent. This fuel cap will result in a potential sulfur dioxide emission rate of 126.1 tons per year (see Table 4 of our October 22, 1999, letter to Phil Barbaccia). The facility SO_2 emission cap to avoid a PSD review is 129.0 tons per year.

We would prefer that this fuel cap be a facility-wide cap (for the boilers and the peel dryer combined). As the cap is meant to assure compliance with the SO_2 emission cap and no credit is assumed for SO_2 sorption in either the boilers or the dryer, the equipment in which the fuel is combusted is not relevant.

If any other clarification is required on this matter, please do not hesitate to contact me at 352-377-5822.

C: Ms. Mara Nasca
Mr. Chuck Harvey
Mr. Henry Heisler

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 633-99-01

November 30, 1999

VIA FAX AND MAIL

Mr. Philip A. Barbaccia
District Air Program Administrator
Florida Department of Environmental Protection
PO Box 2549
Ft Myers FL 33902-2549

Subject: Hendry County AP
Duda & Son Inc./Citrus Belle
DEP File No. 0510004-002-AC
Additional Information Requested November 23, 1999

Dear Mr. Barbaccia:

This letter is in response to your letter dated November 23, 1999, requesting a certification signed by a Responsible Official of Duda Citrus Belle that no projects have been undertaken at the facility subsequent to August 1980 that would have triggered PSD review and requesting information on peel oil recovery and VOC destruction efficiency in the peel dryer. The certification that will be signed by Charles Harvey, Vice President and General Manager of Citrus Belle, will be provided under separate cover.

Regarding the oil recovery and the destruction of VOC in the peel dryer, we have discussed our best estimates of both with your staff and with Joe Kahn. The updated application for an air construction permit, presently in your office, represents that estimate and is based on processing 7.5 million boxes of fruit per year with an available oil content of 3.29 million pounds per year. Our best estimate of the partitioning of the available oil is:

Total recovered	45.4 percent
Destroyed in dryer	23.4 percent
Remaining in pellets	2.2 percent
Emissions from dryer and cooler	29.0 percent
TOTAL	100 percent

This partitioning is consistent with the VOC emission rate requested in our application and represents a VOC emission rate increase that is less than significant.

As discussed in our October 22, 1999, letter to you (Response No. 18), this is our best estimate of peel oil distribution in the Citrus Belle feed mill based on information from several plants and other sources. As we stated in that letter:

> "While the VOC emission rate from the peel dryer is dependent upon these factors [VOC destruction efficiency and the dryer exhaust recirculation rate], it is also dependent upon the oil recovery efficiency. The oil recovery efficiency consistent with the estimated VOC destruction efficiency and the dryer gas recirculation rate is 45 percent. All of these factors are mutually dependent and it is our opinion that there is not enough presently know about dryer operations or the variability in these performance factors to establish VOC destruction, the dryer exhaust gas recirculation rate or oil recovery efficiency as independent permit conditions."

It is my opinion that there is not enough presently known about the operation of the Citrus Belle plant to commit to a specific level of peel oil recovery or a specific VOC destruction efficiency in the dryer. Furthermore, it is my opinion that there is no rule requirement that such commitments be made at this time. Presently, we can only commit to a combination of the aforementioned factors that will result in the VOC emission rate requested in our application.

Once the plant is operating and tested it may be found that factors affecting VOC emissions will result in a lower VOC emission rate than we requested. Whether this is the case or whether Citrus Belle will be operating near the requested VOC emission limit, parametric monitoring (suggested in our updated October 22, 1999, letter) will be conducted to track the performance of the feed mill. This monitoring will include the recovery of various peel oil fractions and measures of dryer operations.

We are also of the opinion that the statement made in your letter of November 23, 1999, regarding the possible addition of a thermal oxidizer or the necessity of a PSD permit is unwarranted. In our permit application, we have provided your office with documentation of baseline emissions, proposed emission limits that represented less than significant increases and all regulated pollutants, and have suggested parametric monitoring to track the performance of the feed mill. The information provided is based on my professional opinion which, in turn, is based on permitting and testing at other citrus processing plants and the review of emission data and permitting data from other plants. It is my professional opinion

that all of the emission limits requested in the Citrus Belle permit application are reasonable and achievable and are supported by data that we have provided the Department.

I trust that this information and the Certification provided under separate cover will provide your office with all of the information required to deem our permit application complete. As you will recall, the Consent Order entered into by Citrus Belle and the Department requires that the permit application be complete by the 45th day after the execution of the Order. According to our records, this would require us to have all of the information necessary to complete the application to your office by December 3, 1999. If there are any questions regarding this information, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

C: Mr. Charles Harvey
Mr. Henry Heisler
Mr. Joe Kahn

DEPT. OF ENVIRONMENTAL PROTECTION
SOUTH DISTRICT, P. O. Box 2549, FT. MYERS, FL 33902-2549
TELEPHONE NO.: (941) 332-6975 FAX NO.: (941) 332-6969
SUNCOM NO.: 748-6975 FAX SUNCOM NO: 748-6969

FAX TRANSMITTAL LETTER

TO:

NAME: Joe Kahn DATE 12-01-99

AGENCY:

TELEPHONE NO.: FAX NO.: 850-922-6979

NUMBER OF PAGES INCLUDING COVER SHEET: 4

FROM:

NAME: MARA G. NASCA

IF ANY PAGES RE NOT CLEARLY RECEIVED, PLEASE CALL IMMEDIATELY!

COMMENTS: Hope you're feeling better!

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

KA 633-99-01

November 30, 1999

VIA FAX AND MAIL

Mr. Philip A. Barbaccia
District Air Program Administrator
Florida Department of Environmental Protection
PO Box 2549
Ft Myers FL 33902-2549

Subject: Hendry County AP
Duda & Son Inc./Citrus Belle
DEP File No. 0510004-002-AC
Additional Information Requested November 23, 1999

Dear Mr. Barbaccia:

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Regarding the oil recovery and the destruction of VOC in the peel dryer, we have discussed our best estimates of both with your staff and with Joe Kahn. The updated application for an air construction permit, presently in your office, represents that estimate and is based on processing 7.5 million boxes of fruit per year with an available oil content of 3.29 million pounds per year. Our best estimate of the partitioning of the available oil is:

Total recovered	45.4 percent
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Emissions from dryer and cooler	29.0 percent
TOTAL	100 percent

This partitioning is consistent with the VOC emission rate requested in our application and represents a VOC emission rate increase that is less than significant.

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> "While the VOC emission rate from the peel dryer is dependent upon these factors [VOC destruction efficiency and the dryer exhaust recirculation rate], it is also dependent upon the oil recovery efficiency. The oil recovery efficiency consistent with the estimated VOC destruction efficiency and the dryer gas recirculation rate is 45 percent. All of these factors are mutually dependent and it is our opinion that there is not enough presently know about dryer operations or the variability in these performance factors to establish VOC destruction, the dryer exhaust gas recirculation rate or oil recovery efficiency as independent permit conditions."

It is my opinion that there is not enough presently known about the operation of the Citrus Belle plant to commit to a specific level of peel oil recovery or a specific VOC destruction efficiency in the dryer. Furthermore, it is my opinion that there is no rule requirement that such commitments be made at this time. Presently, we can only commit to a combination of the aforementioned factors that will result in the VOC emission rate requested in our application.

Once the plant is operating and tested it may be found that factors affecting VOC emissions will result in a lower VOC emission rate than we requested. Whether this is the case or whether Citrus Belle will be operating near the requested VOC emission limit, parametric monitoring (suggested in our updated October 22, 1999, letter) will be conducted to track the performance of the feed mill. This monitoring will include the recovery of various peel oil fractions and measures of dryer operations.

We are also of the opinion that the statement made in your letter of November 23, 1999, regarding the possible addition of a thermal oxidizer or the necessity of a PSD permit is unwarranted. In our permit application, we have provided your office with documentation of baseline emissions, proposed emission limits that represented less than significant increases and all regulated pollutants, and have suggested parametric monitoring to track the performance of the feed mill. The information provided is based on my professional opinion which, in turn, is based on permitting and testing at other citrus processing plants and the review of emission data and permitting data from other plants. It is my professional opinion

Mr. Philip A. Barbaccia
Florida Department of
Environmental Protection

November 30, 1999
Page 3

that all of the emission limits requested in the Citrus Belle permit application are reasonable and achievable and are supported by data that we have provided the Department.

I trust that this information and the Certification provided under separate cover will provide your office with all of the information required to deem our permit application complete. As you will recall, the Consent Order entered into by Citrus Belle and the Department requires that the permit application be complete by the 45th day after the execution of the Order. According to our records, this would require us to have all of the information necessary to complete the application to your office by December 3, 1999. If there are any questions regarding this information, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

C: Mr. Charles Harvey
Mr. Henry Heisler
Mr. Joe Kahn

ENVIRONMENTAL SERVICES

MS 5505

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Joseph Kahn
2.
3.
4.
5.

PLEASE PREPARE REPLY FOR:

_____ SECRETARY'S SIGNATURE

_____ DIV/DIST DIR SIGNATURE

_____ MY SIGNATURE

_____ YOUR SIGNATURE

_____ DUE DATE _____

ACTION/DISPOSITION

_____ DISCUSS WITH ME

_____ COMMENTS/ADVISE

_____ REVIEW AND RETURN

_____ SET UP MEETING

_____ FOR YOUR INFORMATION

_____ HANDLE APPROPRIATELY

_____ INITIAL AND FORWARD

_____ SHARE WITH STAFF

_____ FOR YOUR FILES

COMMENTS:

FROM: SO Dist DATE: 11-23-99 PHONE: SC 748-6945

DEP 15-026 (12/93)

Department of Environmental Protection

COPY

Jeb Bush
Governor

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

David B. Struhs
Secretary

November 23, 1999

RECEIVED
NOV 29 1999
BUREAU OF AIR REGULATION

Mr. John B. Koogler
Koogler & Associates
4014 NW 13th Street
Gainesville, FL 32609

Re: Hendry County AP
Duda & Sons, Inc./Citrus Belle
DEP File No. 0510004-002-AC
Request for Additional Information Regarding
PSD Synthetic Minor Construction Permit
EMA – Caloosahatchee to Lee Coast

Dear Mr. Koogler:

The requested additional information for the PSD synthetic minor application for the A. Duda & Sons, Inc./Citrus Belle was received and reviewed on October 26, 1999. In order to continue processing the application, the Department will need the following additional information pursuant to Rule 62-213.420(1), Florida Administrative Code (F.A.C.), and Rule 62-4.070(1), F.A.C. 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. Submit certification, signed by the responsible official, that no changes have occurred that would trigger PSD review at the facility, other than the current project, since the applicability date of August 1980.

2. Please submit your commitment to a minimum level of oil recovery and destruction efficiency, as discussed with Joseph Kahn, DEP Tallahassee, during the initial stages of this project. The original proposal of 58% oil recovery was discussed with the possibility of even a higher level. We need to agree on an oil recovery limit that is frequently and easily measurable and that will assure compliance. Provide assurance that the burner will achieve the high level of destruction efficiency assured in the potential to emit calculations. What changes will be made to the dryer burner to assure the high level of destruction? Alternative solutions such as the addition of an incinerator or obtaining a PSD permit may have to be considered if a commitment to a high level of oil recovery and destruction can not be made and measured.

Continued . . .

If you have any questions, please call Mara G. Nasca at (941) 332-6975, Ext.188. Your cooperation is appreciated.

Sincerely,

Philip A. Barbaccia
District Air Program Administrator

PAB/MGN/klm

Copy to:

Charles H. Harvey, General Manager
Joseph Kahn, FDEP

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 633-99-01

November 15, 1999

Ms. Mara Masca
Florida Department of
Environmental Protection
2395 Victoria Avenue, Suite 364
Ft. Myers, FL 33902

Subject: Duda Citrus Belle
FDEP File No. 051004-002-AC
Additional Information

Dear Mara:

I have had the opportunity to talk with Joe Kahn on several occasions lately and during one of the conversations, he mentioned that some additional information would be requested to supplement the material that was forwarded to your office in my letter of October 22, 1999. Each of the issues discussed with Mr. Kahn are addressed in the following paragraphs.

Oil Content of Incoming Fruit

Citrus Belle measures the oil content of incoming fruit three times per week. This is done by collecting representative samples of the fruit being processed and measuring the oil content (available oil) using standard industry procedures.

Verification of Fuel Oil Prices

Attached hereto is a November 12, 1999, pricing schedule for various fuel oils that could be used in the dryer and boilers at Citrus Belle. As a note of clarification, prices are quoted for oil with 1.0, 0.7, 0.5 and 0.05 percent sulfur. In my October 22, 1999, letter, I had also included prices for fuel oil containing 0.9, 0.8 and 0.6 percent sulfur. The prices for these fuels were estimated based on the prices for the fuels with 1.0, 0.7 and 0.5 percent sulfur.

Regarding the current pricing, it will be noted that it differs significantly from the prices I used when preparing my October 22, 1999, letter. The price differences are the result of normal fluctuations in fuel oil prices. Even the cost differential between the various grades of fuel fluctuate.

I have checked some of the cost figures presented in Tables 2, 3 and 4 of my October 22, 1999, letter using current fuel oil process. While the cost of SO_2 control differs (being generally lower with current oil prices), the conclusions reached in my earlier letter regarding BACT remain unchanged.

Water Trap for Controlling Particulate Matter Emissions from Lime Silo

Mr. Kahn inquired about the availability of water near the lime silo. Citrus Belle has informed that a water line exists within 10-12 feet of the water trap. As a result, it will be quite convenient for Citrus Belle personnel to check the water level in the trap periodically as proposed in my October 22, 1999, letter and to maintain an adequate water level in the trap.

Type of Wastewater Treatment System

Presumably, as a result of my comment that VOC emissions from the wastewater treatment process are unquantifiable (see Item 12 of my October 22, 1999, letter), we were asked to provide information on the type of wastewater treatment system now used at Citrus Belle. The wastewater treatment involves the distribution of the untreated wastewater by sheet-flow over a 52 acre percolation field. The organics in the wastewater are aerobically reduced at the surface while the water percolates into the aquifer. As stated in my previous letter, there are no known emission factors for estimating VOC emissions from this type of wastewater treatment system.

Determination of Moisture Evaporated in the Dryer

The moisture content of the press cake and the pellets will be determined daily. Also, the amount of bone dry peel processed will be determined each day. Based on knowledge of the quantity of bone dry peel passing through the dryer and the moisture content of the press cake and pellets, the amount of moisture evaporated in the dryer can be determined on a daily basis. This factor can be incorporated into the parametric monitoring if required.

* * *

To the best of my recall, these are the issues that I verbally discussed with Mr. Kahn. Hopefully, I have interpreted our discussion accurately and have provided

all of the additional information required. As required by the Consent Order entered into by Citrus Belle and the Department, it is our intent to have all of the information necessary to complete this permit application to your office by December 3, 1999; the 45th day after the execution of the Consent Order according to our records. Keeping this date in mind, we would appreciate it if you will expedite any further requests for information.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

C: Mr. Charles Harvey, Citrus Belle
Mr. Henry Heisler, Citrus Belle
Mr. Joe Kahn, FDEP, Tallahassee

Coastal
The Energy People

November 12, 1999

Mr. Wayne Lofton
A. Duda & Sons Citrus
Highway 29 South
LaBelle, FL 33935

Dear Wayne,

As requested, the following shows current pricing and the BTU content of #6 Fuel Oils, #5 Fuel Oil, #4 Fuel Oil and Low Sulphur Diesel Fuel.

	Current delivered price	Typical BTU content
1.0% Sulfur #6 Fuel Oil	$.6371 per gallon	151,000 per gallon
0.7% Sulfur #6 Fuel Oil	$.6419 per gallon	149,000 per gallon
1.0% Sulfur #5 Fuel Oil	$.6443 per gallon	148,000 per gallon
0.5% Sulfur #4 Fuel Oil	$.6764 per gallon	145,000 per gallon
.05% Sulfur #2 Diesel Fuel	$.7986 per gallon	138,000 per gallon

Please call if you need additional information. Thank you very much for your business.

Sincerely,

Michael Piermatteo
Coastal Refining & Marketing

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 633-99-01

October 22, 1999

Mr. Philip A. Barbaccia
Environmental Administrator
Program Administration
Waste Management
Florida Department of
Environmental Protection
2295 Victoria Avenue, Suite 364
Ft. Myers, FL 33901

Subject: Duda Citrus Belle
DEP File No. 0510004-002-AC
Additional Information

Dear Mr. Barbaccia:

The following information is submitted in response to your letter of October 5, 1999. Information is provided for each request and we have maintained the same numbering for ease of reference.

1. PSD applicability

(A) Have there been any changes that would result in d-bottlenecking.
(B) Has any ancillary equipment been added to the facility or has any equipment been modified.

As stated in previous correspondence, there have been no changes to either the juice plant or feedmill since the plant began operation during the 1973/74 season that would have de-bottlenecked the plant. Likewise, no ancillary equipment or other equipment has been added to the facility and no equipment or processes have been modified.

No additional juice extractors were added between the time the plant was constructed and the conclusion of the 1998/99 citrus processing season. One extractor was removed three years ago however; reducing the number of extractors from 13 to 12. Associated with the current expansion project, the number of extractors has been increased from 12 to 21.

2. Apparent discrepancy in potential and requested sulfur dioxide emissions.

The apparent discrepancy in SO_2 emissions is due to the fact that SO_2 emissions are a function of fuel use (related to fruit throughput), the sulfur content of the fuel oil and the SO_2 emission cap developed to avoid the PSD permitting process. The only one of these factors that will not change is the SO_2 emission cap of 129 tons per year. The fuel use for the boilers and dryer is a function of fruit throughput with a requested upper limit on fruit throughput in the permit application of 7.5 million boxes per year. It is anticipated that in the 1999/2000 citrus season, Citrus Belle will process approximately 5.0 million boxes of fruit and in subsequent seasons, fruit processing is expected to be in the range of 6.5 million boxes of fruit per season. The 7.5 million box per year limit requested in the permit application is to provide Citrus Belle with flexibility to operate into the foreseeable future with a reasonable margin of safety.

As the fruit throughput increases and fuel use correspondingly increases, the sulfur content of fuel oil will have to be reduced in order that the SO_2 emission cap (129 tons per year) will not be exceeded as shown in the following table.

TABLE 1

Boxes Of Fruit Processed (million boxes/year)	Fuel Oil Sulfur (%)	Expected SO_2 Emissions (tpy)[1]	SO_2 Emission Cap (tons/year)
4.5	1.0	127.2	129
5.0 [2]	0.9	126.4	129
5.7	0.8	127.1	129
6.6 [3]	0.7	128.0	129
7.5 [4]	0.6	123.9	129

(1) Based on fuel use of 0.18 gal/box for boilers and 0.18 gal/box for the dryer.
(2) Anticipated throughput in 1999/2000 season.
(3) Anticipated throughput in 2000/2001 and beyond season.
(4) Maximum permitted fruit throughput.

The data in the table demonstrate that if the fruit processing rate does not exceed 4.5 million boxes per year, the sulfur content of the fuel oil used in the boilers and the dryer can be at 1.0 percent without exceeding the SO_2 emission cap. With a fruit processing rate of 5.0 million boxes per year (anticipated for 1999/2000), the sulfur content of the fuel oil will have to be limited to 0.9 percent; for a fruit processing rate of 6.5 million boxes per year (2000/2001 and beyond), the fuel sulfur content will have to be limited to 0.7 percent or less; and for a fruit processing rate of 7.5 million boxes per year (permit limit), the fuel sulfur content will have to be limited to 0.6 percent or less.

The apparent discrepancy that was referenced resulted from comparing the prorated portion of the SO_2 emission cap assigned to the boilers (70.9 tons per year in the original application) with the SO_2 emissions resulting from the boiler fuel required to process 7.5 million boxes of fruit per season at a fuel sulfur content of 1.0 percent (the upper limit requested for fruit throughput and fuel sulfur).

We are requesting a facility-wide SO_2 emission cap of 129 tons of SO_2 per year or less; the cap established to avoid PSD permitting or a lower cap necessary to satisfy BACT (see response to Item 4). Half of the cap (64.5 tpy) will be assigned to the boilers and half will be assigned to the dryer. We are further requesting that a variable fuel oil sulfur content (1.0 percent, maximum) be permitted as long as neither the SO_2 emission cap nor the BACT emission cap is exceeded. The variable fuel oil sulfur content will allow Citrus Belle to take advantage of fuel oil price swings throughout the year while still complying with SO_2 emission limits

Compliance with the emission cap is discussed in the response to Item 4.

3. Boiler fuel

Citrus Belle is requesting the option to use either fuel oil or natural gas (when it becomes available) to fire the two boilers and the dryer. The calculated emission rates of regulated air pollutants from the boilers are based on emission factors from AP-42, Section 1.3 (fuel oil) and Section 1.4 (natural gas). The emission factor resulting in the highest emission rate of a pollutant was selected so that either fuel (oil or natural gas) could be used exclusively without exceeding the established emission caps. Specifically, emission rates for CO and VOC were based on firing natural gas while the emission rates for particulate matter, sulfur dioxide and nitrogen oxides are based on firing fuel oil.

4. BACT for Boiler No. 3

Department Rule 62-296.406, FAC, requires a Best Available Control Technology (BACT) Determination for particulate matter and sulfur dioxide for boilers with a heat input of less than 250 MMBtu per hour permitted after July 15, 1989. This rule applies to Boiler No. 3. Boiler No. 2 was permitted in 1972 and historically has burned No. 6 fuel oil with a 1.0 percent sulfur content. No. 6 fuel oil with a 1.0 percent sulfur content has also been proposed for the replacement peel dryer, as it is not subject to BACT.

This BACT analysis evaluates the costs (dollars per ton of SO_2 removed) associated with firing fuels of varying sulfur content in all three emission units as well as the costs of firing 1.0 percent sulfur fuel in existing Boiler No. 2 and the peel dryer while adding a separate tank and firing a lower sulfur fuel in Boiler No. 3. The BACT analysis also takes into consideration varying fruit processing rates. As pointed out in the response to Item 2, the allowable fuel sulfur content will vary with fruit processing rate as a result of the 129 ton per year SO_2 emission cap for the facility. BACT for particulate matter was assumed to be controlled by the BACT for SO_2, as PM emissions are a function of the sulfur content and/or the grade of oil.

Table 1 contains the properties and costs of the various fuel oils investigated. The table also contains the cost of adding a separate fuel tank necessary to provide lower sulfur fuel to Boiler No. 3

Tables 2, 3, and 4 are BACT analyses for fruit throughput rates of 4.5, 5.0 and 6.5 million boxes of fruit per season, respectively. It should be noted that these analyses were prepared assuming baseline heat input rates based on the use of 0.18 gallons of No. 6 fuel oil with 1.0 percent sulfur per box of fruit for the boilers (collectively) and 0.18 gallons of the same fuel oil per box of fruit for the dryer. The characteristics of a No. 6 fuel oil with a 1.0 percent sulfur content were used to establish the baseline for fuel consumption, as this was the fuel historically used by Citrus Belle. It was further assumed that Boiler No. 3 will burn 90 percent of the fuel fired to the boilers, and Boiler No. 2 will burn the remaining 10 percent of the boiler fuel.

Each of the BACT analyses begins with a base case. This case has been defined as all three ernission units firing the same fuel oil with the maximum sulfur content possible without exceeding the SO_2 emission cap (129 tons per year). For a fruit processing rate of 4.5 million boxes per season, the base case sulfur content is 1.0 percent; resulting in an annual SO_2 emission rate of 127.2 tons per year. This case is presented primarily because the base case fuel oil is the fuel that Citrus Belle has historically used (No. 6 fuel oil with 1.0 percent sulfur). For the 1999/2000 processing season, Citrus Belle anticipates

processing approximately 5.0 million boxes of fruit. As a result, the base case for the BACT analysis with 4.5 million boxes of fruit per season may not be a viable option.

For a fruit processing rate of 5.0 million boxes per season, the base case fuel sulfur content is 0.9 percent. The BACT analysis shows the effect of continuing to burn No. 6 fuel oil with 1.0 percent sulfur in Boiler No. 2 and the dryer while adding a separate tank and firing fuel oil with 0.7, 0.5 and 0.05 percent sulfur to Boiler No. 3. The incremental cost of SO_2 control (dollars per ton of SO_2 removed) ranges from $4,925 to $6,413 per ton; unreasonably high costs. The BACT analysis also considers the option of firing all emission units with fuel oil with 0.7, 0.5 and 0.05 percent sulfur. The option with all emission units firing fuel oil with 0.7 percent sulfur is the most cost effective. [It should be noted that the same general conclusion is reached in the BACT analysis for a 4.5 million box per season processing rate.] This option will result in an annual SO_2 emission rate of 97 tons per year (well below the emission cap of 129 tons per year), an incremental control cost of $1,115 per ton of SO_2 removed, and will add approximately $33,000 per year to the annual operating cost of the feed mill. Other options result in SO_2 emission rates greater than 97 tons per year, higher SO_2 removal costs and/or much greater increases in annual operating cost.

For a fruit processing rate of 6.5 million boxes per season, the base case results in all units firing fuel oil with 0.7 percent sulfur; the fuel oil that is most cost effective for reducing SO_2 emissions when processing fruit at lower seasonal throughput rates. For the other fuel firing options while processing 6.5 million boxes per season, the incremental SO_2 control costs and increases in annual operating costs are unreasonably high.

If more than 6.5 million boxes of fruit are processed in a season, the sulfur content of all fuels must be reduced to 0.6 percent or less, or natural gas must be fired (see Table in response to Item 2).

Based on the above analyses, it is concluded that BACT (forced by the required BACT analysis for Boiler No. 3) is the use of a residual fuel oil with 0.7 percent sulfur in all three emission units. As BACT is required only for Boiler No. 3 and Citrus Belle is proposing to reduce the sulfur content of fuel fired to all three emission units, it is only fair to view the effect of the proposed BACT in terms of Boiler No. 3. The effect of burning fuel oil with a 0.7 percent sulfur content in all emission units is equivalent to burning a permittable fuel oil with 1.0 percent sulfur in the dryer and Boiler No. 2 and burning fuel oil with about 0.3 percent sulfur in Boiler No. 3 for fruit processing rates up to 6.5 million boxes per year (from Tables 2-4).

To put SO_2 limits in a permittable and enforceable format considering our responses to Items 2, 3 and 4, the following is proposed. The fruit processing limit while using fuel oil with 0.7 percent sulfur is 6.5 million boxes per year and the fuel use limit is 2,371,850 gallons per year; half to the boilers and half to the dryer (Table 4). The facility-wide fuel use is equivalent to 0.365 gallons of fuel oil per box of fruit. It is proposed that a fuel cap of 0.1825 gallons of fuel oil per box of fruit be imposed on both the boilers (combined) and the dryer. It is further proposed that the sulfur content of the fuel oil be limited to 0.7 percent, annual average, for fruit processing rates up to 6.5 million boxes per year. For fruit processing rates above 6.5 million boxes per year (up to the permitted limit of 7.5 million boxes per year), the sulfur content of the fuel oil must be limited to 0.6 percent, annual average, or natural gas must be used.

Compliance with the two fuel oil use caps and the annual average fuel oil sulfur content will be demonstrated by recording the following:

Fruit processed (boxes)
Fuel oil deliveries (gallons and sulfur content, each load)
Fuel oil consumed (dryer and boilers combined)

From these records, the fuel oil consumed per box of fruit can be calculated for the dryer and boilers as can the average fuel sulfur content (Note, the same oil is fired to both the boilers and dryer; hence, the sulfur content of fuel to both will be identical). Running totals can also be maintained to assure compliance with the fuel use caps and SO_2 emission caps.

For natural gas, the following permit limit is proposed. Based on historic records of fuel use, the heat input requirement (boilers and dryer) is 54,000 Btu per box of fruit. This is equivalent to 52.7 cubic feet of natural gas per box of fruit or about 400 million cubic feet of natural gas for processing 7.5 million boxes of fruit. As the original permit application demonstrated that up to 725 million cubic feet of natural gas can be burned without causing any of the emission caps to be exceeded, it is proposed that a single cap for natural gas of 200 million cubic feet per year be imposed for the dryer and a similar limit be imposed for the boilers (combined), regardless of the fruit processing rate.

5. Availability of natural gas.

Citrus Belle has been informed that natural gas should be available at the site sometime in 2001. The company is willing to commit to firing natural gas when it is available, so long as the cost of firing natural gas is reasonable compared to the cost of firing fuel oil. Citrus Belle is of the opinion that a reduction in allowable fuel oil consumption when natural gas becomes available is not a wise

decision because of possible economic ramifications. If the cost of natural gas was to escalate unreasonably with the respect to the cost of fuel oil after Citrus Belle agreed to reduce fuel oil consumption, Citrus Belle would be placed at an economic disadvantage compared with other producers. As stated, Citrus Belle is willing to commit to firing natural gas if the cost is comparable to fuel oil and in doing so, the consumption of fuel oil will be reduced. Citrus Belle does however, wish to retain the option of firing fuel oil 100 percent of the time for reasons stated.

Modifications required to convert to natural gas firing will involve the installation of a conversion valve on the two boilers and the dryer.

6. Heat input rate to dryer.

The 2.25 billion Btu per year heat input while firing oil was based on the heat input required to process 7.5 million boxes of fruit. The heat input of 4.74 billion Btu per year while firing natural gas was based on the dryer operating 8760 hours per year. The segment information has been revised to reflect a fruit processing rate of 7.5 million boxes per year and to reflect fuel use rates that are proportional. Overall, fuel consumption rates have been reduced as discussed in response to Item 4. The revised permit application pages are attached.

7. Emission factors for NOx, SO_2, PM, CO and VOC.

Even though the boilers (collectively) and dryer have the same fuel consumption limitation, NOx emissions from the two types of combustion units should not be expected to be the same. The concept of firing a boiler is to transfer as much of the heat as possible from fuel combustion to water to produce steam. As a result, boilers are fired with as little excess air as practical and consequently, create high combustion zone temperatures. In this high temperature zone, atmospheric nitrogen is converted to nitrogen oxides. In the case of the dryer, the concept of firing is to transfer heat from the fuel to air which in turn passes through the rotary peel dryer drying the peel. As a result, the dryers are fired with greater excess air that results in lower combustion zone temperatures and, hence, lower NOx formation rates.

The emission factors used for estimating NOx emissions from boilers (for both fuel oil and natural gas) are from EPA Publication AP-42. The NOx emission factor for the dryer was calculated to allow as much NOx as possible without exceeding the established NOx emission cap. The resulting NOx emission factor was then compared with emission rates that Koogler & Associates has measured

at other citrus peel dryers to assure that the factor was reasonable and achievable.

The apparent discrepancy in fuel use and potential SO_2 emissions has been explained in response to Item 2. This matter is further clarified in the revised emission estimates attached hereto. The term "process knowledge" to describe an emission factor refers to an emission rate calculated by subtracting boiler emissions (based on EPA emission factors) from pollutant emission caps established to avoid PSD permitting and then confirming that the calculated emission rate (for the dryer and cooler) is achievable and reasonable based on knowledge of other processes (other peel dryers). Furthermore, the factors utilized in establishing the emission caps include the baseline emissions from the existing peel dryer and cooler, calculated emissions from the boilers (using EPA emission factors) and the PSD significant increase caps. The information used to establish the baseline emissions from the existing dryer and cooler was based on material balances, previous measurements from similar facilities and/or reported emission factors. The material balances and measurements from similar sources are also referred to as "process knowledge".

8. Determination of bone dry peel processing rate.

The amount of peel processed is a function of the amount of fruit processed. Accurate records are maintained of daily fruit receipts (boxes of fruit received per day) and fruit and the resulting peel are processed the day received. Therefore, the amount of peel processed on a daily basis can be calculated based on the fruit received that day.

Long-term records at Citrus Belle show that 38 pounds of raw peel (at 85 percent moisture) is generated for each box of fruit processed. This converts to 5.7 pounds of bone dry peel per box of fruit processed. This factor can be reconfirmed on a monthly basis by comparing the quantity of fruit received with the amount of bone dry pellets produced.

The amount of peel (press cake) fed to the dryer on an hourly basis, averaged over a 24-hour period, will be calculated from the amount of fruit processed during the 24-hour period, the calculated quantity of bone dry peel produced per box of fruit, the moisture content of the press cake and the number of hours the dryer operated during the 24-hour period. The moisture content of the press cake will be measured on a daily basis and the hours of dryer operation will be recorded daily and will include only the hours peel was fed to the dryer. It is estimated that the peel (press cake) feed rate to the dryer determined using this methodology will have an accuracy of approximately five percent.

9. Emission point information for the pellet cooler.

Revised page 61 of the permit application containing as much of the emission point information as presently known is attached hereto.

10. Information regarding PM/PM10 and VOC emission factors for the pellet cooler.

The PM/PM10 and VOC emission factors for the pellet cooler are based on information that Koogler & Associates has developed from measurements, calculations or the review of data from other facilities. The proposed emission limit for VOC emissions from the cooler has been increased somewhat to provide a reasonable margin of safety.

11. Information on unregulated and facility-wide fugitive sources.

Lime silo

The lime utilization rate is 0.15 pounds per box of fruit or 563 tons of lime per year at a maximum fruit processing rate of 7.5 million boxes per year. The uncontrolled PM/PM10 emissions associated with transferring this lime from tanker truck to the lime storage silo has been estimated using emission factors from EPA Publication AP-42, Section 11.11. The uncontrolled emission factor for PM/PM10 is 0.48 pounds of particulate matter per ton of material transferred or 0.14 tons per year. It is estimated that the control efficiency of the water trap presently utilized to control emissions for the lime silo is 65 percent. This results in controlled PM/PM10 emissions from the lime silo of 0.05 tons per year.

This information is incorporated in the segment information for facility-wide unregulated and fugitive emissions.

Emergency generator

There is no emergency generator at the Citrus Belle facility.

12. Estimates of facility-wide unregulated and fugitive emissions.

Lime storage and handling

Estimates associated with lime storage were addressed in response to Item 11. The transfer of the lime from the silo to the lime slurry tank is by an enclosed

screw conveyor directly into the slurry tank. No quantifiable emissions are expected from this activity.

Fuel oil storage

VOC emissions estimates from fuel oil storage are based on the use of 2.74 million gallons of residual fuel oil per year and 20,000 gallon fuel tank capacity. This is the quantity of fuel required to process 7.5 million boxes of fruit per year. The estimated VOC emissions associated with fuel storage are 0.02 tons per year assuming the use of No. 2 fuel oil. With a blended fuel oil (required for 0.7 percent sulfur), the emissions will be even less. This information is reported in the revised Segment Information section of the permit application.

Emergency generator

There is no emergency generator at the Citrus Belle facility.

VOC emissions from wastewater treatment

VOC emissions from wastewater treatment are unquantifiable. There are no known emission factors for estimating VOC emissions from the treatment of citrus plant wastewater.

13. Lime silo PM/PM10 emission control.

As addressed in Item 11, the uncontrolled PM/PM10 emissions associated with the lime silo are 0.14 tons per year and estimated controlled emissions are 0.05 tons per year. It is quite apparent that any effort to control this small amount of particulate matter is going to result in a cost of control (dollars per ton of pollutant removed) that is unacceptably high. Citrus Belle proposes to continue using the existing water trap to control emissions from the silo and will commit to inspecting the water trap on a weekly basis and prior to the transfer of lime to the silo to assure that there is adequate water in the trap.

14. Estimated fuel oil use.

Estimated fuel oil use has been revised to 0.18 gallons of fuel oil per box of fruit for the two boilers (collectively) and 0.18 gallons per box of fuel for the dryer. These fuel use rates are slightly higher than historic fuel use rates and are used to provide Citrus Belle with a small margin of safety. As pointed out in your letter, there should be a reduction in fuel requirements as result of the current project.

Citrus Belle agrees but is still proposing the fuel use rates stated herein for permitting purposes.

15. Oil content of pellets and VOC emission factor for the cooler.

The oil content of pellets is not typically measured at Citrus Belle. The value reported in the permit application of 0.0015 pounds of oil per pound of pellets was measured as part of the Florida Citrus Processors/FDEP emission testing program during the 1996/97 season. These data were generated with the feed mill operating under normal conditions and are therefore considered representative of historic plant operation.

The emission factor used to estimate VOC emissions from the cooler stack was 0.64 pounds of VOC per ton of pellets (at 11 percent moisture) or 0.72 pounds of VOC per ton of bone dry pellets. This factor was based on data from the files of Koogler & Associates. The factor was derived from emission measurements made on pellet coolers at other locations. This factor, in our opinion, represents the best available estimate of VOC emissions from pellet coolers.

The proposed VOC emission limit from the pellet cooler has been increased to 2.0 pounds per bone dry ton of peel to provide a reasonable margin of safety in the estimated expected emissions from the pellet cooler. The VOC emissions from the peel dryer have been reduced correspondingly.

16. Proposed peel oil balance.

The proposed peel oil balance is correct. The nomenclature used in the balance is incorrect however and resulted in Comment No. 16. The term "Total (VOC) to dryer" should have read "Total VOC released in dryer". A corrected page has been attached hereto.

17. Peel oil recovery efficiency.

Citrus Belle is of the opinion that the 45 percent oil recovery efficiency will be exceeded once the plant achieves normal operations. The 45 percent recovery efficiency was reported to demonstrate the minimum recovery efficiency necessary to achieve the proposed VOC emission cap of 478.9 tons per year based on the other factors included in the oil balance (oil remaining in pellets, dryer exhaust recirculation and VOC destruction in the dryer). Our conclusion is that the 45 percent recovery efficiency is readily achievable and hence, the 478.9 tons per year emission cap will also be readily achievable.

The recovery efficiency was not presented in the permit application as a surrogate parameter for demonstrating compliance with the VOC emission limit for the dryer nor was it our intention to have it used in that manner. As stated previously, the information was used to provide reasonable assurance that the requested VOC emission cap is achievable.

**18. VOC destruction efficiency in peel dryer.
Recirculation of dryer exhaust gases.
Compliance monitoring and parametric monitoring.**

VOC destruction in peel dryer

Information provided in the permit application included an estimate that 45 percent of the VOC (peel oil) released in the dryer will be combusted in the dryer burner. This destruction efficiency was arrived at by estimating that 50 percent of the dryer exhaust gas will be recirculated back through the dryer burner and 90 percent of the VOC in the recirculated gas will be destroyed in the burner. As the fraction of the gas stream recirculated to the dryer burner will remain essentially the same (50 percent – see below), it is anticipated that the 90 percent VOC destruction efficiency will be maintained over the normal range of dryer operating conditions.

There is no publicly available supporting information or data to justify this destruction efficiency. The estimated destruction efficiency is based on limited proprietary measurements made by Koogler & Associates at two citrus processing plants, discussions with other consultants who have made similar measurements and a material balance supported by emission measurement and plant operating data at another citrus processing plant. As with oil recovery efficiency, the VOC destruction efficiency in the peel dryer was presented in the permit application to support a VOC emission limit that, in our opinion, is reasonable and achievable. The destruction efficiency is not readily measurable and it is not directly verifiable by parametric monitoring. Based on these limitations and the comments in following paragraphs, the destruction efficiency should not be included as a permit condition.

Dryer exhaust gas recirculation rate

The dryer exhaust gas at Citrus Belle discharges into a suction box served by four identical exhaust fans. Two of the exhaust fan discharge to a duct that recirculates exhaust gas to the dryer burner while the other two fans discharge to a duct that exhausts to the waste heat evaporator. As the exhaust fans are identical and both ducts are the same diameter and about equal lengths, it is reasonable to assume that 50 percent of the exhaust gas is recirculated to the

burner while the remaining 50 percent is discharged to the waste heat evaporator. It is expected that this ratio will hold over the normal operating range of the dryer.

Compliance and parametric monitoring

As stated in the previous section of this response, the VOC destruction efficiency and the dryer exhaust recirculation rate were not presented in the permit application as proposed permit conditions or as surrogate parameters for the demonstration of compliance. The information was provided to support our best understanding of dryer performance and to provide justification for a VOC emission limit that, in our opinion, is reasonable and achievable. The VOC destruction estimate, as previously described, was based on limited measurements, discussions with other persons knowledgeable in this area and on material balances. The dryer exhaust gas recirculation rate estimate is based on the design of the dryer exhaust system and our best understanding of the performance of this system. While the VOC emission rate from the peel dryer is dependent upon these factors, it is also dependent upon the oil recovery efficiency. The oil recovery efficiency consistent with the estimated VOC destruction efficiency and the dryer gas recirculation rate is 45 percent. All of these factors are mutually dependent and it is our opinion that there is not enough presently known about dryer operations or the variability in these performance factors to establish VOC destruction, the dryer exhaust gas recirculation rate or oil recovery efficiency as independent permit conditions. Furthermore, to the best of our knowledge, there are no surrogate parameters that can be used on a routine basis to demonstrate VOC destruction efficiency or dryer exhaust gas recirculation rates.

Parametric monitoring and compliance testing requirements are discussed in response to Item 19.

19. Compliance monitoring and parametric monitoring.

SO_2 cap

Citrus Belle is requesting to use a common fuel oil in the dryer and both boilers. A variable sulfur content oil is requested with a 1.0 percent sulfur maximum and a 0.7 percent annual average for fruit processing rates up to 6.5 million boxes per year. If the fruit processing rate exceeds 6.5 million boxes per year (up to 7.5 million boxes), the annual average sulfur content will be limited to 0.6 percent.

To monitor compliance with this cap, Citrus Belle will maintain records of each shipment of fuel oil (quantity and sulfur content) and from these records, will

calculate potential SO_2 emissions. A cumulative total of fuel received (gallons) and potential SO_2 emissions (tons) will be maintained for a 12-month rolling period. Compliance with the annual SO_2 emission cap (129 tpy) and the annual facility-wide fuel use cap (dryer and boilers of 2,737,500 gallons) will be demonstrated by showing the rolling 12-month totals do not exceed the caps.

Boilers

The two boilers at Citrus Belle are package units with burners that automatically adjust the fuel and air flow depending upon the steam demand placed on the boilers. These boilers will be subject to the routine inspection and maintenance plan of Citrus Belle to assure proper operation; therefore assuring that emissions are maintained in the expected range.

Daily records will be maintained of the quantity of fuel oil fired to the two boilers combined (or the natural gas fired to the boilers) as discussed in response to Item 4. This will be part of the record keeping requirements necessary to assure that the boiler fuel use cap is not exceeded.

Dryer

The emissions from the dryer are a function of combustion products, the combustion process and the characteristics of the press cake. Parametric monitoring is proposed to address these three areas.

The burner on the peel dryer is equipped with an Auto-Flame controller that automatically adjusts the air/fuel ratio depending upon the demand of the dryer. This will assure combustion that is as efficient as possible and will require minimal operator attention. This burner will assure that emissions resulting from poor combustion (primarily CO) are minimized to the maximum extent possible. The continued operation of the burner will be assured by a regular inspection and maintenance program. The operation of the burner and dryer can be monitored by the temperature of the dryer exhaust gas. These records will be recorded on a continuous basis.

The fuel fired to the dryer (oil or gas) will be monitored daily and records will be maintained. This is part of the record keeping required to demonstrate that the dryer fuel use cap is not exceeded. These records will also provide assurance that other combustion related emissions remain in the expected ranges.

Press cake and pellet characteristics

The characteristics of press cake that have the greatest influence on emissions are the throughput rate, the moisture content and the oil content. These parameters will be monitored on a daily basis.

The press cake throughput rate is directly related to the amount of fruit received. Historically, the fruit processed by Citrus Belle produces 38 pounds of raw peel (at 85 percent moisture) for each box of fruit processed. This is equivalent to 5.7 pounds of bone dry peel per box of fruit. The dryer throughput, on a daily basis, will be determined by multiplying the number of boxes of fruit processed by 5.7 pounds of bone dry peel per box and converting to the press cake throughput rate by adjusting for press cake moisture. The total press cake for the 24-hour period will be divided by the number of hours the dryer operated during that period.

The moisture content of the press cake will be determined once during each 24-hour period unless variations in operating conditions dictate that additional moisture determinations be made.

The VOC emissions from the dryer and cooler will be a function of the peel oil released in the dryer and cooler and the performance of the dryer and dryer burner as previously discussed. The oil released in the dryer and cooler will be monitored on a daily basis as a function of the difference between the oil content of the press cake and the oil content of the pellets. The oil content of both the press cake and pellets will be determined once a day unless variations in operating conditions dictate that the oil content be determined frequently.

Parametric monitoring and record keeping summary

A summary of proposed parametric monitoring and record keeping is attached.

Emission measurements

Emission measurements and visible emissions observations will be required to demonstrate initial compliance and to develop operating ranges for the surrogate parameters that will be used as an indicator of continuing plant performance.

For the boilers, no emission measurements are proposed, as these emission units are minor sources. Initial compliance and compliance on an annual basis is proposed to be by visible emissions observations and fuel use and fuel sulfur monitoring.

The initial emission measurements proposed for the peel dryer are carbon monoxide, nitrogen oxides, particulate matter (total on a surrogate for PM10) and VOC. Annually, emission measurements are proposed for carbon monoxide and VOC with visible emissions observations as a surrogate for particulate matter emission measurements. Compliance testing for NOx and PM are proposed every five years prior to the time of permit renewal. Compliance with the SO_2 emission limit will be determined by monitoring the quantity and the sulfur content of the fuel oil fired to the dryer.

It is proposed that the pellet cooler be subject to visible emissions observations only. Emission measurements for VOCs should not be required on the cooler unless VOC emissions from the dryer are near the proposed emission cap.

Operating ranges for the surrogate monitoring parameters will be established during the compliance testing period.

20. Past actual PM 10 emissions from the pellet cooler.

The past actual emissions from the pellet cooler have been accounted for and added to the past actual emission summary. The PM emissions from the cooler added less than 0.5 tons per year to past actual PM emissions.

21. Proposed emission rate increases compared with PSD significant increase levels.

The proposed emission rate increases have been reviewed and the increases for NOx and PM10 have been reduced. The emission rate change in VOC emissions as a result of this project already showed a decrease in emissions. The proposed CO emission increase was maintained at 98.2 tons per year and the proposed SO_2 increase was maintained at 39.2 tons per year.

The reduction in the proposed NOx and PM10 increases and the decrease in VOC emissions are based on emission rates from the dryer and cooler that, in our opinion, are reasonable and achievable. The CO emission rate increase remains unchanged, as the resulting CO emission limit for the dryer is as restrictive as Citrus Belle can accept at this time. The SO_2 emission increase was maintained as these emissions can readily be monitored through records of fuel use and fuel sulfur content.

While not an enforceable assurance, it should be recognized that all emission rate increases and the resulting permit limits are based on processing of 7.5 million boxes of fruit per year. For the 1999/2000 season, Citrus Belle is

planning to process 5.0 million boxes of fruit and for following seasons, the fruit processing rate is anticipated to be in the range of 6.5 million boxes. As the permitted emission rates requested by this application are based on actual boxes of fruit processed (tons of bone dry peel processed) and emission caps are based on the processing of 7.5 million boxes of fruit per season, there is an additional safety factor provided to assure that the annual emission caps will not be exceeded. If the annual fruit processing rate approaches 7.5 million boxes of fruit per season and if the actual emissions from the plant are close to the emission limits established by this permit, Citrus Belle will consider other measures to provide assurance that the annual emission caps are not exceeded.

22. Additional equipment.

Associated with this project, the following equipment changes have been made:

(a) The number of extractors (FMC) has been increased from 12 to 21.

(b) A paddle finisher has been added to improve the separation of frit from the two percent oil emulsion.

(c) One additional desludging centrifuge has been added to improve the recovery of cold press oil. The centrifuge is rated at 55 gallons per minute of two percent oil emulsion.

(d) One additional polishing centrifuge has been added to improve cold press oil recovery. The centrifuge is rated at 1.5 gallons per minute of 70 percent oil cream.

(e) The lime addition to the raw peel has been converted from dry lime addition to lime slurry addition and the reaction time of the lime and peel (prior to pressing) has been increased.

(f) A 110,000 pound per hour (peel at approximately 85 percent moisture) dewatering press has been added to reduce the moisture content of raw peel to approximately 70 percent.

(g) One additional vertical peel press rated at 100,000 pounds per hour (wet peel with approximately 70 percent moisture) has been added. This press along with the two existing 100,000 pound per hour vertical presses will reduced the moisture content of press cake to 64-65 percent.

(h) The waste heat evaporator capacity has been increased from 20,000 pounds per hour to 60,000 pounds per hour (water evaporated). This will result in a considerable improvement in d-limonene recovery.

* * * *

I trust that the information provided herein will fully respond to the issues raised in your letter of October 4, 1999, and thereby complete this application. If there should be additional questions or if there are question regarding the information provided, please do not hesitate to contact me at 352-377-5822.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

C: Mr. Charles H. Harvey, General Mgr, Citrus Belle
Mr. Henry Heisler, Plant Mgr, Citrus Belle
Mr. Joe Kahn, FDEP, Tallahassee

TABLE 1

FUEL OIL PROPERTIES AND FUEL TANK COST

CITRUS BELLE
LABELLE, FLORIDA

FUEL OIL PARAMETERS

Fuel Sulfur (%)	Fuel Cost ($/gal)	Fuel Weight (lb/gal)	Heating Value (Btu/gal)	Gal. Fuel Per Box Fruit (gal/box)*	Fuel Cost ($/box)
1.0	0.445	8.21	150,000	0.3600	0.1602
0.9	0.453	8.12	149,300	0.3617	0.1639
0.8	0.460	8.03	148,700	0.3631	0.1670
0.7	0.467	7.94	148,000	0.3649	0.1704
0.6	0.500	7.84	147,000	0.3673	0.1837
0.5	0.532	7.73	146,000	0.3699	0.1968
0.005	0.753	7.21	141,000	0.3830	0.2884

* Based on 0.18 gal/box for boilers and 0.18 gal/box for the dryer of No. 6 oil with 1.0% sulfur.

FUEL TANK COSTS

Tank Cost (30,000 gal)	-	$15,000
Containment	-	14,000
Pump, piping, electrical	-	13,500
Installation	-	7,500
Total Installed Cost		$50,000

Assume 3 year life as gas will be available within this timeframe and 10 percent cost of capital.

Annual Cost = $20,106/year.

TABLE 2
BACT ANALYSIS FOR SO_2 ON THE NO. 3 BOILER AT A FRUIT PROCESSING RATE OF 4.5 MILLION BOXES PER YEAR

CITRUS BELLE
LABELLE, FLORIDA

Boxes Fruit Processed – 4.5 million/season
SO_2 Emission Cap – 129 tpy

Heat input requirements based on 0.18 gal. No. 6 fuel/box of fruit for boilers (collectively) and 0.18 gal. No. 6 fuel/box of fruit for the dryer.

Scenario	Fuel Sulfur (%)	Fuel		SO_2 Emissions (tpy)	Fuel Cost–Increase over Base		SO_2 Reduction from Base Case (tpy)	Cost of SO_2 Control ($/ton)
		Quantity (gal/yr)	Cost ($/yr)		($/yr)	(%)		
Base	1.0	1,620,000	720,000	127.2	-	-	-	-
Case 1								
B2/D (1)	1.0	891,000	396,495	70.0	-	-	-	-
B3 (2)	0.7	738,923	345,077	39.3	-	-	-	-
New Tank	-	-	20,106 (3)	-	-	-	-	-
TOTAL	-	-	761,678	109.3	40,778	5.7	17.9	2,278
Case 2								
B2/D	1.0	891,000	396,495	70.0	-	-	-	-
B3	0.5	749,048	398,493	27.7	-	-	-	-
New Tank	-		20,106	-	-	-	-	-
TOTAL	-		815,094	97.7	94,194	13.1	29.5	3,193
Case 3								
B2/D	1.0	891,000	396,495	70.0	-	-	-	-
B3	0.05	775,575	584,008	2.7	-	-	-	-
New Tank	-	-	20,106	-	-	-	-	-
TOTAL	-	-	1,000,609	72.7	279,709	38.8	54.5	5,132
Case 4								
All	0.7	1,642,050	766,838	87.3	45,938	6.4	39.9	1,151
Case 5								
All	0.5	1,664,553	885,542	61.6	164,643	22.8	65.6	2,510
Case 6								
All	0.05	1,723,500	1,297,796	6.0	576,896	80.0	121.2	4,760

(1) B2 – Boiler No. 2; D – Dryer
(2) B3 – Boiler
(3) See Table 1
Shaded Area – Most cost effective option

TABLE 3
BACT ANALYSIS FOR SO_2 ON THE NO. 3 BOILER AT A FRUIT PROCESSING RATE OF 5.0 MILLION BOXES PER YEAR

CITRUS BELLE
LABELLE, FLORIDA

Boxes Fruit Processed – 5.0 million/season
SO_2 Emission Cap – 129 tpy

Heat input requirements based on 0.18 gal. No. 6 fuel/box of fruit for boilers (collectively) and 0.18 gal. No. 6 fuel/box of fruit for the dryer.

Scenario	Fuel Sulfur (%)	Fuel		SO_2 Emissions (tpy)	Fuel Cost–Increase over Base		SO_2 Reduction from Base Case (tpy)	Cost of SO_2 Control ($/ton)
		Quantity (gal/yr)	Cost ($/yr)		($/yr)	(%)		
Base	0.9	1,808,500	819,250	126.4	-	-	-	-
Case 1								
B2/D (1)	1.0	990,000	448,470	76.9	-	-	-	-
B3 (2)	0.7	821,025	383,419	43.6	-	-	-	-
New Tank	-	-	20,106 (3)	-	-	-	-	-
TOTAL	-	-	851,995	120.5	32,745	4.0	5.9	5,550
Case 2								
B2/D	1.0	990,000	448,470	76.9	-	-	-	-
B3	0.5	832,275	442,770	30.8	-	-	-	-
New Tank	-		20,106	-	-	-	-	-
TOTAL	-		911,346	107.7	92,096	11.2	18.7	4,925
Case 3								
B2/D	1.0	990,000	448,740	76.9	-	-	-	-
B3	0.05	861,750	648,898	3.0	-	-	-	-
New Tank	-	-	20,106	-	-	-	-	-
TOTAL	-	-	1,117,474	79.9	298,224	36.4	46.5	6,413
Case 4								
All	0.7	1,824,500	852,042	97.0	32,792	4.0	29.4	1,115
Case 5								
All	0.5	1.849,503	983,936	68.4	164,686	20.1	58.0	2,839
Case 6								
All	0.05	1,915,000	1,441,995	6.6	622,745	76.0	119.8	5,198

(1) B2 – Boiler No. 2; D – Dryer
(2) B3 – Boiler
(3) See Table 1
Shaded Area – Most cost effective option

TABLE 4
BACT ANALYSIS FOR SO_2 ON THE NO. 3 BOILER AT A FRUIT PROCESSING RATE OF 6.5 MILLION BOXES PER YEAR

CITRUS BELLE
LABELLE, FLORIDA

Boxes Fruit Processed – 6.5 million/season
SO_2 Emission Cap – 129 tpy

27000 Btu

Heat input requirements based on 0.18 gal. No. 6 fuel/box of fruit for boilers (collectively) and 0.18 gal. No. 6 fuel/box of fruit for the dryer.

Scenario	Fuel Sulfur (%)	Fuel		SO_2 Emissions (tpy)	Fuel Cost–Increase over Base		SO_2 Reduction from Base Case (tpy)	Cost of SO_2 Control ($/ton)
		Quantity (gal/yr)	Cost ($/yr)		($/yr)	(%)		
Base	0.7	2,371,850	1,107,654	126.1	-	-	-	-
Case 1								
B2/D (1)	0.8	1,298,083	597,118	79.7	-	-	-	-
B3 (2)	0.5	1,081,958	575,601	40.0	-	-	-	-
New Tank	-	-	20,106 (3)	-	-	-	-	-
TOTAL	-	-	1,192,825	119.7	85,171	7.7	6.4	13,308
Case 2								
B2/D	1.0	1,287,000	572,715	101.0	-	-	-	-
B3	0.05	1,120,275	843,567	3.9	-	-	-	-
New Tank	-		20,106	-	-	-	-	-
TOTAL	-		1,436,388	104.9	328,734	29.7	21.2	15,506
Case 3								
All	0.5	2,404,354	1,279,116	88.9	171,462	15.5	37.2	4,609
Case 4								
All	0.05	2,489,500	1,874,594	8.6	766,940	69.2	117.5	6,527

(1) B2 – Boiler No. 2; D – Dryer
(2) B3 – Boiler
(3) See Table 1
Shaded Area – No option is cost effective when compared with the Base Case.

SUMMARY OF PROPOSED PARAMETRIC MONITORING AND RECORD KEEPING

SUMMARY OF PROPOSED PARAMETRIC MONITORING AND RECORD KEEPING

CITRUS BELLE
LABELLE, FLORIDA

FUEL CAPS

Boilers (two boilers combined)

1. Daily fuel use – gallons/day or mmcf/day
2. Cumulative total – 12-month rolling total (gal/yr or mmcf/yr)

Dryer

1. Daily fuel use – gallons/day or mmcf/day
2. Cumulative total – 12-month rolling total (gal/yr or mmcf/yr)
3. Fuel use – gallons/box or mmcf/box (monthly and annual averages)

SO_2 CAP

All Fuel Oil

1. For each load received
   a. Quantity (gallons)
   b. Sulfur content (%)
   c. Calculated potential SO_2 emissions (157s lb/1000 gal, where "s" is the fuel sulfur content in percent)

2. For all fuel oil
   a. Cumulative total potential SO_2 – 12-month rolling total (tons SO_2/yr)
   b. Cumulative average fuel sulfur content (%) – monthly and annual averages

FRUIT AND PEEL PROCESSING

Fruit Processing

1. Daily fruit receipts – boxes/day by variety
2. Cumulative total – 12-month rolling total (boxes/yr, by variety)

Peel Processing

1. Bone dry peel generated – tons/day (based on records of pounds of peel per box of fruit. Records are to be confirmed/updated monthly based on fruit received, pellets produced and measured pellet moisture content).

2. Press Cake
   a. Moisture content (%) – measure daily
   b. Oil content (lb oil/lb bone dry [b.d.] peel) – measure daily
   c. Press cake to dryer – tons/day (b.d. and actual)
   d. Dryer operating hours – hr/day (actual peel processing time)
   e. Oil to dryer – lb/day
   f. Press cake processing rate – ton/hr, daily average calculated from press cake to dryer and operating hours

3. Pellets
   a. Moisture content (%) – measure daily
   b. Oil content (lb oil/b.d. ton peel) – measure daily
   c. Pellets produced - tons/day (b.d. and actual)
   d. Oil remaining in pellets – lb/day
   e. Pellets produced monthly – tons/month (based on sales and inventory. To be used to update peel generation rate)

BOILER OPERATION

1. Fuel use to both boilers combined (see FUEL CAPS)
2. Hours of operation, each boiler - hours/day

DRYER OPERATION

1. Fuel use (see FUEL CAPS)
2. Hours of operation (see FRUIT AND PEEL PROCESSING)
3. Dryer exhaust gas temperature – recorded continually
4. Peel processing rate (see FRUIT AND PEEL PROCESSING)

OIL RECOVERY

1. Cold press oil – lb/day
2. Essence oil – lb/day
3. d-limonene – lb/day

REVISED PERMIT APPLICATION PAGES

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
PM10	**B**		**21.2**	**ESCPSD**	
SO2	**A**		**129.0**	**ESCPSD**	
NOX	**B**		**60.9**	**ESCPSD**	
CO	**A**		**155.0**	**ESCPSD**	
VOC	**A**		**478.9**	**ESCPSD**	

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Residual fuel firing**		
2. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.21**	5. Maximum Annual Rate: **1369**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **The maximum annual fuel oil usage and SO2 emissions for the two boilers are capped in order to avoid PSD review. Fuel oil use for the two boilers is capped at 1,368,750 gallons.**		

205 x 10^9 Btu/yr Combined

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural gas firing**		
2. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **million cubic feet burned**	
4. Maximum Hourly Rate: **0.03**	5. Maximum Annual Rate: **200**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1025**
10. Segment Comment (limit to 200 characters): **Maximum annual fuel use for the two boilers combined is 200 MMCF.**		

205 x 10^9 Btu/yr Combined

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____1__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **2.6** lb/hour **8.5** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **12.41 lb/1000 gal** Reference: **AP-42**		7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **PM/PM10, hourly = 12.41 lb/1000 gal x 210 gal/hr = 2.6 lb/hr** **PM/PM10, annual = 12.41 lb/1000 gal x 1,368,750 gal/yr x ton/2000 lbs = 8.5 tpy**		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel oil use for the two boilers combined limited to 1,368,750 gallons per year to avoid PSD.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2.6 lb/hr**	4. Equivalent Allowable Emissions: **2.6** lb/hour **8.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ **of** __5____

Pollutant Detail Information Page ____2__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **33** lb/hour **64.5** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **157(s) lb/1000 gal** Reference: **AP-42**		7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **SO2, hourly max = 157(1) lb/1000 gal x 210 gal/hr = 33.0 lb/hr** **SO2, annual max= 64.5 tpy, boiler fuel cap (0.5 x facility cap)**		
10. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel oil quantity for the two boilers combined and sulfur content will be limited by annual cap to avoid PSD. Maximum fuel oil sulfur content requested is 1% while the average will be 0.7% or less.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

2. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **33 lb/hr**	4. Equivalent Allowable Emissions: **33** lb/hour **64.5** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel oil analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____3__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **11.6** lb/hour **37.6** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **55 lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **NOX, hourly = 55 lb/1000 gal x 210 gal/hr = 11.6 lb/hr** **NOX, annual = 55 lb/1000 gal x 1,368,750 gal/yr x ton/2000 lbs = 37.6 tpy**	
11. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel use for the two boilers combined limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

3. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **11.6 lb/hr**	4. Equivalent Allowable Emissions: **11.6** lb/hour **37.6** tons/year
5. Method of Compliance (limit to 60 characters): **Operating practice**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____4__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.5** lb/hour **8.4** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **84 lb/MMCF** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **CO, hourly = 84 lb/MMCF x 0.03 MMCF/hr = 2.5 lb/hr** **CO, annual = 84 lb/MMCF x 200 MMCF/yr x ton/2000 lbs = 8.4 tpy**	
12. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Boiler fuel cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

4. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2.5 lb/hr**	4. Equivalent Allowable Emissions: **2.5** lb/hour **8.4** tons/year
5. Method of Compliance (limit to 60 characters): **Operating practice**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___1___ of __5____

Pollutant Detail Information Page ____5__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **0.1** lb/hour **0.3** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **2.8 lb/MMCF** Reference: **AP-42**		7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

VOC, hourly = 2.8 lb/MMCF x 0.03 MMCF/hr = 0.1 lb/hr
VOC, annual = 2.8 lb/MMCF x 200 MMCF/yr x ton/2000 lbs = 0.3 tpy

13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Boiler fuel cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

5. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.1 lb/hr**	4. Equivalent Allowable Emissions: **0.1** lb/hour **0.3** tons/year

5. Method of Compliance (limit to 60 characters):
Operating practice

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Residual fuel firing**		
4. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.28**	6. Maximum Annual Rate: **1369**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **The maximum annual fuel oil usage and SO2 emissions for the two boilers combined are capped in order to avoid PSD review. Boiler fuel oil cap is 1,368,750 gallons per year.**		

205 x 10^9 Btu/yr Combined

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural gas firing**		
3. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **million cubic feet burned**	
4. Maximum Hourly Rate: **0.041**	5. Maximum Annual Rate: **200**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	10. Million Btu per SCC Unit: **1025**
10. Segment Comment (limit to 200 characters): **Maximum annual gas use for the two boilers combined is 200 MMCF.**		

205 x 10^9 Btu/yr Combined

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **3.5** lb/hour **8.5** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **12.41 lb/1000 gal** Reference: **AP-42**		7. Emissions Method Code: **3**

8. Calculation of Emissions (limit to 600 characters):

PM/PM10, hourly = 12.41 lb/1000 gal x 280 gal/hr = 3.5 lb/hr
PM/PM10, annual = 12.41 lb/1000 gal x 1,368,750 gal/yr x ton/2000 lbs = 8.5 tpy

14. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Fuel oil use for the two boilers combined limited to 1,368,750 gallons per year to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

6. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3.5 lb/hr**	4. Equivalent Allowable Emissions: **3.5** lb/hour **8.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9**	

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):
Emission limit volunteered to avoid PSD. BACT, under FAC Rule 62-296 applies. Natural gas, when available in the near future, and 0.7 % sulfur content (or less) annual average, residual fuel oil in the interim, and later as secondary fuel, represents BACT for this unit.

Emissions Unit Information Section ___2___ **of** __5____

Pollutant Detail Information Page ____2__ **of** ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **44** lb/hour **64.5** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **157(s) lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **SO2, hourly max = 157(1) lb/1000 gal x 280 gal/hr = 44.0 lb/hr** **SO2, annual max= 64.5 tpy, boiler fuel cap (0.5 x facility cap)**	
15. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel oil quantity for the two boilers combined and sulfur content will be limited by annual cap to avoid PSD. Maximum fuel oil sulfur content requested is 1% while the average will be 0.7% or less.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

7. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **44 lb/hr**	4. Equivalent Allowable Emissions: **44** lb/hour **64.5** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel oil analysis**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit volunteered to avoid PSD. BACT, under FAC Rule 62-296 applies. Natural gas, when available in the near future, and 0.7 % sulfur content (or less) annual average, residual fuel oil in the interim, and later as secondary fuel, represents BACT for this unit.**	

Emissions Unit Information Section ___2___ of __5____

Pollutant Detail Information Page ____3__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **15.4** lb/hour **37.6** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **55 lb/1000 gal** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **NOX, hourly = 55 lb/1000 gal x 280 gal/hr = 15.4 lb/hr** **NOX, annual = 55 lb/1000 gal x 1,368,750 gal/yr x ton/2000 lbs = 37.6 tpy**	
16. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel oil use for the two boilers combined limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

8. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **15.4 lb/hr**	4. Equivalent Allowable Emissions: **15.4** lb/hour **37.6** tons/year
5. Method of Compliance (limit to 60 characters): **Operating practice**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___2___ of __5____

Pollutant Detail Information Page ____4__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.4** lb/hour **8.4** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **84 lb/MMCF** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **CO, hourly = 84 lb/MMCF x 0.041MMCF/hr = 3.4 lb/hr** **CO, annual = 84 lb/MMCF x 200 MMCF/yr x ton/2000 lbs = 8.4 tpy**	
17. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Boiler fuel cap.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

9. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3.4 lb/hr**	4. Equivalent Allowable Emissions: **3.4** lb/hour **8.4** tons/year
5. Method of Compliance (limit to 60 characters): **Operating practice**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___2___ of __5____

Pollutant Detail Information Page ____5__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.1** lb/hour **0.3** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **2.8 lb/MMCF** Reference: **AP-42**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **VOC, hourly = 2.8 lb/MMCF x 0.041 MMCF/hr = 0.1 lb/hr** **VOC, annual = 2.8 lb/MMCF x 200 MMCF/yr x ton/2000 lbs = 0.3 tpy**	
18. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___1___ of __1____

10. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.1 lb/hr**	4. Equivalent Allowable Emissions: **0.1** lb/hour **0.3** tons/year
5. Method of Compliance (limit to 60 characters): **Operating practice**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**54** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **35 tph peel at about 65 percent moisture**		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **Rate is equivalent to 12.3 tph bone dry peel**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __3___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Residual fuel firing**		
6. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.36**	7. Maximum Annual Rate: **1369**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **Maximum annual fuel oil use and SO2 emissions for the dryer capped to avoid PSD review. Dryer fuel oil cap is 1,368,750 gpy.**		

205 x 10^9 Btu/yr

Segment Description and Rate: Segment __2___ of __3___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural gas firing**		
4. Source Classification Code (SCC): **1-02-006-02**	3. SCC Units: **million cubic feet burned**	
4. Maximum Hourly Rate: **0.053**	5. Maximum Annual Rate: **200**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	11. Million Btu per SCC Unit: **1025**
10. Segment Comment (limit to 200 characters): **Maximum annual dryer gas use is capped at 200 MMCF.**		

205 x 10^9 Btu/yr

Segment Description and Rate: Segment __3___ of __3___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Peel drying**		
5. Source Classification Code (SCC): **3-02-008-99**	3. SCC Units: **Tons processed**	
4. Maximum Hourly Rate: **35 (at 65% moisture)**	5. Maximum Annual Rate: **61,072 (at 65% moisture)**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	12. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Equivalent to 12.3 tph bdp (bone dry peel); 21,375 tpy bdp; and 7.5 mmboxes of fruit per year.**		

Emissions Unit Information Section ___3___ of __5____

Pollutant Detail Information Page ____1__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **12.3** lb/hour **10.7** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **1.0 lb/ton bdp** Reference: **Process knowledge**		7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **PM/PM10, hourly = 1.0 lb/ton bdp x 12.25 tph bdp = 12.3 lb/hr** **PM/PM10, annual = 1.0 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 10.7 tpy**		
19. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Peel input limited by annual fruit processing cap of 7.5 mmboxes to avoid PSD.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

11. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **12.3 lb/hr**	4. Equivalent Allowable Emissions: **12.3** lb/hour **10.7** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___3___ of __5____

Pollutant Detail Information Page ____2__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **57.2** lb/hour **64.5** tons/year		4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **157 (S) lb/1000 gal** Reference: **AP-42**		7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **SO2, hourly = 157(1) lb/1000 gal x 364 gph = 57.2 lb/hr** **SO2, annual = 64.5 tpy, dryer cap (0.5 x facility cap)**		
20. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Fuel oil sulfur content and fuel oil use will be limited by annual cap to avoid PSD. Maximum fuel oil sulfur content requested is 1% while the average will be 0.7% or less.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

12. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **57.2 lb/hr**	4. Equivalent Allowable Emissions: **57.2** lb/hour **64.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 6C**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___3___ of __5____

Pollutant Detail Information Page ____3__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOX**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **26.7** lb/hour **23.3** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **2.18 lb/ton bdp** Reference: **Process knowledge**	7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

NOX, hourly = 2.18 lb/ton bdp x 12.25 tph bdp = 26.7 lb/hr
NOX, annual = 2.18 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 23.3 tpy

21. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Peel input limited by annual cap to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of __1____

13. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **26.7 lb/hr**	4. Equivalent Allowable Emissions: **26.7** lb/hour **23.3** tons/year

5. Method of Compliance (limit to 60 characters):
EPA Method 7E

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Emission limit to avoid PSD.

Emissions Unit Information Section ___3___ of __5____

Pollutant Detail Information Page ____4__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **168.1** lb/hour **146.6** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **13.72 lb/ton bdp** Reference: **Process knowledge**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **CO, hourly = 13.72 lb/ton bdp x 12.25 tph bdp = 168.1 lb/hr** **CO, annual = 13.72 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 146.6 tpy**	
22. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Peel input limited by annual cap to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

14. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **168.1 lb/hr**	4. Equivalent Allowable Emissions: **168.1** lb/hour **146.6** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**	

Emissions Unit Information Section ___3___ of __5____

Pollutant Detail Information Page ____5__ of ___5___

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:	
3. Potential Emissions: **524.1** lb/hour **457.2** tons/year		4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: **42.78 lb/ton bdp** Reference: **Process knowledge**		7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **VOC, hourly = 42.78 lb/ton bdp x 12.25 tph bdp = 524.1 lb/hr** **VOC, annual = 42.78 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 457.2 tpy**		
23. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Peel input limited by annual cap to avoid PSD.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

15. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **524.1 lb/hr**	4. Equivalent Allowable Emissions: **524.1** lb/hour **457.2**tons/year	
5. Method of Compliance (limit to 60 characters): **EPA Method 25A**		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Emission limit to avoid PSD.**		

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram?	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **15** feet	7. Exit Diameter: **2.5** feet
8. Exit Temperature: **90** °F	9. Actual Volumetric Flow Rate: **4500**acfm	10. Water Vapor: **3%**
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM10**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.3** lb/hour **2.0** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.19 lb/ton bdp** Reference: **Process knowledge**	7. Emissions Method Code:**2**
8. Calculation of Emissions (limit to 600 characters): **PM/PM10, hourly = 0.19 lb/ton bdp x 12.25 tph bdp = 2.3 lb/hr** **PM/PM10, annual = 0.19 lb/ton bdp x 21,375 tpy bdp x ton/2000 lbs = 2.0 tpy**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Cap on annual peel processed to avoid PSD.**	

Allowable Emissions Allowable Emissions ___1___ of ___1___

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **2.3 lb/hr**	4. Equivalent Allowable Emissions: **2.3** lb/hour **2.0** tons/year
5. Method of Compliance (limit to 60 characters): **Operating practice**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Cap on annual peel processed to avoid PSD.**	

Emissions Unit Information Section ___4___ of __5____

Pollutant Detail Information Page ____2__ of __2____

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **24.5** lb/hour **21.4** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **2.0 lb/ton bone dry peel (ton bdp)** Reference: **Process knowledge**	7. Emissions Method Code:**2**

8. Calculation of Emissions (limit to 600 characters):

VOC, hourly = 2.0 lb/ton bone dry peel x 12.25 tph bdp = 24.5 lb/hr
VOC, annual = 2.0 lb/ton bone dry peel x 21,375 tpy bdp x ton/2000 lbs = 21.4 tpy

10. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
Cap on annual peel processed to avoid PSD.

Allowable Emissions Allowable Emissions ___1___ of ___1___

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions:
4. Requested Allowable Emissions and Units: **24.5 lb/hr**	4. Equivalent Allowable Emissions: **24.5** lb/hour **21.4** tons/year

5. Method of Compliance (limit to 60 characters):
Operating practice

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Cap on annual peel processed to avoid PSD.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Unregulated Emission Units and Facility-wide Fugitive Emissions**

4. Emissions Unit Identification Number: ID: [X] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **NA**	7. Emissions Unit Major Group SIC Code: **20**	8. Acid Rain Unit? [ ]

9. Emissions Unit Comment: (Limit to 500 Characters) **Includes unregulated and facility-wide fugitive emissions, including lime silo (0.14 tpy PM) and fuel oil storage (0.02 tpy VOCs).**

UNREGULATED & EXEMPT ACTIVITIES

The following activities are considered to be unregulated or exempt from permitting requirements:

- Fruit storage and handling
- Juice extraction
- Juice processing
- Lime storage and handling
- Pellets storage and handling
- Fuel oil storage tank
- Emergency generator
- Facility maintenance activities
- Waste water treatment system

BASELINE EMISSIONS AND PROPOSED EMISSION CAPS

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

Pollutant	1997 (tpy)	1998 (tpy)	Avg. (tpy)	Increase (tpy)	Proposed Cap (tpy)
CO	45.5	68.0	56.8	98.2	155.0
NOx	33.9	29.0	31.5	29.4	60.9
PM10	8.4	7.2	7.8	13.4	21.2
SO_2	96.6	82.9	89.8	39.2	129.0
VOC	505.0	491.7	498.4	-19.5	478.9

Revised 10/20/99

PROPOSED EMISSION LIMITS

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

Boilers

Fuel required @ 0.1825 gal/box
7.5 mm boxes x 0.1825 = 1,368,750 gal/yr and/or 200 MMCF of natural gas

Emissions:

Pollutant	Factor (Oil) (lb/1000 gal)	Factor (Gas) (lb/MMCF)	Emissions (Oil) (tpy)	Emissions (Gas) (tpy)	Emissions Max (tpy)
CO	5.0	84	3.4	8.4	8.4 (gas)
NOx	55.0	100	37.6	10.0	37.6 (oil)
PM10	12.41	6.2	8.5	0.6	8.5 (oil)
SO_2	157(S)	0.6	(1)	0.1	(1) (oil)
VOC	0.28	2.8	0.2	0.3	0.3 (gas)

Dryer/Cooler

7.5 mm boxes @ 38 lb peel (85% moisture)/box = 21,375 bone dry tons of peel/yr

Emissions:

Pollutant	Emission Cap (tpy)	Boiler (tpy)	Dryer/Cooler (tpy)	Dryer/Cooler (lb/b.d. ton)
CO	155.0	8.4	146.6	13.72
NOx	60.9	37.6	23.3	2.18
PM10	21.2	8.5	12.7	1.19
SO_2	129.0	(1)	(1)	(1)
VOC	478.9	0.3	478.6	44.78

Pollutant	Dryer (tpy)	Dryer (lb/b.d. ton)	Cooler (tpy)	Cooler (lb/b.d. ton)
PM10	10.7	1.00	2.0	0.19
VOC	457.2	42.78	21.4	2.00

(1) SO_2 emission cap will be met by restricting fuel oil sulfur content.

Revised 10/20/99

ANNUAL OPERATING REPORT SUMMARY

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

	Boiler No. 1	Boiler No. 2	Dryer	Coolers(3)	Total
1997					
Hours	3043	192	2968	2,968	
Fuel (gal)	583,478	36,815	609,933	-	1,230,226
CO (tpy)	1.5	0.1	43.9(1)	-	45.5
NOx (tpy)	16.1	1.0	16.8	-	33.9
PM (tpy)	3.8	0.2	4.0	0.4	8.4
SO_2 (tpy)	45.8	2.9	47.9	-	96.6
VOC (tpy)	0.1	0.1	500.9(2)	3.9	505.0
1998					
Hours	2927	288	2831	2,831	
Fuel (gal)	452,100	55,200	549,650	-	1,056,950
CO (tpy)	1.1	0.1	66.8(1)	-	68.0
NOx (tpy)	12.4	1.5	15.1	-	29.0
PM (tpy)	2.9	0.4	3.6	0.3	7.2
SO_2 (tpy)	35.5	4.3	43.1	-	82.9
VOC (tpy)	0.1	0.1	488.3(2)	3.2	491.7

(1) Stack test data from dryer
(2) Material balance on dryer
(3) Estimated from emissions at other facilities
PM = 0.06 lb/ton pellets
VOC = 0.64 lb/ton pellets

Revised 10/20/99

1997/98 SEASON

CITRUS BELLE
LABELLE, FLORIDA

Total Fruit Processed - 3,802,706 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	2,179,437	57.3	98,076	7.75	760,089
Val	881,077	23.2	39,648	14.5	574,896
Gpft	742,156	19.5	31,542	7.5	236,565
TOTAL	3,802,706	100.0			1,571,550

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng	369,935	369,935		399,458
	Gpft	29,523		29,523	
Essence	Orng	36,226	36,226		37,593
	Gpft	1,367		1,367	
d-limonene		88,380	82,133	6,247	88,380
TOTAL		525,431	488,294	37,137	525,431

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng	1,334,985	488,294	846,691	36.6
Gpft	236,565	37,137	199,428	15.7
TOTAL	1,571.550	525,431	1,046,119	33.4

Fruit and Peel Summary

Total Fruit (boxes) - 3,802,706 boxes
Raw Peel @ 38 lb/box and 85% moisture - 72,251 tons
Bone Dry Peel - 10,838 tons
Press Cake @ 70% moisture - 36,126 tons
Dry Peel @ 13% moisture - 12,457 tons
Pellets @ 11% moisture - 12,177 tons

PEEL OIL BALANCE

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

SEASON	-	**1997/98**	
Total Fruit Processed (boxes)	-	3,802,706	
Available Oil (lb)	-	1,571,550	
Accountable Recovery/Losses/Destruction (lb)			
Essence oil	-	37,593	
Cold press oil	-	399,458	
D-limonene	-	88,380	
Fugitive losses	-	Unquantifiable	
Pellets (Oil content 0.0015 lb oil/lb)	-	36,532	Stack Emissions
Cooler Stack (0.64 lb VOC/ton pellets)	-	7,793	3.9 tpy
Dryer/WHE Stack	-	1,001,794	500.9 tpy
Total Recovery/Losses/Destruction (lb)		- 1,571,550	504.8 tpy

1998/99 SEASON

CITRUS BELLE
LABELLE, FLORIDA

Total Fruit Processed - 3,072,400 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	1,457,803	47.4	65,601	9.0	590,409
Val	696,620	22.7	31,348	16.8	526,646
Gpft	916,977	29.9	39,014	8.03	313,282
TOTAL	3,072,400	100.0			1,430,338

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng	180,988	180,988		212,307
	Gpft	31,319		31,319	
Essence	Orng	70,629	70,629		77,346
	Gpft	6,717		6,717	
d-limonene		128,180	111,348	16,832	128,180
TOTAL		417,833	362,965	54,868	417,833

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng	1,117,055	362,965	754,090	32.5
Gpft	313,282	54,868	258,414	17.5
TOTAL	1,430,338	417,833		29.2

Fruit and Peel Summary

Total Fruit (boxes) - 3,072,400 boxes
Raw Peel @ 38 lb/box and 85% moisture - 58,376 tons
Bone Dry Peel - 8,756 tons
Press Cake @ 70% moisture - 29,188 tons
Dry Peel @ 13% moisture - 10,065 tons
Pellets @ 11% moisture - 9,839 tons

PEEL OIL BALANCE

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

SEASON	-	**1998/99**	
Total Fruit Processed (boxes)	-	3,072,400	
Available Oil (lb)	-	1,430,338	
Accountable Recovery/Losses/Destruction (lb)			
Essence oil	-	77,346	
Cold press oil	-	212,307	
D-limonene	-	128,180	
Fugitive losses	-	Unquantifiable	
Pellets (Oil content 0.0015 lb oil/lb)	-	29,517	Stack Emissions
Cooler Stack (0.64 lb VOC/ton pellets)	-	6,297	3.2 tpy
Dryer/WHE Stack	-	976,691	488.3 tpy
Total Recovery/Losses/Destruction	-	1,430,338	491.5 tpy

2000/2001 SEASON

CITRUS BELLE
LABELLE, FLORIDA

Total Fruit Processed - 7,500,000 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M (90 lb/bx)	3,500,000	46.7	157,500	8.38	1,319,850
Val (90 lb/bx)	1,750,000	23.3	78,750	15.65	1,232,438
Gpft (85 lb/bx)	2,250,000	30.0	95,625	7.76	742,050
TOTAL	7,500,000	100.0	331,875		3,294,338

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng				630,933
	Gpft				
Essence	Orng				38,480
	Gpft				
d-limonene					827,320
TOTAL					1,496,733

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng				
Gpft				
TOTAL	3,294,338	1,496,733	1,797,605	45

Fruit and Peel Summary

Total Fruit (boxes) - 7,500,000 boxes
Raw Peel @ 38 lb/box and 85% moisture - 142,500 tons
Bone Dry Peel - 21,375 tons
Press Cake @ 65% moisture - 61,072 tons
Dry Peel @ 13% moisture - 24,569 tons
Pellets @ 11% moisture - 24,017 tons

w/o DESIR. RED. 69% RECOVERY

PEEL OIL BALANCE

CITRUS BELLE
LABELLE, FLORIDA

SEPTEMBER 2, 1999

SEASON	-	**2000/2001**	
Total Fruit Processed (boxes)	-	7,500,000	
Available Oil (lb)	-	3,294,338	
Accountable Recovery/Losses/Destruction (lb)			
Essence oil	-	38,480	
Cold press oil	-	630,933	1496733
d-limonene	-	827,320	
Fugitive losses	-	Unquantifiable	
Pellets (Oil content 0.0015 lb oil/lb)	-	72,052	Stack Emissions
Cooler Stack (0.64 lb VOC/ton pellets)	-	15,371	7.7 tpy vs. 21.4
Dryer/WHE			
Total released in dryer - 1,710,182			
Combusted (50% recirculated gas and 90% VOC destruction)	-	769,582	
Emissions (10% from recirculated gas and 100% from unrecirculated gas	-	940,600	470.3 tpy vs. 457.2
Total Recovery/Losses/Destruction	-	3,294,338	478.0 tpy

Revised 10/20/99

ESTIMATED UNREGULATED EMISSIONS

UNREGULATED EMISSIONS
LIME STORAGE SILO

Lime utilization rate @ 0.15 lb/box of fruit

= 0.15 lb/box x (7.5×10^6) boxes/yr x 1/2000
= 562.5 tpy

Storage silo capacity = 1550 cu. ft. @ 82 lb/cu. ft.

= 1550 cu. ft. x 82 lb/cu. ft x 1/2000
= 63.5 tons

Load in 25 ton truck load increments at the transfer rate of 25 tph.

Emissions

Uncontrolled @ 0.48 lb/ton (AP-42, Section 11.12, Cement transfer to silo, pneumatic)

= 0.48 lb/ton x 562.5 tpy x 1/2000
= 0.14 tpy

Controlled @ 65% by water trap

= 0.14 (1 - 0.65)
= 0.05 tpy

Identification

Identification No.:	Tank
City:	Labelle
State:	FL
Company:	Citrus Belle
Type of Tank:	Vertical Fixed Roof
Description:	Fuel Oil

Tank Dimensions

Shell Height (ft):	24.0
Diameter (ft):	12.0
Liquid Height (ft):	24.0
Avg. Liquid Height (ft):	12.0
Volume (gallons):	20307
Turnovers:	136.0
Net Throughput (gal/yr):	2761752

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft):	0.00
Radius (ft) (Dome Roof):	0.00
Slope (ft/ft) (Cone Roof):	0.0000

Breather Vent Settings

Vacuum Setting (psig):	0.00
Pressure Setting (psig):	0.00

Meteorological Data Used in Emission Calculations: Fort Myers, Florida (Avg Atmospheric Pressure = 14.7 psia)

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	75.91	70.55	81.27	73.92	0.0108	0.0091	0.0127	130.000			130.00	Option 3: A=12.1010, B=8907.0

Annual Emission Calculations

Standing Losses (lb):	4.8319
Vapor Space Volume (cu ft):	1357.17
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor:	0.040258
Vented Vapor Saturation Factor:	0.993187
Tank Vapor Space Volume	
Vapor Space Volume (cu ft):	1357.17
Tank Diameter (ft):	12.0
Vapor Space Outage (ft):	12.00
Tank Shell Height (ft):	24.0
Average Liquid Height (ft):	12.0
Roof Outage (ft):	0.00
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.00
Roof Height (ft):	0.000
Roof Slope (ft/ft):	0.00000
Shell Radius (ft):	6.0
Vapor Density	
Vapor Density (lb/cu ft):	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.000000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.010785
Daily Avg. Liquid Surface Temp.(deg. R):	535.58
Daily Average Ambient Temp. (deg. R):	533.57
Ideal Gas Constant R (psia cuft /(lb-mole-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	533.59
Tank Paint Solar Absorptance (Shell):	0.17
Tank Paint Solar Absorptance (Roof):	0.17
Daily Total Solar Insolation Factor (Btu/sqftday):	1492.00
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.040258
Daily Vapor Temperature Range (deg.R):	21.43
Daily Vapor Pressure Range (psia):	0.003601
Breather Vent Press. Setting Range(psia):	0.00
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.010785
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.009116
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.012717
Daily Avg. Liquid Surface Temp. (deg R):	535.58
Daily Min. Liquid Surface Temp. (deg R):	530.22
Daily Max. Liquid Surface Temp. (deg R):	540.94
Daily Ambient Temp. Range (deg.R):	19.90

Annual Emission Calculations

Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.993187
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.010785
Vapor Space Outage (ft):	12.00
Working Losses (lb):	35.7031
Vapor Molecular Weight (lb/lb-mole):	130.000000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.010785
Annual Net Throughput (gal/yr):	2761752
Turnover Factor:	0.3873
Maximum Liquid Volume (cuft):	2714
Maximum Liquid Height (ft):	24.0
Tank Diameter (ft):	12.0
Working Loss Product Factor:	1.00
Total Losses (lb):	40.54

Annual Emissions Report

Liquid Contents	Losses (lbs.): Standing	Working	Total
Distillate fuel oil no. 2	4.83	35.70	40.54
Total:	4.83	35.70	40.54

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 633-99-01

MEMORANDUM

TO: Mara Grace Nasca, FDEP

FROM: John Koogler

DATE: September 16, 1999

SUBJECT: Update to Construction Permit Application

Attached is a revised page of the permit application, updating the list of unregulated and exempt activities.

If you have any questions, please call me.

JBK:par

Encl.

C: J. Kahn, DARM
C. Harvey, Citrus Belle

UNREGULATED & EXEMPT ACTIVITIES

The following activities are considered to be unregulated or exempt from permitting requirements:

- Fruit storage and handling
- Juice extraction
- Juice processing
- Lime storage and handling
- Pellets storage and handling
- Fuel oil storage tank
- Emergency generator
- Facility maintenance activities
- Waste water treatment system

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

PROJECT 633-99-01

FAX TRANSMITTAL FORM

TO: Joe Kahn

FAX NO.

FROM: Gaby Card

DATE: 9/16/99 SENT BY:

The text being transmitted consist s of 2 page(s) PLUS this one. If you do not receive all of the pages or if there are difficulties with this transmission, please call (352) 377-5822.

REMARKS:

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

RECEIVED
SEP 16 1999
BUREAU OF AIR REGULATION

KA 633-99-01

MEMORANDUM

TO: Mara Grace Nasca, FDEP

FROM: John Koogler

DATE: September 16, 1999

SUBJECT: Update to Construction Permit Application

Attached is a revised page of the permit application, updating the list of unregulated and exempt activities.

If you have any questions, please call me.

JBK:par

Encl.

C: J. Kahn, DARM
C. Harvey, Citrus Belle

UNREGULATED & EXEMPT ACTIVITIES

The following activities are considered to be unregulated or exempt from permitting requirements:

- Fruit storage and handling
- Juice extraction
- Juice processing
- Lime storage and handling
- Pellets storage and handling
- Fuel oil storage tank
- Emergency generator
- Facility maintenance activities
- Waste water treatment system

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 633-99-01

September 2, 1999

Mr. Philip Barbaccia
Florida Department of
Environmental Protection
South District Office
P.O. Box 2549
Fort Myers, FL 33902-2549

Subject: Air Construction Permit Application
A. Duda & Sons, Inc. / Citrus Belle

Dear Mr. Barbaccia:

Enclosed are four copies of an air construction permit application for installation of a boiler, peel dryer and pellet cooler at the above facility.

The proposed project will allow an increase in the fruit processing capacity of the existing facility up to 7.5 million boxes per year. The proposed plant changes include:

1. Replacing the existing 30,000 pound per hour dryer and 20,000 pound per hour waste heat evaporator with a 1973-built 40,000 pound per hour dryer and 60,000 pound per hour waste heat evaporator.

2. Replace the existing 600 HP boiler with a 1977-built 1000 HP boiler.

3. Replace the 5 ton per hour pellet cooler with a 14 ton per hour unit.

4. Install additional centrifuge capacity to enhance citrus oil recovery.

5. Install additional frit and peel dewatering presses to improve plant efficiency and citrus oil recovery.

6. Allow for natural gas usage as soon as it is available for the site.

The proposed project will result in increases in emissions below significant levels, as defined in Rule 62-212, FAC. Consequently, the proposed project will not be subject to PSD review requirements.

Also enclosed is a check in the amount of $4500 (application processing fee).

If you have any questions, please do not hesitate to call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:par

Encl.

C: J. Kahn, FDEP DARM
C. Harvey, Citrus Belle

RCVD 8/30/99
FROM JOHN KOELLER

NOTES RE T/C
W/ PRADEEP RAWAL
9/1/99 10 AM

DISC.
11/17/98
EPA GUIDANCE
& COMPELLING
CIRCUMSTANCES.

DUDA CITRUS BELLE

1997/98 SEASON

Total Fruit Processed - 3,802,706 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	2,179,437	57.3	98,076	7.75	760,089
Val	881,077	23.2	39,648	14.5	574,896
Gpft	742,156	19.5	31,542	7.5	236,565
TOTAL	3,802,706	100.0			1,571,550

85 LB/BIX

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng	369,935	369,935		399,458
	Gpft	29,523		29,523	
Essence	Orng	36,226	36,226		37,593
	Gpft	1,367		1,367	
d-limonene		88,380	82,133	6,247	88,380
TOTAL		525,431	488,294	37,137	525,431

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng	1,334,985	488,294	846,691	36.6
Gpft	236,565	37,137	199,428	15.7
TOTAL	1,571.550	525,431	1,046,119	33.4

Fruit and Peel Summary

Total Fruit (boxes) - 3,802,706 boxes
Raw Peel @ 38 lb/box and 85% moisture - 72,251 tons
Bone Dry Peel - 10,838 tons
Press Cake @ 70% moisture - 36,126 tons
Dry Peel @ 13% moisture - 12,457 tons
Pellets @ 11% moisture - 12,177 tons

1998/99 SEASON

Total Fruit Processed - 3,072,400 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	1,457,803	47.4	65,601	9.0	590,409
Val	696,620	22.7	31,348	16.8	526,646
Gpft	916,977	29.9	39,014	8.03	313,282
TOTAL	3,072,400	100.0			1,430,338

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng	180,988	180,988		212,307
	Gpft	31,319		31,319	
Essence	Orng	70,629	70,629		77,346
	Gpft	6,717		6,717	
d-limonene		128,180	111,348	16,832	128,180
TOTAL		417,833	362,965	54,868	417,833

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng	1,117,055	362,965	754,090	32.5
Gpft	313,282	54,868	258,414	17.5
TOTAL	1,430,338	417,833		29.2

Fruit and Peel Summary

Total Fruit (boxes) - 3,072,400 boxes
Raw Peel @ 38 lb/box and 85% moisture - 58,376 tons
Bone Dry Peel - 8,756 tons
Press Cake @ 70% moisture - 29,188 tons
Dry Peel @ 13% moisture - 10,065 tons
Pellets @ 11% moisture - 9,839 tons

2000/2001 SEASON

Total Fruit Processed - 6,500,000 Boxes

Fruit	Boxes	% of Fruit	Tons Fruit	Oil (lb/ton)	Avail. Oil (lb)
E/M	3,000,000	46.1	135,000	8.38	1,130,625
Val	1,500,000	23.1	67,500	15.65	1,056,375
Gpft	2,000,000	30.8	85,000	7.76	659,600
TOTAL	6,500,000	100.0			2,846,600

Recovered Oil

Oil	Fruit	Rec. Oil (lb)	From Orng (lb)	From Gpft (lb)	Total (lb)
Cold Press	Orng				687,401
	Gpft				
Essence	Orng				43,069
	Gpft				
d-limonene					925,193
TOTAL					1,656,534

Oil Recovery Efficiency

Fruit	Avail. Oil (lb)	Rec. Oil (lb)	Unrec. Oil (lb)	Rec. Efficiency (%)
Orng				
Gpft				
TOTAL	2,846,600	1,656,534	1,190,065	58.2

PARAMETRIC MONITORING MIN LEVEL OF OIL RECOVERY

Fruit and Peel Summary

Total Fruit (boxes)	-	6,500,000 boxes
Raw Peel @ 38 lb/box and 85% moisture	-	123,500 tons
Bone Dry Peel	-	18,525 tons
Press Cake @ 65% moisture	-	52,929 tons
Dry Peel @ 13% moisture	-	21,293 tons
Pellets @ 11% moisture	-	20,815 tons

PEEL OIL BALANCE

SEASON	-	**1997/98**	
Total Fruit Processed (boxes)	-	3,802,706	
Available Oil (lb)	-	1,571,550	
Accountable Recovery/Losses/Destruction (lb)			
Essence oil	-	37,593	
Cold press oil	-	399,458	
D-limonene	-	88,380	
Wastewater			
Flow (gpd) - 310,000			
Oil conc. (mg/ℓ) - 80			
Operating days - 180/yr			
Oil to treatment plant	-	37,250	
Fugitive losses	-	Unquantifiable	
Pellets (Oil content 0.0015 lb oil/lb)	-	36,532	Stack Emissions
Cooler Stack (0.64 lb VOC/ton pellets)	-	7,793	3.9 tpy
Dryer/WHE			
Total to dryer - 964,544			
Combusted (50% recirculated gas and 90% VOC destruction)		434,045	ASSUME NO DESTRUCTION
Emissions (10% from recirculated gas and 100% from unrecirculated gas	-	530,499	265.2 tpy
Total Recovery/Losses/Destruction (lb)	-	1,571,550	269.1 tpy

PEEL OIL BALANCE

SEASON	-	**1998/99**	
Total Fruit Processed (boxes)	-	3,072,400	
Available Oil (lb)	-	1,430,338	
Accountable Recovery/Losses/Destruction (lb)			
Essence oil	-	77,346	
Cold press oil	-	212,307	
D-limonene	-	128,180	
Wastewater			
Flow (gpd) - 250,000			
Oil conc. (mg/ℓ) - 80			
Operating days - 180/yr			
Oil to treatment plant	-	30,040	
Fugitive losses	-	Unquantifiable	
Pellets (Oil content 0.0015 lb oil/lb)	-	29,517	Stack Emissions
Cooler Stack (0.64 lb VOC/ton pellets)	-	6,297	3.2 tpy
Dryer/WHE			
Total to dryer - 946,651			
Combusted (50% recirculated gas and 90% VOC destruction)	-	425,993	NONE
Emissions (10% from recirculated gas and 100% from unrecirculated gas	-	520,658	260.3 tpy
Total Recovery/Losses/Destruction	-	1,430,338	263.5 tpy

PEEL OIL BALANCE

SEASON	-	**2000/2001**	
Total Fruit Processed (boxes)	-	6,500,000	
Available Oil (lb)	-	2,846,600	
Accountable Recovery/Losses/Destruction (lb)			
Essence oil	-	43,069	
Cold press oil	-	687,461	
d-limonene	-	925,193	
Wastewater			
Flow (gpd) - 370,000			
Oil conc. (mg/ℓ) - 40			
Operating days - 210/yr			
Oil to treatment plant	-	25,935	
Fugitive losses	-	Unquantifiable	
Pellets (Oil content 0.0015 lb oil/lb)	-	62,445	Stack Emissions
Cooler Stack (0.64 lb VOC/ton pellets)	-	13,322	6.7 tpy
Dryer/WHE			
Total to dryer - 1,089,175			
Combusted (50% recirculated gas and 90% VOC destruction)	-	490,129	MAY BE REQD TO TEST FOR DESTR.
Emissions (10% from recirculated gas and 100% from unrecirculated gas	-	599,046	299.5 tpy

---

Total Recovery/Losses/Destruction	-	2,846,600	306.2 tpy
Baseline Emissions (tpy)			266.3 tpy
VOC Emission Increase (tpy)			39.9 tpy

ANNUAL OPERATING REPORT SUMMARY

CITRUS BELLE
LABELLE, FLORIDA

	Boiler No. 1	Boiler No. 2	Dryer	Total
1997				
Hours	3043	192	2968	
Fuel (gal)	583,478	36,815	609,933	1,230,226
CO (tpy)	1.5	0.1	43.9(1)	45.5
NOx (tpy)	16.1	1.0	16.8	33.9
PM (tpy)	3.8	0.2	4.0	8.0
SO_2 (tpy)	45.8	2.9	47.9	96.6
VOC (tpy)	0.1	0.1	269.1(2)	269.3
1998				
Hours	2927	288	2831	
Fuel (gal)	452,100	55,200	549,650	1,056,950
CO (tpy)	1.1	0.1	66.8(1)	68.0
NOx (tpy)	12.4	1.5	15.1	29.0
PM (tpy)	2.9	0.4	3.6	6.9
SO_2 (tpy)	35.5	4.3	43.1	82.9
VOC (tpy)	0.1	0.1	263.5(2)	263.7

(1) Stack test data from dryer
(2) Material balance on dryer

BASELINE EMISSIONS AND PROPOSED EMISSION CAPS

CITRUS BELLE
LABELLE, FLORIDA

Pollutant	1997 (tpy)	1998 (tpy)	Avg. (tpy)	Increase (tpy)	Proposed Cap (tpy)
CO	45.5	68.0	56.8	98.2	155.0
NOx	33.9	29.0	31.5	39.5	71.0
PM10	8.0	6.9	7.5	14.9	22.4
SO_2	96.6	82.9	89.8	39.2	129.0
VOC	269.3	263.7	266.5	39.9	306.4

TOO HIGH. SHOULD BE NO MORE THAN 80% OF SIG. LEVEL TO AVOID STRICTER PARAM. NSR.

SHOULD BE ZERO OR NEG.

MAY BE OK EXC. CHECK CAN. TO #4 @ 0.7 g/s

PROPOSED EMISSION LIMITS

Boilers

Fuel required @ 0.2 gal/box
6.5 mm boxes x 0.2 = 1,300,000 gal/yr

Emissions

Pollutant	Factor (lb/1000 gal)	Emissions (tpy)
CO	5.0	3.3
NOx	55.0	35.8
PM10	12.41	8.1
SO_2	-	71.0(1)
VOC	0.28	0.2

Dryer/Cooler

Emissions

Pollutant	Emission Cap (tpy)	Boiler (tpy)	Dryer/Cooler (tpy)	Dryer/Cooler (lb/b.d. ton)
CO	155.0	3.3	151.7	16.38
NOx	71.0	35.8	35.2	3.80
PM10	22.5 4	8.1	14.4 3	1.55
SO_2	129.0	71.0	58.0(2)	6.26
VOC	306.4	0.2	306.2	33.06

(1) 55% of total allowable SO_2 emissions
(2) 45% of total allowable SO_2 emissions