Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

September 8, 2000

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

RE: Southern Gardens Citrus Processing Corporation
Clewiston, Florida
PSD-FL-299
Facility ID No. 0510015-007-AC

Dear Mr. Bunyak:

Enclosed for your review and comment is an application for construction of a PSD source. The applicant, Southern Gardens Citrus Processing Corporation, proposes to add three (3) extractors to the existing thirty-six (36) extractors at their existing facility in Hendry County, Florida.

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

Sincerely,

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

AAL/jka

Enclosures

Golder Associates Inc.

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

Golder Associates

TRANSMITTAL LETTER

To: A. A. Linero
Florida Dept of Env. Protection
New Source Review Section
111 S. Magnolia Drive, Suite 4
Tallahassee, FL 32301

Date: September 5, 2000
Project No.: 0037568

Sent by: Pro Run Courier Service

- ☐ Mail
- ☐ Air Freight
- ☒ Hand Carried
- ☐ UPS
- ☐ Federal Express

Per: David Buff

Quantity	Item	Description
4	Permit Application	Southern Gardens PSD

Remarks:

P:\Projects\2000\0037\0037568Y Southern Gardens\F1\WP\#3lot.doc

PRO-RUN
courier service

P.O. BOX 140485 Gainesville, FL. 32614-0485
Owned and operated by W.W. Consultants, Inc.
Gainesville 375-8583 Toll Free 1-800-777-6786

72114

☐ Sender ☐ Receiver $____
Bill Charges To: ☐ COD

Sender			Receiver		
Street Address			Street Address		
City	Zip		City	Zip	
Driver 1	P.U. Time	Date	Driver 2	Del. Time	Date

Pieces Description of Contents / Weight / Job #'s / STAT / Special Instructions / etc:

It is agreed and understood that the liability of Pro Run is limited to no more than the charge for this transaction.

Sender's Signature	Receiver's Signature

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

Golder Associates

TRANSMITTAL LETTER

To: **A. A. Linero**
Florida Dept of Env. Protection
New Source Review Section
111 S. Magnolia Drive, Suite 4
Tallahassee, FL 32301

Date: September 5, 2000
Project No.: 0037568

Sent by: **Pete Calamore**

- ☐ Mail
- ☐ Air Freight
- ☐ Hand Carried
- ☐ UPS
- ☒ Federal Express

Per: **David Buff**

Quantity	Item	Description
1	PSD Permit Application for Extractors Addition	Southern Gardens Citrus Processing Corporation
1	check	$7500

Remarks:

P:\Projects\2000\0037\0037568Y Southern Gardens\F1\WP\#Slot.doc

RECEIVED

SEP 05 2000

BUREAU OF AIR REGULATION

PSD PERMIT APPLICATION
FOR EXTRACTORS ADDITION

SOUTHERN GARDENS
CITRUS PROCESSING CORPORATION

CLEWISTON, FLORIDA

Prepared For:

Southern Gardens Citrus Processing Corporation
755 C.R. 833, P.O. Box 130
Clewiston, Florida 33440

Prepared By:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

September 2000
0037568Y/F1

DISTRIBUTION:
4 Copies - FDEP
3 Copies - Southern Gardens
2 Copies - Golder Associates Inc.

AIR PERMIT APPLICATION

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)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Southern Gardens Citrus Processing Corp.**	
2. Site Name: **Southern Gardens Citrus Processing Corp.**	
3. Facility Identification Number: **0510015** [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **755 C.R. 833; P.O. Box 130** City: **Clewiston** County: **Hendry** Zip Code: **33440**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Derek Pridgen, Environmental Engineer**
2. Application Contact Mailing Address: Organization/Firm: **Southern Gardens Citrus Processing** Street Address: **755 CR 833; P.O. Box 130** City: **Clewiston** State: **FL** Zip Code: **33440**
3. Application Contact Telephone Numbers: Telephone: (**863**) **983 - 3030** Fax: (**863**) **983 - 3060**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	9-6-00
2. Permit Number:	0510015-007-AC
3. PSD Number (if applicable):	PSD-FL-299
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:
   Tristan Chapman, Vice President, General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **Southern Gardens Citrus Processing Corp.**
   Street Address: **765 CR 833**
   City: **Clewiston** State: **FL** Zip Code: **33440**
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(863) 983 - 9090** Fax: **(863) 983 - 3060**
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: 8/31/00

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address:
   Organization/Firm: **Golder Associates Inc.**
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 336 - 5600** Fax: **(352) 336 - 6603**

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.

David A. Buff — Signature

9/1/00 — Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
003	Citrus Feed Mill(Peel Dryer/Waste Heat Evaporator)	AC1A	
004, 005, 009	Citrus Pellet Coolers	AC1A	
006	7 VOC Storage Tanks	AC1A	

Application Processing Fee

Check one: [X] Attached - Amount: $: 7,500 [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

   This application is for a PSD permit for the addition of three (3) extractors to the existing thirty-six (36) extractors.

2. Projected or Actual Date of Commencement of Construction: **1 Sep 2000**

3. Projected Date of Completion of Construction: **1 Nov 2000**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **487.5** North (km): **2958.0**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **26 / 44 / 30** Longitude (DD/MM/SS): **81 / 7 / 30**			
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: **Derek Pridgen, Environmental Engineer**
2. Facility Contact Mailing Address: Organization/Firm: **Southern Gardens Citrus Processing** Street Address: **P.O. Box 130** City: **Clewiston** State: **FL** Zip Code: **33440**
3. Facility Contact Telephone Numbers: Telephone: (**863**) **983 - 3030** Fax: (**863**) **983 - 3060**

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. [X] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [X] 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): **HAPs classification is based on limited test data.**	

List of Applicable Regulations

All Federal regulatory citations reflect the rule language as of June 2000.
All State regulatory citations reflect the rule language as of June 2000.
Only those rules, regulations, and ordinances specifically identified herein apply to this facility.
See Attached Title V core list, effective date 3/25/97, except for 40CFR82.

Title V Core List

Effective:03/25/97

[**Note:** The Title V Core List is intended to simplify the completion of the "List of Applicable Regulations" that apply facility-wide (see Subsection II.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.

Requirements that apply to emissions units must be identified in Subsection III.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form.

Applicants must identify all "applicable requirements" in order to claim the "permit shield" described at Rule 62-213.460, F.A.C.]

Federal: ***(description)***

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: ***(description)***

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 12-31-95

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.
62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding

Title V Core List

Effective:03/25/97

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-21-96

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.
62-210.300(3), F.A.C.: Exemptions.
62-210.300(3)(a), F.A.C.: Full Exemptions.
62-210.300(3)(b), F.A.C.: Temporary Exemption.

62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.
62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and Instructions.

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 11-30-94

CHAPTER 62-257, F.A.C: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96

CHAPTER 62-281, F.A.C: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.
62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited
62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

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
PM	A				Particulate Matter-Total
PM_{10}	A				Particulate Matter-PM_{10}
SO_2	A				Sulfur Dioxide
NO_X	A				Nitrogen Oxides
CO	A				Carbon Monoxides
VOC	A				Volatile Organic Compounds
HAPs	A				Total Hazardous Air Pollutants
H115	A				Methanol

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID: SG-FE-1 [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: SG-FE-2 [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID: SG-FE-3 [ ] 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: PSD Report [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [X] Attached, Document ID: PSD Report [ ] 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:_____ [ ] 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
   [ ] Not Applicable

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

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

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

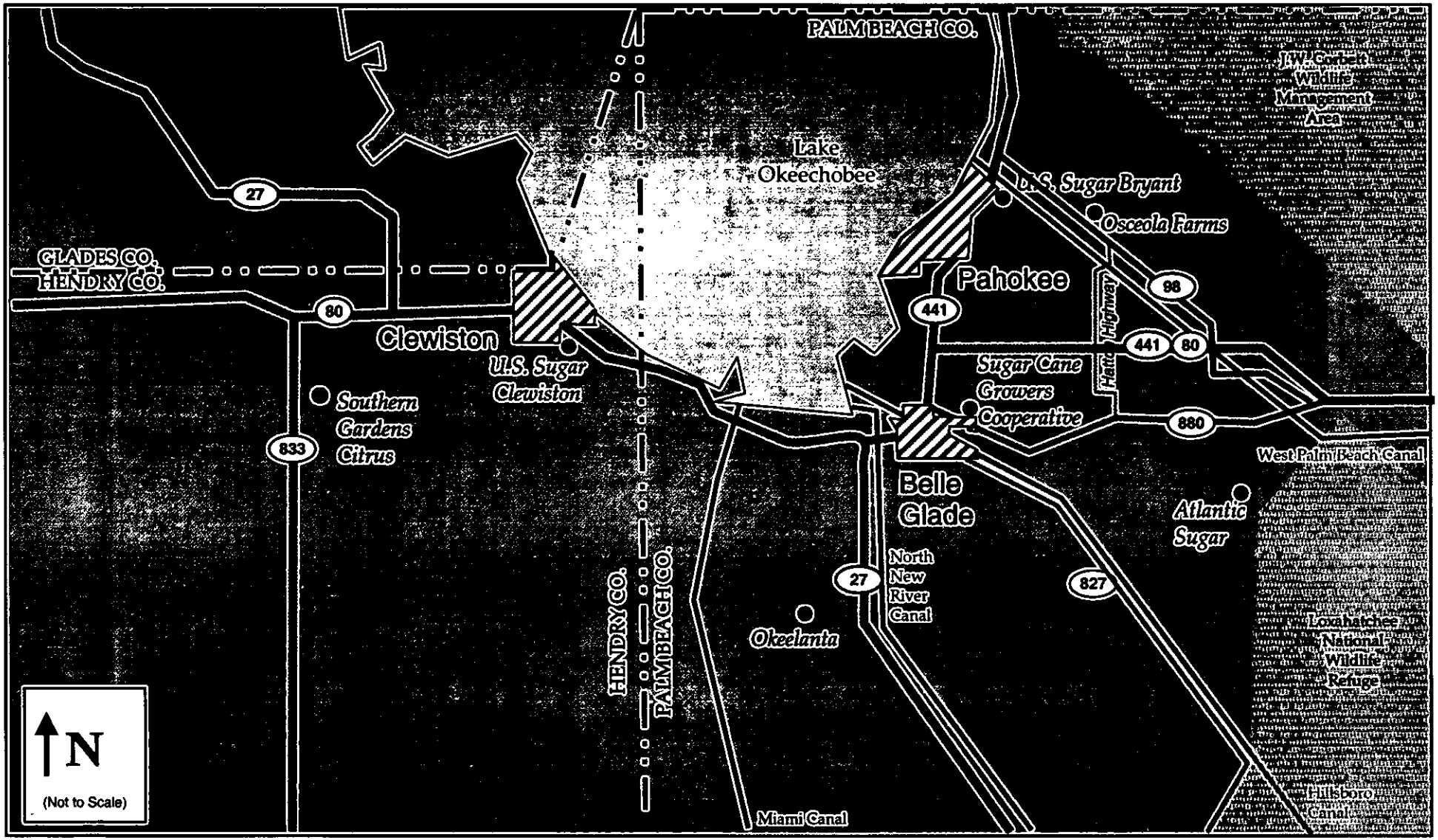
13. Risk Management Plan Verification:
    [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_____) or previously submitted to DEP (Date and DEP Office:_____)
    [ ] Plan to be submitted to CEPPO (Date required:_____)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

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

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

ATTACHMENT SG-FE-1

AREA MAP



Attachment SG-FE-1
Location of Southern Gardens Citrus Processing Corporation

Source: Golder Associates Inc., 2000

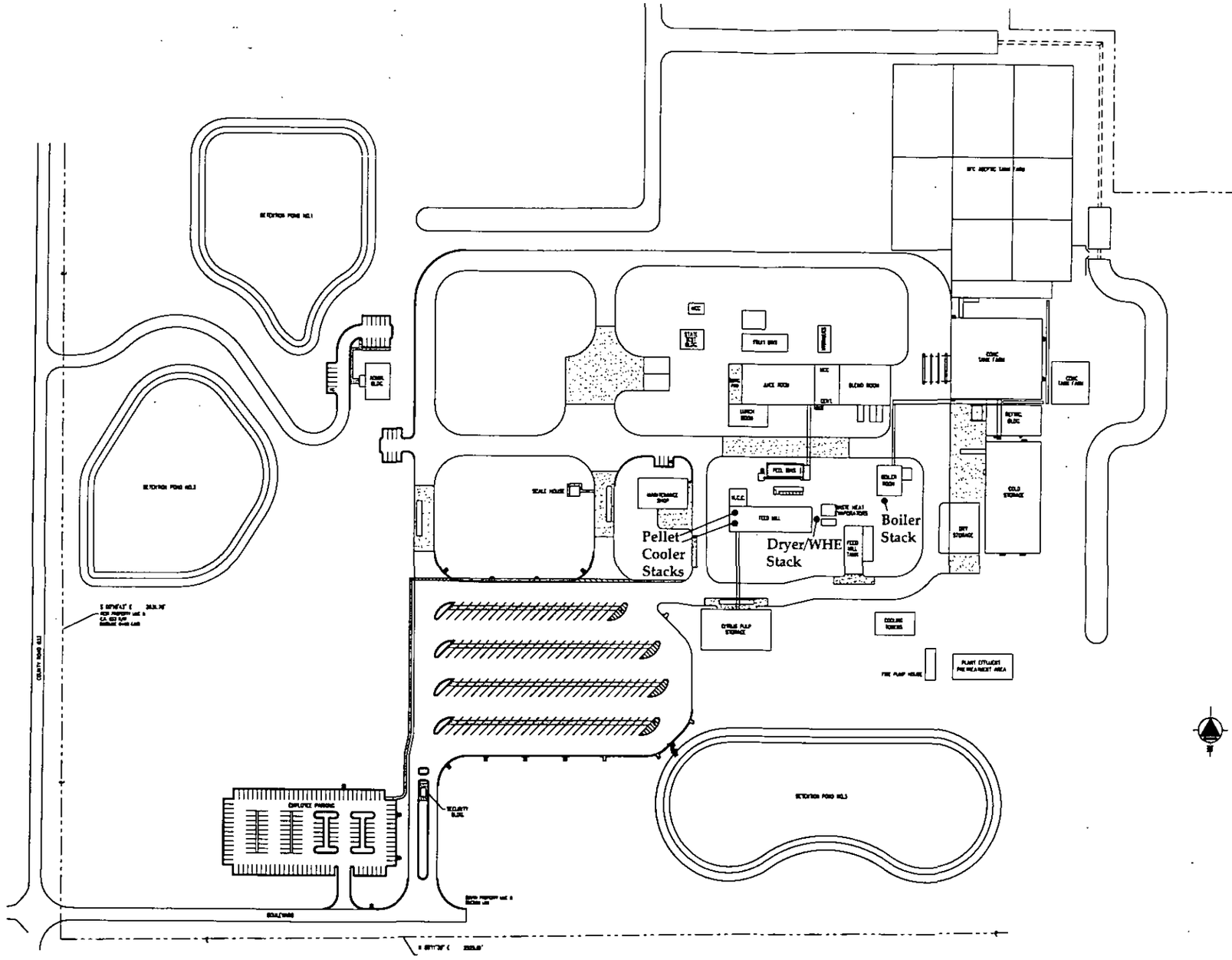
Golder Associates

ATTACHMENT SG-FE-2

FACILITY PLOT PLAN

Attachment SG-FE-2
Facility Plot Plan
0037568Y\F1\WP\SG-FE-2.dwg

Golder Associates



Legend

- Stack Location

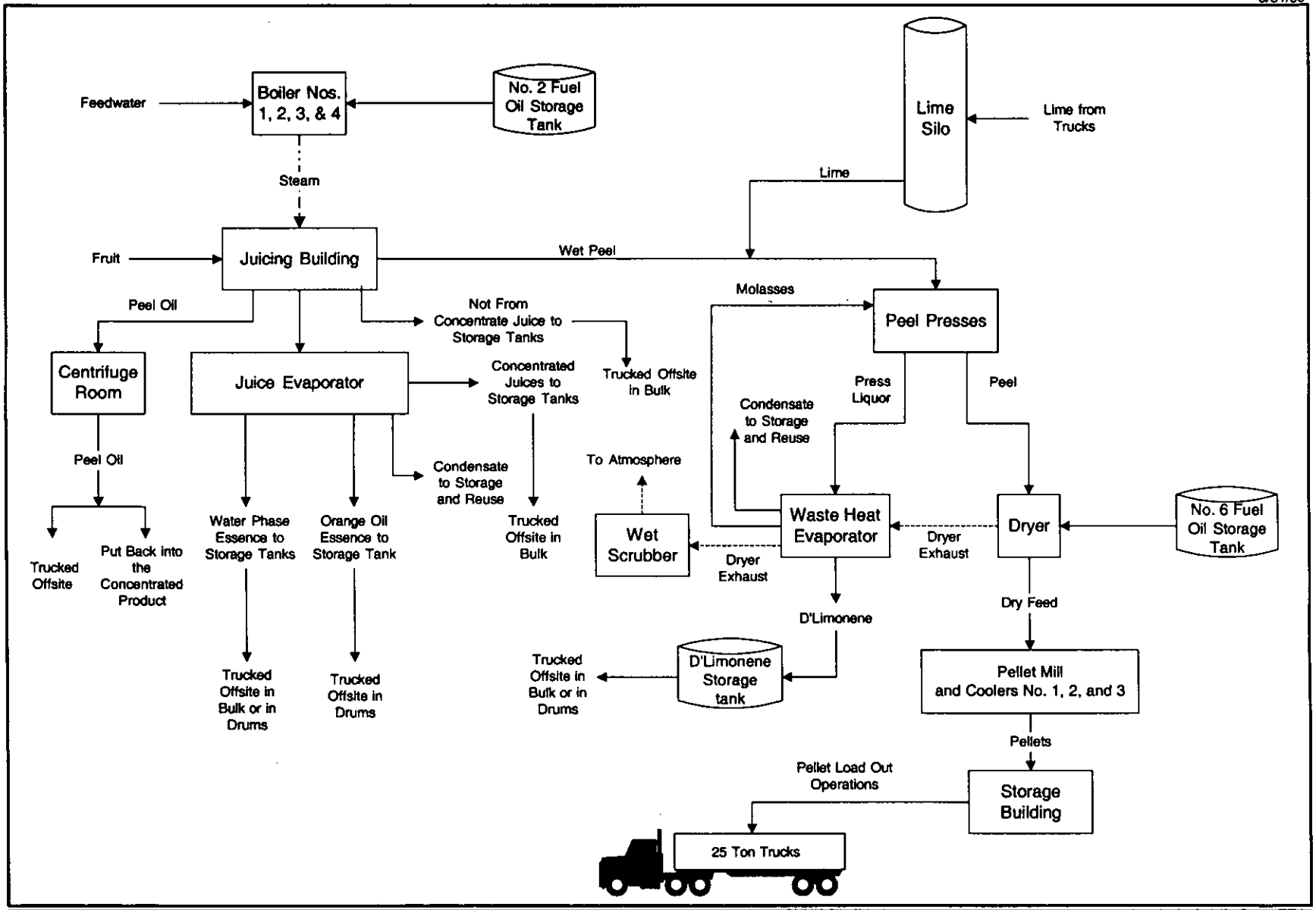
SOUTHERN GARDENS CITRUS
1" = 100' 5/9/00

ATTACHMENT SG-FE-3

PROCESS FLOW DIAGRAM

0037568Y/F1/WP/SG-FIGS.VSD

8/31/00



Attachment SG-FE-3
Southern Gardens Citrus Processing Corporation
Process Flow Diagram
Clewiston, Florida

Process Area: Overall Plant Process

Filename: SG-FIGS.VSD

Latest Revision Date: 8/31/00

Process Flow Legend:
Solid / Liquid
Gas
Steam

Golder Associates

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):
Citrus Feed Mill

4. Emissions Unit Identification Number:
ID: **003**
[ ] 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		**20**	[ ]

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

4-Digit SIC code = 2037. The feed mill contains a 135,000 lb/hr waste heat evaporator and a 60,000 lb/hr feed dryer fired with low sulfur No. 6 fuel oil.

Emissions Unit Control Equipment

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

Wet scrubber – medium efficiency

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

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:	**84** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr tons/day
3. Maximum Process or Throughput Rate:	**94,000 lb/hr (47 TPH)**
4. Maximum Production Rate:	**41,000 lb/hr**
5. Requested Maximum Operating Schedule:	
	24 hours/day **7** days/week
	36 weeks/year **6,000** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	

1. **Max Prod. Rate represents citrus peel at 12% moisture.**
2. **Process or throughput varies depending upon moisture content of peel relates to pounds of wet citrus peel and molasses at 74% moisture.**

See Attachment SG-EU1-B6.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

62-296.320(4)(a), F.A.C. Process Weight Table	
62-296.320(4)(b), F.A.C. General Visible Emissions Standards	
62-297.310, F.A.C. General Compliance Test Requirements	
62-297.401(5), F.A.C. EPA Test Method 5	
62-297.401(6), F.A.C. EPA Test Method 6	
62-297.401(9), F.A.C. EPA Test Method 9	
62-297.440(1)(b), F.A.C. Supplementary Test Procedures – ASTM D 396-76	

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? **CFM**	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: **125** feet	7. Exit Diameter: **5.7** feet
8. Exit Temperature: **175** °F	9. Actual Volumetric Flow Rate: **37,000** 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): **Actual volumetric flow rate based on most recent available stack test data.**		

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): **Food and agricultural fuel fired equipment, process heaters, residual oil**		
2. Source Classification Code (SCC): **3-02-900-02**	3. SCC Units: **Thousand Gallons Burned**	
4. Maximum Hourly Rate: **0.552**	5. Maximum Annual Rate: **3,316**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **1.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **152**
10. Segment Comment (limit to 200 characters): **84.0 MMBtu/hr maximum firing low sulfur No. 6 fuel oil (1.5% sulfur).**		

Segment Description and Rate: Segment 2 of 3

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Food and agriculture, Citrate Feed Manufacture: Handling and Transferring**		
2. Source Classification Code (SCC): **3-02-008-32**	3. SCC Units: **Tons of Product**	
4. Maximum Hourly Rate: **20.5**	5. Maximum Annual Rate: **125,333**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Hourly and annual rates refer to dry citrus peel at 12% moisture, assuming pressed peel moisture content of 74%.**		

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

Segment Description and Rate: Segment 3 of 3

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Food and Agriculture; Other Not Specified; Other Not Classified**		
2. Source Classification Code (SCC): **3-02-999-99**	3. SCC Units: **Tons Produced**	
4. Maximum Hourly Rate: **11.95**	5. Maximum Annual Rate: **80,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **SCC units refer to Tons of molasses produced. Hourly and annual rates refer to molasses production.**		

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	002		EL
PM_{10}	002		NS
SO_2			EL
NO_X			NS
CO			NS
VOC			NS
H115			NS
HAPs			NS

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **32.05** lb/hour **96.15** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference: **See Att. SG-EU1-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU1-G8. Emission factor based on Process Weight Formula 62-296.320(4)(a) F.A.C. E-17.31(P)$^{0.16}$ where P = 47 TPH; E = 32.05 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus feed mill hours of operation are limited to 6,000 hours/yr.**	

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:	4. Equivalent Allowable Emissions: **32.05** lb/hour **96.15** 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): **Based on Process Weight Formula 62-296.320(4)(a) F.A.C.**	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **32.05** lb/hour **96.15** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **100% of PM** Reference: **See Att. SG-EU1-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU1-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus feed mill hours of operation are limited to 6,000 hours/yr.**	

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):	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **42** lb/hour **126** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.5 lb/MMBtu** Reference: **See Attachment SG-EU1-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU1-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

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: **0.5 lb/MMBtu**	4. Equivalent Allowable Emissions: **42** lb/hour **126** 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): **Existing permit condition. Emissions related to No. 6 fuel oil combination.**	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **27.7** lb/hour **61.5** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **1.5 lb/ton BDP** Reference: **See Att. SG-EU1-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU1-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus Feed Mill hours of operation are limited to 6,000 hr/yr.**	

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):	

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: **1,522.3** lb/hour **2,881.5** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **82.51 lb/ton BDP** Reference: **See Att. SG-EU1-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU1-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus Feed Mill operating hours limited to 6,000 hr/yr.**	

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):	

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: **951.4** lb/hour **1,800.9** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **51.57 lb/ton BDP** Reference: **See Att. SG-EU1-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU1-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus Feed Mill operating hours limited to 6,000 hr/yr**	

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 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): **Rule 62-296.320(4)(b), F.A.C.**	

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

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **FLOW**	2. Pollutant(s): **NO_x**
3. CMS Requirement: [ ] Rule [X] Other	
4. Monitor Information: Manufacturer: **Custom Design** Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Existing permit condition requires measuring of total water flow to the scrubber nozzles. Parameter monitored to insure proper operation of the scrubber.**	

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

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	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 2 of 2

1. Parameter Code: **FLOW**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **Kent** Model Number: **50** Serial Number: **See Comment**	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Existing permit condition requires monitoring of oil usage. No serial no. or installation date provided because meters are routinely replaced to insure optimum performance.**	

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

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: SG-EU1-J1 [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: SG-EU1-J2 [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: SG-EU1-J3 [ ] 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 [X] Attached, Document ID: PSD Report [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **See Attachment SG-EU1-J10**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] 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:_____

[ ] Not Applicable

ATTACHMENT SG-EU1-B6

OPERATING CAPACITY/SCHEDULE COMMENT

ATTACHMENT SG-EU1-B6

Operating Capacity/Schedule Comment

The peel dryer is designed for 60,000 lb/hr water evaporation rate. The process input rate and production rate are dependent upon the moisture content of the peel going into the dryer as well as the dried peel production.

ATTACHMENT SG-EU1-G8
CALCULATION OF EMISSIONS

Attachment SG-EU1-G8. Future Potential Emissions for Peel Dryer/WHE at Southern Gardens Citrus Processing Corporation

Regulated Pollutant	Emission Factor	Reference	Short-Term Activity Factor [a]	Maximum Hourly Emissions (lb/hr)	Annual Activity Factor [b]	Annual Emissions (TPY)
Particulate (PM)	32.05 lb/hr	1	--	32.05	--	96.2
Particulate (PM10)	100% of PM	2	--	32.05	--	96.2
Sulfur dioxide	0.5 lb/MMBtu	3	84.0 MMBtu/hr	42.0	504,000 MMBtu/hr	126.0
Nitrogen oxides	1.5 lb/ton BDP	4	18.5 tons/hr BDP	27.7	82,000 tons/yr BDP	61.5
Carbon monoxide						
Early/Mids	58.05 lb/ton BDP	5	18.5 tons/hr BDP	1,071.1	--	--
Valencia	82.51 lb/ton BDP	5	18.5 tons/hr BDP	1,522.3	--	--
Annual Average	70.28 lb/ton BDP	5	--	--	82,000 tons/yr BDP	2,881.5
VOC						
Early/Mids	36.28 lb/ton BDP	6	18.5 tons/hr BDP	669.4	--	--
Valencia	51.57 lb/ton BDP	6	18.5 tons/hr BDP	951.4	--	--
Annual Average	43.93 lb/ton BDP	6	--	--	82,000 tons/yr BDP	1,800.9

Footnotes

[a] Currently permitted heat input rate; throughput rate is maximum.

[b] Based on 20 million boxes of fruit per year; 8.2 lb bone dry peel per box, and 6,000 hr/yr.

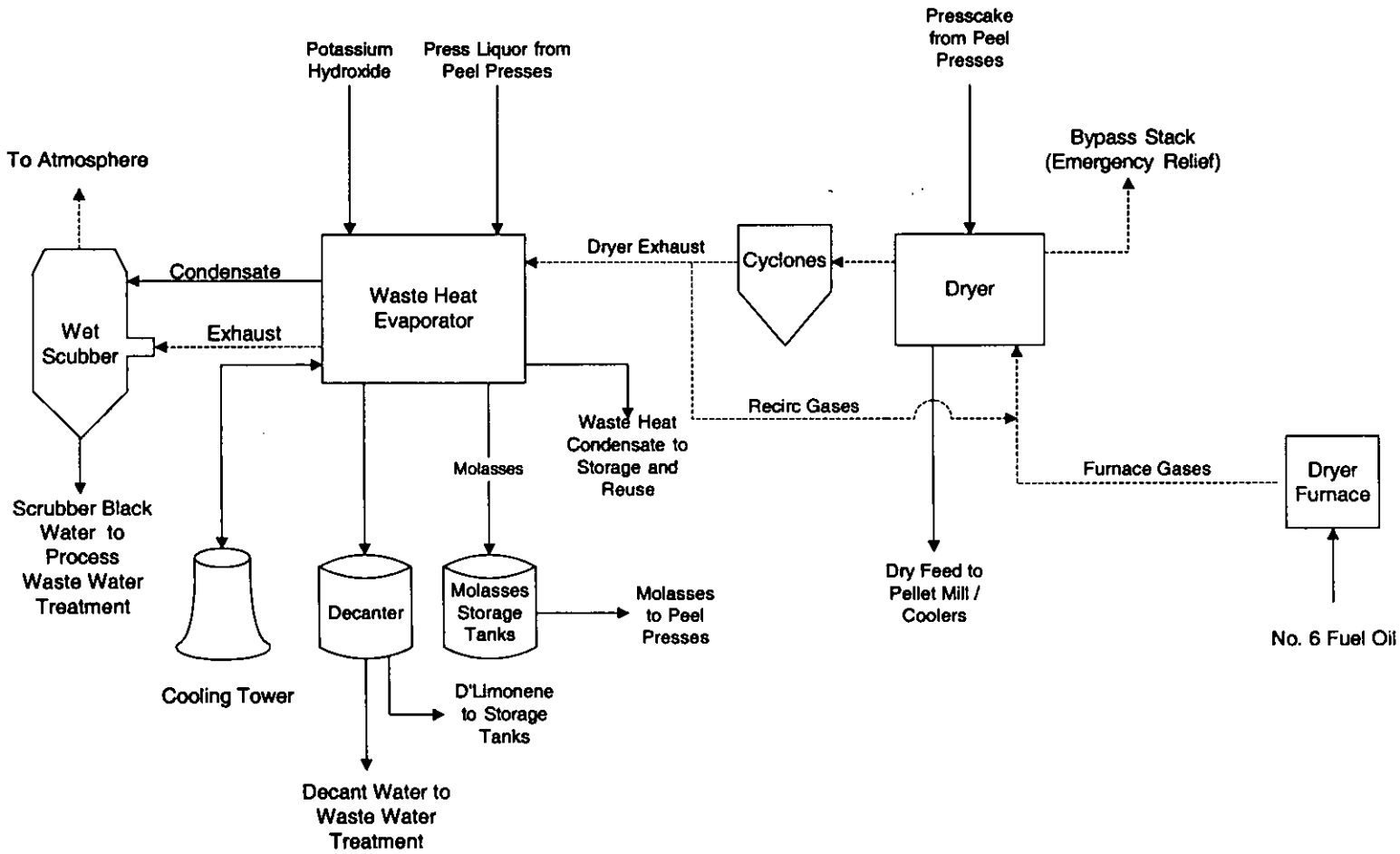
BDP = bone dry peel

References:

1. Maximum emission based on Process Weight Formula, E = 17.31*P ^ 0.16,where E is in lb/hr and P = 47 TPY throughput rate (62-296.320 (4)(a) F.A.C.).
2. Conservative assumption.
3. Currently permitted emission limit.
4. Maximum emissions based on stack test data.
5. Based on 160% of VOC emissions, derived from stack test data.
6. Emission factor based on General FCPA Emission Factor, maximum production rates and:
   Early/Mids -- 0.4275 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Valencia -- 0.6076 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Annual Average - assumes a 50/50 mix of Valencia and Early/Mids.
   Based on 90 lb fruit/box; 8.2 lb bone dry peel/box; 72% of oil to dryer emitted from dryer stack.

ATTACHMENT SG-EU1-J1

PROCESS FLOW DIAGRAM



Attachment SG-EU1-J1
Southern Gardens Citrus Processing Corporation
Process Flow Diagram
Clewiston, Florida

Process Area: Pellet Mill and Cooler
Filename: SG-FIGS.VSD
Latest Revision Date: 8/31/00

Process Flow Legend:
Solid / Liquid
Gas
Steam

Golder Associates

ATTACHMENT SG-EU1-J2

FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT SG-EU1-J2

Fuel Analysis Specification for Southern Gardens Citrus Processing Corporation Citrus Feed Mill

Parameter	No. 6 Residual Fuel Oil
Density (lb/gal)	8.0
Heating Value (Btu/lb)	19,000
Heating Value (Btu/gal)	152,000
Nitrogen (%)	0.17
Sulfur (%)	1.5 Max
Ash/Inorganic (%)	<0.05

ATTACHMENT SG-EU1-J3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Attachment SG-EU1-J3

Southern Gardens Citrus Processing Corporation
Citrus Feed Mill Wet Collection Control Equipment Parameters

Citrus Feed Mill 52FTM26001503

Outlet Gas Temp (F)	175	(a)
Outlet Gas Flow Rate (ACFM)	37,000	(a)
Pressure Drop Across Device (inches of H2O) Min/Max	4 / 7	
Scrubbant Flow Rate (gal/min) - Normal	>200	
Scrubbant Supply Pressure (psi) - Normal/Maximum	40 / 32	
Average Scrubbant pH	4	
Scrubbant Make-up Rate (specify units)	70 gpm	
Scrubber Inlet Loading Rate (lb/hr) of PM	641	(b)

Pollutants

	Inlet Loading lb/hr	Outlet Loading lb/hr	Control Efficiency (%)
Particulate Matter	641	32.05	95

Footnotes

(a) From recent stack test data.
(b) Back calculated from the proposed allowed limit and the equipment supplier efficiency rating.

ATTACHMENT SG-EU1-J10

SUPPLEMENTAL REQUIREMENTS COMMENT

AIR OPERATING PERMIT

AIR OPERATING PERMIT

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

PERMITTEE:
Southern Gardens Citrus
Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

I.D. No: 52FTM26001503
Permit/Certification
Number: AO26-260247
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000
County: Hendry
Latitude: 26° 44′ 30" N
Longitude: 81° 07′ 30" W
Section/Town/Range: 15/43S/32E
Project: Southern Gardens
Citrus Feed Mill

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Operate a 60,000 pound per hour feed dryer with a 135,000 pound per hour waste heat evaporator. The unit is fired with low sulfur NO. 6 fuel oil, and the heat input is 84.0 MMBtu/hr.

The facility is located at 755 C.R. 833, about 1/2 mile south of S.R. 80.

Pertinent Documents	Dated
BACT	Feb. 4, 1992
Construction Permit AC26-206069	June 3, 1992
DEP Form 62-1.202(3) CoCoC	Oct. 11, 1994
Permit Modification AC26-260242	Feb. 17, 1995

For Title V Permits
SIC Number 2037
SCC Numbers 3-02-900-02

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AO26-260247
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. All fugitive dust generated at this site shall be adequately controlled. [Reference Rule 62-296.310(3), F.A.C.]

2. This facility shall be operated in such a fashion so as to preclude objectionable odors. [Reference Rule 62-296.320(2), F.A.C.]

3. The maximum numbers of hours of operation of this facility are limited to 6,000 per year, but the season is extended from October 1st to June 30th. [Reference Construction Permit Application dated October 24, 1994]

CONDITIONS OF COMPLIANCE:

4. Proper oil flow meters shall be installed to monitor the fuel oil being consumed. [Reference Rule 62-4.070(3), F.A.C.]

5. The scrubber control system shall be equipped with instrumentation to monitor total pressure drop and inlet water pressure. Such instrumentation shall be properly maintained so as to be functional at all times. [Reference Rule 62-4.070(3), F.A.C.]

6. Stack sampling facilities provided by the owner shall be in accordance with the requirements of Chapter 62-297.345, F.A.C.

7. Sulfur dioxide emissions shall not exceed 0.50 pounds per million BTU heat input. Compliance will be calculated from analyses of sulfur in the No. 6 fuel oil. Sulfur content in fuel shall not exceed 0.7%. [Reference Rule 62-296.330, F.A.C. & Construction Permit Application dated October 24, 1994]

8. The maximum allowable heat input is 84.0 million BTU's per hour. This is the heat input at which compliance with standards shall be demonstrated. [Reference Construction Permit Application dated October 24, 1994]

9. Visible emissions shall not exceed 20% opacity. [Reference Rule 62-296.310(2)(a), F.A.C.]

10. This facility shall comply with the Process Weight Table Emission Rates for units having a capacity greater than 30 tons per hour. The allowable emissions rate shall be calculated by the use of the formula $E = 17.31 * P^{0.16}$, where E is the emissions in pounds per hour and P is the process weight in tons per hour. [Reference Rule 62-296.310(1)(b), F.A.C.]

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AO26-260247
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

SPECIFIC CONDITIONS:

CONDITIONS OF COMPLIANCE:

11. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

REQUIRED TESTING:

12. Testing of emissions should be conducted with the source operating within 10% of its rated capacity. Testing may be conducted at less than 90% of rated capacity; however, if so, subsequent source operation is limited to up to 110% of the test load. Once the unit is so limited, then operation at higher capacities is allowed for purposes of additional compliance testing to regain rated capacity in the permit with prior notification to the Department's South District.

13. Notification of the Department prior to any required testing shall include as a minimum: the date and time of the test, the exact location of the test, and the name and telephone number of the contact person at the site. [Reference Rule 62-297.340(1)(i), F.A.C.]

14. Particulate emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with **EPA Method Five** as published in 40 CFR 60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year within 60 days prior to April 14th. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

15. Sulfur dioxide emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with **EPA Method Six** as published in 40 CFR 60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year within 60 days prior to April 14th. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

16. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AO26-260247
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

SPECIFIC CONDITIONS:

REQUIRED TESTING:

compliance at the permitted maximum operating rate. Test shall be conducted in accordance with **EPA Method Nine** as published in 40 CFR 60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year within 60 days prior to April 14th. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

REPORTS AND RECORD KEEPING:

17. An annual operation report [DER Form 62-210.900(5)] shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(2), F.A.C.]

GENERAL CONDITIONS:

18. An integral part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

Note: In the event of an emergency the permittee shall contact the Department by calling **(904) 413-9911.** During normal business hours, the permittee shall call (813) 332-6975.

Issued this 27th day of February, 1995.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Peter J. Ware
Director of
District Management

PJW/AEL/ael

7 Pages Attached

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AO26-260247
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5) Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by any order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, F.A.C. as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(X) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used;
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

AIR OPERATING PERMIT AMMENDMENTS

Department of
Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT MODIFICATION

March 27, 1996

CERTIFIED MAIL #Z 391 361 416
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit by:

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

Hendry County - AP
DEP File No. AC26-206069
AC26-260242 and AO26-260247
ARMS Facility ID # 0510015

On February 2, 1996, Southern Gardens Citrus Processing Corporation applied to the Department to change the permit amendment issued on January 22, 1996. This change is due to additional data disclosing that two (2) of the parameters requiring data are insignificant and therefore not necessary for compliance.

Enclosed is Permit Number 0510015-002-AC issued to Southern Gardens Citrus Processing Corporation, pursuant to Section(s) 403.087, Florida Statutes, for the following modification to Permit Numbers AC26-260242 and AO26-260247

AC26-260242 Specific Condition No. 9
AO26-260247 Specific Condition No. 7

FROM: Sulfur dioxide emissions shall not exceed 0.50 pounds per million Btu heat input, or a total of 126 tons per year. Continuing compliance will be determined by monitoring the pH every six hours of operation of the press liquor into the waste heat evaporator, the molasses exit of the waste heat evaporator, and the black water. These values, with the annual EPA Method six data, will be used to determine operating parameters as surrogates to determine scrubbing efficiency. Sulfur content in the No. 6 fuel oil shall not exceed 1.5 per cent. [Reference Rule 62-296.330, F.A.C. & Construction Permit Application dated October 24, 1994]

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

TO: Sulfur dioxide emissions shall not exceed 0.50 pounds per million Btu heat input, or a total of 126 tons per year. Continuing compliance will be determined by monitoring the pH every eight hours of operation of the waste heat evaporator black water. These values, with the annual EPA Method six data, will be used to determine operating parameters as surrogates to determine scrubbing efficiency. Sulfur content in the No. 6 fuel oil shall not exceed 1.5 per cent. [Reference Rule 62-296.330, F.A.C. & Construction Permit Application dated October 24, 1994]

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S..

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code (F.A.C.).

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 62-103.070, F.A.C.. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

David M. Knowles

David M. Knowles, P.E.
District Air
Program Administrator

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT AMENDMENT ISSUANCE and all copies were mailed by certified mail before the close of business on March 27, 1996 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Laura Hall 3-27-96
(Clerk) (Date)

DMK/AEL/jw

cc: David A. Buff, P.E.

AIR CONSTRUCTION PERMIT

Department of
Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

PERMITTEE:
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

Facility ID.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002
County: Hendry
Latitude: 26° 44' 30" N
Longitude: 81° 07' 30" W
Section/Town/Range: 15/43S/32E
Project: Pellet mill cooler

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For construction of a third pellet mill cooler and modification of permit of Boiler No. 3 to allow increased operation and modification of permits of Boilers No. 1 and No. 2 to allow increased flexibility in operating Boilers No. 1 and No. 2.

The facility is located at 755 C. R. 833, 0.5 mile south of S. R. 80, west of Clewiston, Hendry County, Florida.

Pertinent Documents	Dated
Boiler No. 1 AC26-206066	03-Jun-1992
Boiler No. 2 AC26-206068	03-Jun-1992
Feed Mill: Peel Dryer AC26-206069	03-Jun-1992
Pellet Mills/Coolers AC26-206072	03-Jun-1992
Tanks AC26-241731	24-Jan-1994
Boilers No. 1 & No. 2 AO26-260246	27-Feb-1995
Feed Mill AC26-260242	17-Feb-1995
Feed Mill AO26-260247	27-Feb-1995
Tanks Permit Amendment	02-Nov-1995

For Title V Permits
SIC Number 2037

PERMITTEE:
Southern Gardens Citrus Processing Corp.

Facility ID. No.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. The applicant, Southern Gardens Citrus Processing Corporation (SGCPC), shall retain a registered professional engineer for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. [Reference Rule 62-4.050(3), F.A.C.] Within 60 days of completion of construction, an amendment to the Title V Operation Permit Application shall be filed. [Reference Rule 62-4.220, F.A.C.]

2. The maximum number of hours of operation of the pellet mill are limited to 6,000 per year. The season is extended from October 1st to June 30th.

3. SGCPC shall not discharge air pollutants which cause or contribute to an objectionable odor. [Reference Rule 62-296.320(2), F.A.C.].

4. SGCPC shall take reasonable precautions to prevent emissions of unconfined particulate matter. [Reference Rule 62-296.320(4)(c), F.A.C.].

CONDITIONS OF COMPLIANCE:

5. Visible emissions from the pellet mill shall not exceed 20% opacity. [Reference Rule 62-296 F.A.C.]

6. Boilers 1, 2, and 3 are allowed simultaneous operation up to 8,760 hours/year. The total oil consumption by all three boilers will be limited to 4,078,000 gallons/year.

7. Specific Condition No. 5 of the operating permit (AO26-260247) for peel dryer/waste heat evaporator and Specific Condition 7 of the construction permit (AC26-260242) are modified to replace the requirement for total pressure drop with a requirement to measure total water flow to the nozzles.

8. This pellet mill shall comply with the Process Weight Table Emissions Rates. For units having a capacity less than 30 tons per hour the allowable emissions rate shall be calculated by the use of the formula $E = 3.59 * P^{0.62}$, where E is the emissions in pounds per hour and P is the process weight in tons per hour. For units having a capacity greater than 30 tons per hour the allowable emissions rate shall be calculated by the use of the formula $E=17.31 * P^{0.16}$. [Reference Rule 62-296 F.A.C.]

PERMITTEE:
Southern Gardens Citrus Processing Corp.

Facility ID. No.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002

SPECIFIC CONDITIONS:

REQUIRED TESTING:

9. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60, Appendix A , or State approved equivalent method. Such tests shall be conducted within 30 days of initial startup. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing.

REPORTS AND RECORD KEEPING:

10. An annual operation report (DER Form 62-210.900(5)) shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(3), F.A.C.]

11. All other Specific Conditions of permits for this facility shall remain unchanged.

GENERAL CONDITIONS:

12. An integral part of this permit is the attached 15 General Conditions.
[Rule 62-4.160, F.A.C.]

NOTE: In the event of an emergency the permittee shall contact the Department by calling (850) 413-9911. During normal business hours, the permittee shall call (941) 332-6975.

Issued this 8th day of July, 1997.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

David M. Knowles, P.E.
District Air Program Administrator

DMK/JRS/jw

12 Pages Attached

PERMITTEE:
Southern Gardens Citrus Processing Corp.

Facility ID. No.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5) Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by any order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of
credentials or other documents as may be required by law, and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, F.A.C. as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
(X) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used;
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Department of
Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

Virginia B. Wetherell
Secretary

PERMITTEE:
Southern Gardens Citrus
Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

I.D. No: 52FTM26001503
Permit/Certification
Number: AC26-260242
Date of Issue: February 17, 1995
Expiration Date: February 17, 1996
County: Hendry
Latitude: 26° 44' 30" N
Longitude: 81° 07' 30" W
Section/Town/Range: 15/43S/32E
Project: Southern Gardens
Citrus Feed Mill

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Modify the original construction permit for a 60,000 pound per hour feed dryer to increase the waste heat evaporator to 135,000 pounds per hour. The hours of operation are increased to 6,000 and the heat input is increased to 84.0 MMBtu/hr.

The facility is located at 755 C.R. 833, about 1/2 mile south of S.R. 80.

Pertinent Documents	Dated
BACT	Feb. 4, 1992
Construction Permit AC26-206069	June 3, 1992
DEP Form 62-1.202(3) CoCoC	Oct. 11, 1994

For Title V Permits
SIC Number 2037
SCC Numbers 3-02-900-02

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AC26-260242
Date of Issue: February 17, 1995
Expiration Date: February 17, 1996

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. All fugitive dust generated at this site shall be adequately controlled. [Reference Rule 62-296.310(3), F.A.C.]

2. This facility shall be operated in such a fashion so as to preclude objectionable odors. [Reference Rule 62-296.320(2), F.A.C.]

3. The maximum numbers of hours of operation of this facility are limited to 6,000 per year, but the season is extended from October 1st to June 30th. [Reference Construction Permit Application dated October 24, 1994]

CONDITIONS OF COMPLIANCE:

4. The applicant shall retain a registered professional engineer for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. [Reference Rule 62-4.050(3), F.A.C.] An APPLICATION FOR AIR PERMIT - SHORT FORM (DEP Form 62-210.900(2) attached) shall be submitted as an application for an operation permit, with the compliance tests results. These are to be submitted within 60 days after completion of construction. [Reference Rule 62-4.220, F.A.C.]

5. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction.

6. Proper oil flow meters shall be installed to monitor the fuel oil being consumed. [Reference Rule 62-4.070(3), F.A.C.]

7. The scrubber control system shall be equipped with instrumentation to monitor total pressure drop and inlet water pressure. Such instrumentation shall be properly maintained so as to be functional at all times. [Reference Rule 62-4.070(3), F.A.C.]

8. Stack sampling facilities provided by the owner shall be in accordance with the requirements of Chapter 62-297.345, F.A.C.

9. Sulfur dioxide emissions shall not exceed 0.50 pounds per million BTU heat input. Compliance will be calculated from analyses of sulfur in the No. 6 fuel oil. Sulfur content in fuel shall not exceed 0.7%. [Reference Rule 62-296.330, F.A.C. & Construction Permit Application dated October 24, 1994]

10. The maximum allowable heat input is 84.0 million BTU's per hour. This is the heat input at which compliance with standards shall be demonstrated. [Reference Construction Permit Application dated October 24, 1994]

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AC26-260242
Date of Issue: February 17, 1995
Expiration Date: February 17, 1996

SPECIFIC CONDITIONS:

CONDITIONS OF COMPLIANCE:

11. Visible emissions shall not exceed 20% opacity. [Reference Rule 62-296.310(2)(a), F.A.C.]

12. This facility shall comply with the Process Weight Table Emission Rates for units having a capacity greater than 30 tons per hour. The allowable emissions rate shall be calculated by the use of the formula $E = 17.31*P^{0.16}$, where E is the emissions in pounds per hour and P is the process weight in tons per hour. [Reference Rule 62-296.310(1)(b), F.A.C.]

13. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

REQUIRED TESTING:

14. Testing of emissions should be conducted with the source operating within 10% of its rated capacity. Testing may be conducted at less than 90% of rated capacity; however, if so, subsequent source operation is limited to up to 110% of the test load. Once the unit is so limited, then operation at higher capacities is allowed for purposes of additional compliance testing to regain rated capacity in the permit with prior notification to the Department's South District.

15. Notification of the Department prior to any required testing shall include as a minimum: the date and time of the test, the exact location of the test, and the name and telephone number of the contact person at the site. [Reference Rule 62-297.340(1)(i), F.A.C.]

16. Particulate emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with **EPA Method Five** as published in 40 CFR 60, Appendix A, or State approved equivalent method. Such tests shall be conducted within 30 days of the initial startup. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

17. Sulfur dioxide emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with **EPA Method Six** as published in 40 CFR

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AC26-260242
Date of Issue: February 17, 1995
Expiration Date: February 17, 1996

SPECIFIC CONDITIONS:

REQUIRED TESTING:

60, Appendix A, or State approved equivalent method. Such tests shall be conducted within 30 days of the initial startup. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

18. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with **EPA Method Nine** as published in 40 CFR 60, Appendix A, or State approved equivalent method. Such tests shall be conducted within 30 days of the initial startup. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

REPORTS AND RECORD KEEPING:

19. An annual operation report [DER Form 62-210.900(5)] shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(2), F.A.C.]

GENERAL CONDITIONS:

20. An integral part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

Note: In the event of an emergency the permittee shall contact the Department by calling **(904) 413-9911.** During normal business hours, the permittee shall call (813) 332-6975.

Issued this 17th day of February, 1995.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Peter J. Ware
Director of
District Management

PJW/AEL/jw

7 Pages Attached

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001503
Permit/Cert. No.: AC26-260242
Date of Issue: February 17, 1995
Expiration Date: February 17, 1996

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5) Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by any order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, F.A.C. as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

(X) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used;
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

AIR OPERATING PERMIT AMENDMENTS

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT MODIFICATION

March 27, 1996

CERTIFIED MAIL #Z 391 361 416
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit by:

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

Hendry County - AP
DEP File No. AC26-206069
AC26-260242 and AO26-260247
ARMS Facility ID # 0510015

On February 2, 1996, Southern Gardens Citrus Processing Corporation applied to the Department to change the permit amendment issued on January 22, 1996. This change is due to additional data disclosing that two (2) of the parameters requiring data are insignificant and therefore not necessary for compliance.

Enclosed is Permit Number 0510015-002-AC issued to Southern Gardens Citrus Processing Corporation, pursuant to Section(s) 403.087, Florida Statutes, for the following modification to Permit Numbers AC26-260242 and AO26-260247

AC26-260242 Specific Condition No. 9
AO26-260247 Specific Condition No. 7

FROM: Sulfur dioxide emissions shall not exceed 0.50 pounds per million Btu heat input, or a total of 126 tons per year. Continuing compliance will be determined by monitoring the pH every six hours of operation of the press liquor into the waste heat evaporator, the molasses exit of the waste heat evaporator, and the black water. These values, with the annual EPA Method six data, will be used to determine operating parameters as surrogates to determine scrubbing efficiency. Sulfur content in the No. 6 fuel oil shall not exceed 1.5 per cent. [Reference Rule 62-296.330, F.A.C. & Construction Permit Application dated October 24, 1994]

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

TO: Sulfur dioxide emissions shall not exceed 0.50 pounds per million Btu heat input, or a total of 126 tons per year. Continuing compliance will be determined by monitoring the pH every eight hours of operation of the waste heat evaporator black water. These values, with the annual EPA Method six data, will be used to determine operating parameters as surrogates to determine scrubbing efficiency. Sulfur content in the No. 6 fuel oil shall not exceed 1.5 per cent. [Reference Rule 62-296.330, F.A.C. & Construction Permit Application dated October 24, 1994]

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S..

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this

permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code (F.A.C.).

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 62-103.070, F.A.C.. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

David M. Knowles

David M. Knowles, P.E.
District Air
Program Administrator

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT AMENDMENT ISSUANCE and all copies were mailed by certified mail before the close of business on March 27, 1996 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Laura Hall 3-27-96
(Clerk) (Date)

DMK/AEL/jw

cc: David A. Buff, P.E.

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):
Citrus Pellet Coolers

4. Emissions Unit Identification Number:
ID: **004, 005, 009**
[ ] 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		**20**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)
4-Digit SIC code = 2037. This emissions unit consists of two pellet mills and three coolers. Either Coolers #1 and #2 can operate together, or Cooler #3 can operate alone. Cooler #1 ID = 004; Cooler #2 ID = 005; Cooler #3 ID = 009.

Emissions Unit Control Equipment

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

Cyclones are an integral part of the process and are not considered as control equipment.

Baghouse for dust control on the storage building. Currently FDEP does not require the baghouse to be used.

2. Control Device or Method Code(s): **18**

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:				mmBtu/hr
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:	**46,000 lb/hr**			
4. Maximum Production Rate:	**46,000 lb/hr**			
5. Requested Maximum Operating Schedule:				
	24	hours/day	**7**	days/week
	36	weeks/year	**6,000**	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum rates relate to total pounds of citrus peel through Coolers #1 and #2, or through Cooler #3.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

62-296.320(4)(a), F.A.C. Process weight table	
62-296.320(4)(b), F.A.C. General Visible Emission Standards	
62-297.310(2), F.A.C. General Compliance Test Requirements	
62-297.310(4)(a), F.A.C. General Compliance Test Requirements	
62-297.310(5), F.A.C. General Compliance Test Requirements	
62-297.310(7)(a)1., F.A.C. General Compliance Test Requirements	
62-297.310(7)(a)3., F.A.C. General Compliance Test Requirements	
62-297.310(7)(a)4.a., F.A.C. General Compliance Test Requirements	
62-297.310(7)(a)9., F.A.C. General Compliance Test Requirements	
62-297.310(8), F.A.C. General Compliance Test Requirements	
62-297.401(9), F.A.C. EPA Method Nine	

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? **CPM**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Coolers #1 and #3 vent to Cyclone #1; Cooler #2 vents to Cyclone #2.**		
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** feet
8. Exit Temperature: **110** °F	9. Actual Volumetric Flow Rate: **13,900** 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): **Stack parameters apply to Cyclone #1. Stack parameters for Cyclone #2 are as follows: height = 30 ft; diameter = 2.0 ft; temp. = 110°F; flow = 9,800 acfm.**		

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): **Food and Agriculture, Feed Manufacture, Pellet Cooler**		
2. Source Classification Code (SCC): **3-02-008-16**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **23**	5. Maximum Annual Rate: **138,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **0**
10. Segment Comment (limit to 200 characters): **Hourly and annual rates refer to total dry citrus peel through coolers.**		

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			EL
PM_{10}			NS
VOC			NS

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.0** lb/hour **15.0** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **5.0 lb/hr** Reference: **See Att. SG-EU2-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU2-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus pellet mill hours of operation are limited to 6,000 hrs/yr.**	

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):	

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

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.0** lb/hour **15.0** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **100% of PM** Reference: **See Att. SG-EU2-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU2-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Citrus Pellet mill hours of operation are limited to 6,000 hours/yr.**	

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):	

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: **119.3** lb/hour **225.1** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **6.45 lb/ton BDP** Reference: **See Att. SG-EU2-G8**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See Attachment SG-EU2-G8**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **BDP = bone dry peel.**	

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 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): **Rule 62-296.320(4)(b), F.A.C.**	

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: SG-EU2-J1 [ ] 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 [X] Attached, Document ID: PSD-Report [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **See Attachment SG-EU2-J10**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] 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:_____

[ ] Not Applicable

ATTACHMENT SG-EU2-G8

CALCULATION OF EMISSIONS

Attachment SG-EU2-G8. Future Potential Emissions for Citrus Pellet Mill at Southern Gardens Citrus Processing Corporation

Regulated Pollutant	Emission Factor	Reference	Short-Term Activity Factor [a]	Maximum Hourly Emissions (lb/hr)	Annual Activity Factor [b]	Annual Emissions (TPY)
Particulate (PM)	5.00 lb/hr	1	--	5.0	6,000 hr/yr	15.0
Particulate (PM10)	100% % of PM	2	--	5.0	--	15.0
VOC						
Early/Mids	4.54 lb/ton BDP	3	18.5 TPH BDP	83.9	--	--
Valencia	6.45 lb/ton BDP	3	18.5 TPH BDP	119.3	--	--
Annual Average	5.49 lb/ton BDP	3	--	--	82,000 TPY BDP	225.1

Footnotes

[a] Based on maximum throughput rate.

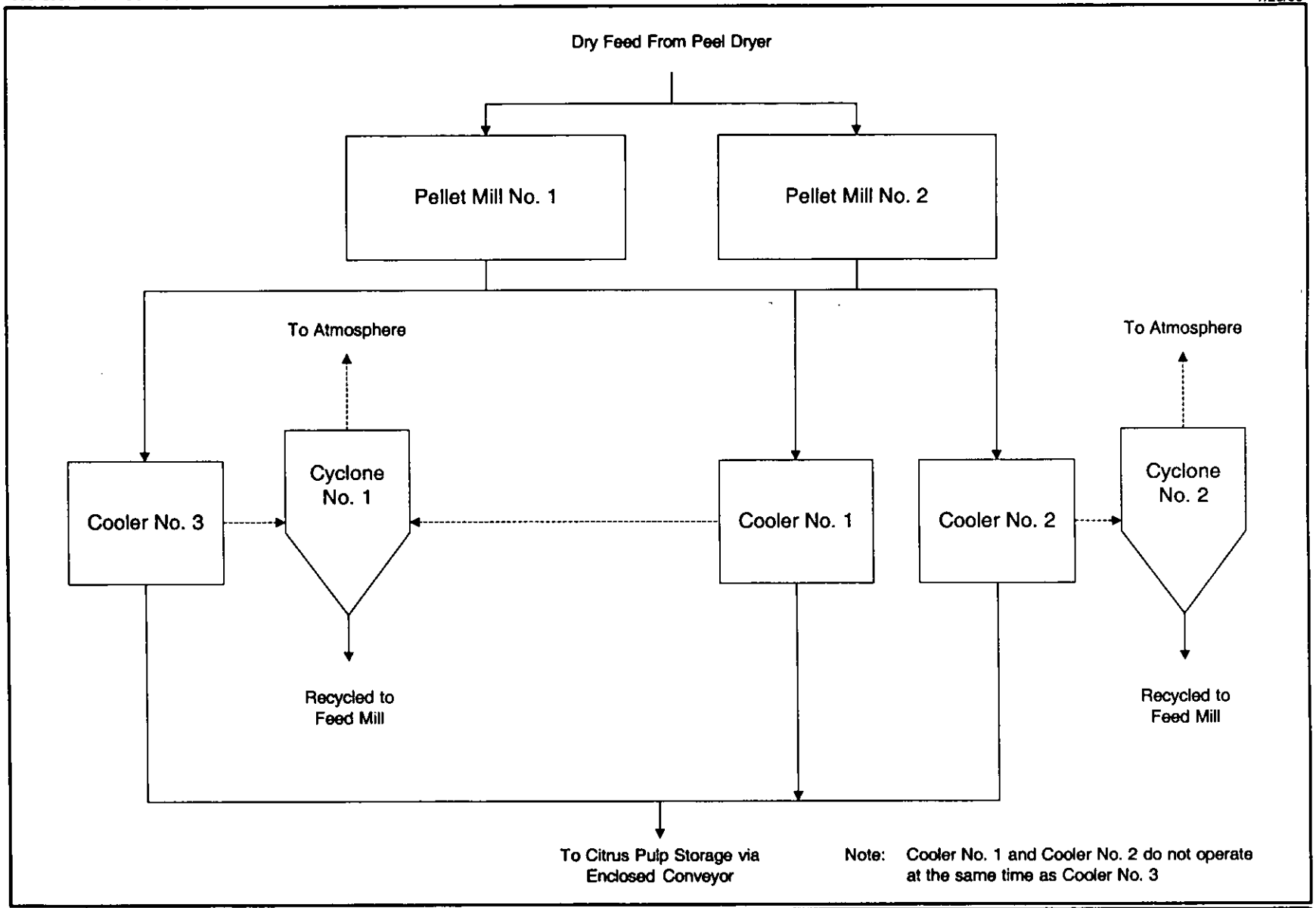
[b] Based on 20 million boxes of fruit per year, 8.2 lb bone dry peel per box, and 6,000 hr/yr.

References:

1. Maximum emissions based on stack test data.
2. Conservative assumption.
3. Emissions based on General FCPA Emission Factor, maximum production rates and:
   Early/Mids -- 0.4275 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Valencia -- 0.6076 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Annual Average -- assumes a 50/50 mix of Valencia and Early/Mids.
   Based on 90 lb of fruit/box; 8.2 lb bone dry peel/box; 9% of oil to dryer emitted from pellet cooler.

ATTACHMENT SG-EU2-J1

PROCESS FLOW DIAGRAM



Attachment SG-EU2-J1
Southern Gardens Citrus Processing Corporation
Process Flow Diagram
Clewiston, Florida

Process Area: Citrus Pellet Mill
Filename: SG-FIGS.VSD
Latest Revision Date: 7/28/00

Process Flow Legend:
Solid / Liquid
Gas
Steam

Golder Associates

ATTACHMENT SG-EU2-J10

SUPPLEMENTAL REQUIREMENTS COMMENT

AIR OPERATING PERMIT

AIR OPERATING PERMIT

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

PERMITTEE:
Southern Gardens Citrus
Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

I.D. No: 52FTM26001504
Permit/Certification
Number: AO26-260249
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000
County: Hendry
Latitude: 26° 44' 30" N
Longitude: 81° 07' 30" W
Section/Town/Range: 15/43S/32E
Project: Southern Gardens
Citrus Pellet Mill

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To operate a citrus pellet mill and cooler. This is one of two units, the second has not been completed.

The facility is located at 755 C.R. 833, about 1/2 mile south of S.R. 80.

Pertinent Documents	Dated
Construction Permit AC26-206072	June 3, 1992
DEP Form 62-1.202(3) CoCoC	Oct. 11, 1994
Permit Modification AC26-260243	Feb. 17, 1995

For Title V Permits
SIC Number 2037
SCC Numbers 3-02-008-16

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001504
Permit/Cert. No.: AO26-260249
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. All fugitive dust generated at this site shall be adequately controlled. [Reference Rule 62-296.310(3), F.A.C.]

2. This facility shall be operated in such a fashion so as to preclude objectionable odors. [Reference Rule 62-296.320(2), F.A.C.]

3. The maximum numbers of hours of operation of this facility are limited to 6,000 per year, but the season is extended from October 1st to June 30th. [Reference Construction Permit Application dated October 24, 1994]

CONDITIONS OF COMPLIANCE:

4. Visible emissions shall not exceed 20% opacity. [Reference Rule 62-296.310(2)(a), F.A.C.]

5. This facility shall comply with the Process Weight Table Emission Rates for units having a capacity less than 30 tons per hour. The allowable emissions rate shall be calculated by the use of the formula $E = 3.59 * p^{0.62}$, where E is the emissions in pounds per hour and P is the process weight in tons per hour. [Reference Rule 62-296.310(1)(b), F.A.C.]

REQUIRED TESTING:

6. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60, Appendix A, or State approved equivalent method. Such tests shall be conducted once per year within 60 days prior to April 14th. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

REPORTS AND RECORD KEEPING:

7. An annual operation report (DER Form 62-210.900(5)) shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(2), F.A.C.]

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001504
Permit/Cert. No.: AO26-260249
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

SPECIFIC CONDITIONS:

GENERAL CONDITIONS:

8. An integral part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

Note: In the event of an emergency the permittee shall contact the Department by calling **(904) 413-9911.** During normal business hours, the permittee shall call (813) 332-6975.

Issued this 27th day of February, 1995.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Peter J. Ware
Director of
District Management

PJW/AEL/ael

6 Pages Attached

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001504
Permit/Cert. No.: AO26-260249
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5) Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by any order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, F.A.C. as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used;
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

AIR CONSTRUCTION PERMIT

Department of
Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

PERMITTEE:
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

Facility ID.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002
County: Hendry
Latitude: 26° 44' 30" N
Longitude: 81° 07' 30" W
Section/Town/Range: 15/43S/32E
Project: Pellet mill cooler

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For construction of a third pellet mill cooler and modification of permit of Boiler No. 3 to allow increased operation and modification of permits of Boilers No. 1 and No. 2 to allow increased flexibility in operating Boilers No. 1 and No. 2.

The facility is located at 755 C. R. 833, 0.5 mile south of S. R. 80, west of Clewiston, Hendry County, Florida.

Pertinent Documents	Dated
Boiler No. 1 AC26-206066	03-Jun-1992
Boiler No. 2 AC26-206068	03-Jun-1992
Feed Mill: Peel Dryer AC26-206069	03-Jun-1992
Pellet Mills/Coolers AC26-206072	03-Jun-1992
Tanks AC26-241731	24-Jan-1994
Boilers No. 1 & No. 2 AO26-260246	27-Feb-1995
Feed Mill AC26-260242	17-Feb-1995
Feed Mill AO26-260247	27-Feb-1995
Tanks Permit Amendment	02-Nov-1995

For Title V Permits
SIC Number 2037

PERMITTEE:
Southern Gardens Citrus Processing Corp.

Facility ID. No.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. The applicant, Southern Gardens Citrus Processing Corporation (SGCPC), shall retain a registered professional engineer for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. [Reference Rule 62-4.050(3), F.A.C.] Within 60 days of completion of construction, an amendment to the Title V Operation Permit Application shall be filed. [Reference Rule 62-4.220, F.A.C.]

2. The maximum number of hours of operation of the pellet mill are limited to 6,000 per year. The season is extended from October 1st to June 30th.

3. SGCPC shall not discharge air pollutants which cause or contribute to an objectionable odor. [Reference Rule 62-296.320(2), F.A.C.].

4. SGCPC shall take reasonable precautions to prevent emissions of unconfined particulate matter. [Reference Rule 62-296.320(4)(c), F.A.C.].

CONDITIONS OF COMPLIANCE:

5. Visible emissions from the pellet mill shall not exceed 20% opacity. [Reference Rule 62-296 F.A.C.]

6. Boilers 1, 2, and 3 are allowed simultaneous operation up to 8,760 hours/year. The total oil consumption by all three boilers will be limited to 4,078,000 gallons/year.

7. Specific Condition No. 5 of the operating permit (AO26-260247) for peel dryer/waste heat evaporator and Specific Condition 7 of the construction permit (AC26-260242) are modified to replace the requirement for total pressure drop with a requirement to measure total water flow to the nozzles.

8. This pellet mill shall comply with the Process Weight Table Emissions Rates. For units having a capacity less than 30 tons per hour the allowable emissions rate shall be calculated by the use of the formula $E = 3.59 * P^{0.62}$, where E is the emissions in pounds per hour and P is the process weight in tons per hour. For units having a capacity greater than 30 tons per hour the allowable emissions rate shall be calculated by the use of the formula $E=17.31*P^{0.16}$. [Reference Rule 62-296 F.A.C.]

PERMITTEE:
Southern Gardens Citrus Processing Corp.

Facility ID. No.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002

SPECIFIC CONDITIONS:

REQUIRED TESTING:

9. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60, Appendix A , or State approved equivalent method. Such tests shall be conducted within 30 days of initial startup. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing.

REPORTS AND RECORD KEEPING:

10. An annual operation report (DER Form 62-210.900(5)) shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(3), F.A.C.]

11. All other Specific Conditions of permits for this facility shall remain unchanged.

GENERAL CONDITIONS:

12. An integral part of this permit is the attached 15 General Conditions.
[Rule 62-4.160, F.A.C.]

NOTE: In the event of an emergency the permittee shall contact the Department by calling (850) 413-9911. During normal business hours, the permittee shall call (941) 332-6975.

Issued this 8th day of July, 1997.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

David M. Knowles, P.E.
District Air Program Administrator

DMK/JRS/jw

12 Pages Attached

PERMITTEE:
Southern Gardens Citrus Processing Corp.

Facility ID. No.: 0510015
Permit Number: 0510015-005-AC
Date of Issue: July 8, 1997
Expiration Date: July 8, 2002

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5) Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by any order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, F.A.C. as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
(X) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used;
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

PERMITTEE:
Southern Gardens Citrus
Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

I.D. No: 52FTM26001504
Permit/Certification
Number: AO26-260249
Date of Issue: February 27, 1995
Expiration Date: February 27, 2000
County: Hendry
Latitude: 26° 44′ 30" N
Longitude: 81° 07′ 30" W
Section/Town/Range: 15/43S/32E
Project: Southern Gardens
Citrus Pellet Mill

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To operate a citrus pellet mill and cooler. This is one of two units, the second has not been completed.

The facility is located at 755 C.R. 833, about 1/2 mile south of S.R. 80.

Pertinent Documents	Dated
Construction Permit AC26-206072	June 3, 1992
DEP Form 62-1.202(3) CoCoC	Oct. 11, 1994
Permit Modification AC26-260243	Feb. 17, 1995

For Title V Permits
SIC Number 2037
SCC Numbers 3-02-008-16

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001504
Permit/Cert. No.: AC26-260243
Date of Issue: February 17, 1995
Expiration Date: June 3, 1997

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. All fugitive dust generated at this site shall be adequately controlled. [Reference Rule 62-296.310(3), F.A.C.]

2. This facility shall be operated in such a fashion so as to preclude objectionable odors. [Reference Rule 62-296.320(2), F.A.C.]

3. The maximum numbers of hours of operation of this facility are limited to 6,000 per year, but the season is extended from October 1st to June 30th. [Reference Construction Permit Application dated October 24, 1994]

CONDITIONS OF COMPLIANCE:

4. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction.

5. The applicant shall retain a registered professional engineer for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. [Reference Rule 62-4.050(3), F.A.C.] An APPLICATION FOR AIR PERMIT - SHORT FORM (DEP Form 62-210.900(2) attached) shall be submitted as an application for an operation permit, along with the compliance tests results. These are to be submitted within 60 days after completion of construction.[Reference Rule 62-4.220, F.A.C.]

6. Visible emissions shall not exceed 20% opacity. [Reference Rule 62-296.310(2)(a), F.A.C.]

7. This facility shall comply with the Process Weight Table Emission Rates for units having a capacity less than 30 tons per hour. The allowable emissions rate shall be calculated by the use of the formula $E = 3.59 * P^{0.62}$, where E is the emissions in pounds per hour and P is the process weight in tons per hour. [Reference Rule 62-296.310(1)(b), F.A.C.]

REQUIRED TESTING:

8. Visible emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Test shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60, Appendix A, or State approved equivalent method. Such tests shall be conducted within 30 days of the initial startup.

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001504
Permit/Cert. No.: AC26-260243
Date of Issue: February 17, 1995
Expiration Date: June 3, 1997

SPECIFIC CONDITIONS:

REQUIRED TESTING:

Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rule 62-297.340(1), F.A.C.]

REPORTS AND RECORD KEEPING:

9. An annual operation report (DER Form 62-210.900(5)) shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(2), F.A.C.]

GENERAL CONDITIONS:

10. An integral part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

Note: In the event of an emergency the permittee shall contact the Department by calling **(904) 413-9911.** During normal business hours, the permittee shall call (813) 332-6975.

Issued this 17th day of February, 1995.
STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Peter J. Ware
Director of
District Management

PJW/AEL/jw

__7__ Pages Attached

PERMITTEE:
Southern Gardens Citrus
Processing Corp.

I.D. No.: 52FTM26001504
Permit/Cert. No.: AC26-260243
Date of Issue: February 17, 1995
Expiration Date: June 3, 1997

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5) Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by any order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of non-compliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, F.A.C. as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used;
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

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):
Seven Storage Tanks for Volatile Organic Compounds (VOC)

4. Emissions Unit Identification Number:
ID: **006**
[ ] 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		**20**	[ ]

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

Four vertical fixed roof fuel oil storage tanks (30,000 gallons each), two for No. 2 distillate fuel oil and two for No. 6 residual fuel oil; and three vertical fixed roof D-Limonene storage tanks (24,000 gallons each).

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
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:		°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:			mmBtu/hr
2. Maximum Incineration Rate:	lb/hr		tons/day
3. Maximum Process or Throughput Rate:	**12,178,863 gal/yr**		
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	24 hours/day	**7**	days/week
	52 weeks/year	**8,760**	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			

Throughput rates are as follows: 4,078,000 gal/yr for No. 2 fuel oil; 7,100,863 gal/yr for No. 6 fuel oil; 1,000,000 gal/yr for D-Limonene.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

40 CFR 60.116b(a)	
40 CFR 60.116b(b)	
62-204.800(7)(b)14, F.A.C., Federal Regulations Adopted by Reference: 40 CFR 60, Subpart Kb	
62-296.320(1)(a), F.A.C., General Pollutant Emissions Limiting Standards	

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? **VOC ST**	2. Emission Point Type Code: **4**	
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: **F**	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: **77** °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **29** feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **Nonstack emission point height is an average of the tank farm shell heights.**		

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

Segment Description and Rate: Segment 1 of 6

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum Product Storage – Fixed Roof Tanks (varying sizes), Distillate Fuel No. 2: Working Loss (Tank Diameter Independent) Fixed Roof.**		
2. Source Classification Code (SCC): **4-03-010-21**	3. SCC Units: **Thousand Gallons Throughput**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **4,078**	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 relates to No. 2 distillate fuel oil working losses. Max annual rate refers to max No. 2 distillate fuel oil throughput.**		

Segment Description and Rate: Segment 2 of 6

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum Product Storage – Fixed Roof Tanks (67,000 BBL, Tank Size) Distillate Fuel No. 2: Breathing Loss**		
2. Source Classification Code (SCC): **4-03-010-19**	3. SCC Units: **Thousand Gallons Storage**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**	6. Estimated Annual Activity Factor: **60**
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Segment description relates to No. 2 distillate fuel oil breathing losses. Activity factor refers to No. 2 distillate fuel oil storage tank capacity (2 tanks at 30,000 gallons each).**		

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

Segment Description and Rate: Segment 3 of 6

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum Product Storage – Fixed Roof Tanks: Independent Tank Diameter: Working Loss: Fuel oil Grade 6**		
2. Source Classification Code (SCC): **4-03-010-99**	3. SCC Units: **Thousand Gallons Throughput**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **7,101**	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 relates to No. 6 residual fuel oil working losses. Max annual rate refers to max No. 6 residual fuel oil throughput.**		

Segment Description and Rate: Segment 4 of 6

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Petroleum Product Storage – Fixed Roof Tanks (67,000 BBL) – Breathing Loss – Fuel oil Grade 6**		
2. Source Classification Code (SCC): **4-03-010-97**	3. SCC Units: **Thousand Gallons Storage**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**	6. Estimated Annual Activity Factor: **60**
9. Maximum % Sulfur:	10. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Segment description relates to No. 6 residual fuel oil breathing losses. Activity factor refers to max No. 6 storage capacity (2 tanks at 30,000 gallons each).**		

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

Segment Description and Rate: Segment 5 of 6

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Organic chemical storage, fixed roof Tanks, Esters Specify Ester: Working Loss**		
2. Source Classification Code (SCC): **4-07-044-99**	3. SCC Units: **Thousand Gallons Throughput**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **1,000**	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 relates to D-Limonene working losses. Maximum annual rate refers to the sum total combined annual throughput rate for the three D-Limonene tanks.**		

Segment Description and Rate: Segment 6 of 6

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Organic chemical storage, Fixed Roof Tanks, Esters, Specify Ester: Breathing Loss**		
2. Source Classification Code (SCC): **4-07-044-97**	3. SCC Units: **Thousand Gallons Storage**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**	6. Estimated Annual Activity Factor: **72**
11. Maximum % Sulfur:	12. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): **Segment description relates to D-Limonene breathing losses. Activity factor refers to D-Limonene storage tank capacity (3 tanks at 24,000 gallons each).**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			NS

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: lb/hour tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [X] 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:	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:	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: SG-EU3-J1 [ ] 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
   [X] Attached, Document ID: PSD-Report [ ] Not Applicable

9. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

10. Supplemental Requirements Comment:

See Attachment SG-EU3-J10

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] 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:_____

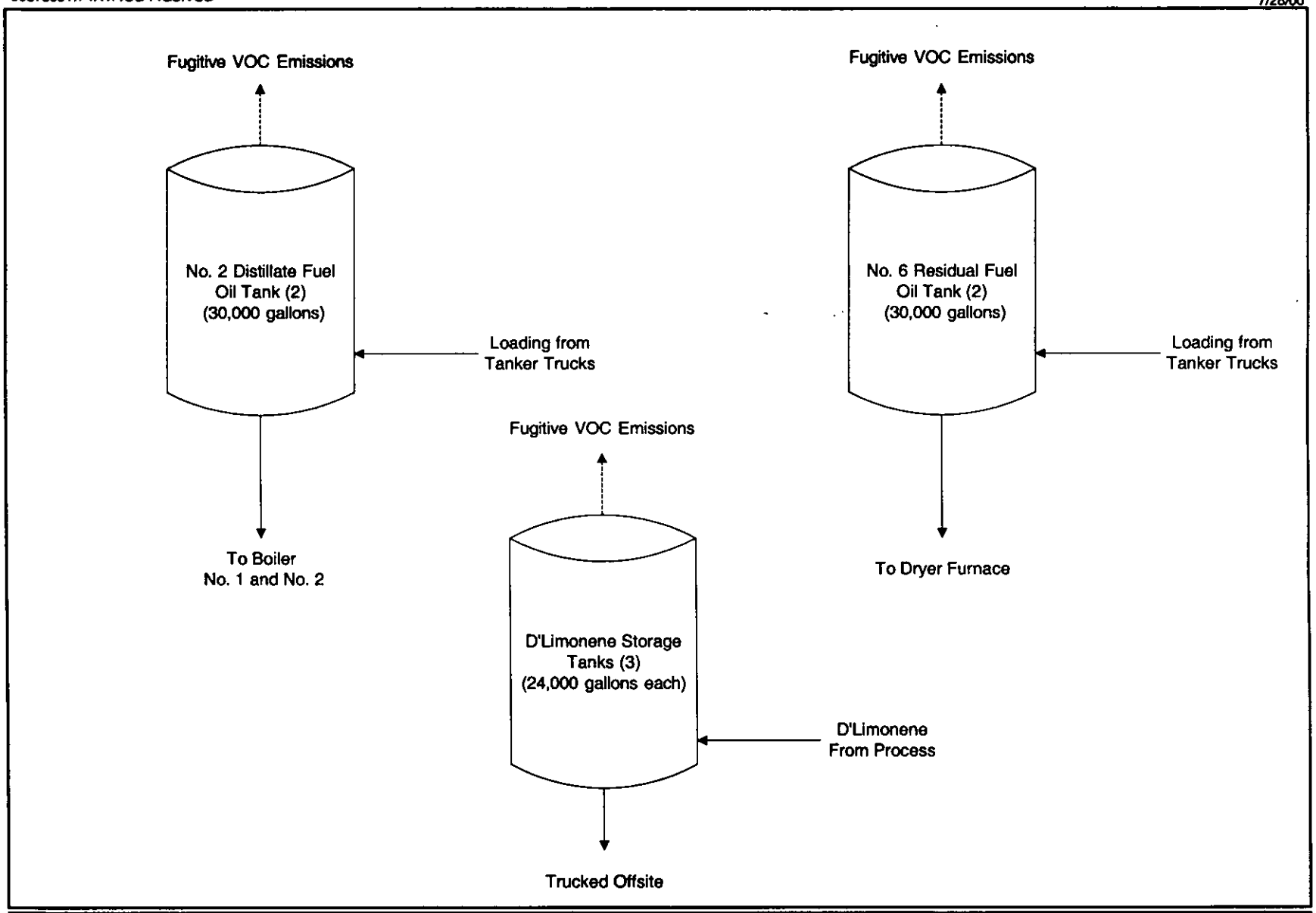
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

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

[ ] Not Applicable

ATTACHMENT SG-EU3-J1

PROCESS FLOW DIAGRAM



Attachment SG-EU3-J1
Southern Gardens Citrus Processing Corporation
Process Flow Diagram
Clewiston, Florida

Process Area: VOC Storage Tanks
Filename: SG-FIGS.VSD
Latest Revision Date: 7/28/00

Process Flow Legend:
Solid / Liquid
Gas
Steam

Golder Associates

ATTACHMENT SG-EU3-J10

SUPPLEMENTAL REQUIREMENTS COMMENT

AIR OPERATING PERMIT

Department of Environmental Protection

·ton Chiles
·overnor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT ISSUANCE

January 30, 1995

:ERTIFIED MAIL #Z 054 062 491
:ETURN RECEIPT REQUESTED

.n the Matter of an
.pplication for Permit by:

:tuart Salter, Vice President
·outhern Gardens Citrus
Processing Corporation
ost Office Box 130
lewiston, Florida 33440
_____/

DEP File No. AO26-260253
Hendry County - AP

Enclosed is Permit Number AO26-260253 to operate four (4) torage tanks for volatile organic compounds (VOC) issued pursuant o Section(s) 403.087, Florida Statutes.

A person whose substantial interests are affected by this ermit may petition for an administrative proceeding (hearing) in ccordance with Section 120.57, Florida Statutes (F.S.). The etition must contain the information set forth below and must be iled (received) in the Office of General Counsel of the Department t 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 4 days of receipt of this Permit. Petitioner shall mail a copy of he petition to the applicant at the address indicated above at the ime of filing. Failure to file a petition within this time period hall constitute a waiver of any right such person may have to equest an administrative determination (hearing) under Section 20.57, F.S..

The Petition shall contain the following information;

(a) The name, address, and telephone number of each etitioner, the applicant's name and address, the Department Permit ile Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received otice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests re affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, f any;
(e) A statement of facts which petitioner contends warrant eversal or modification of the Department's action or proposed ction;

(f) A statement of which rules or statutes petitioner contends :equire reversal or modification of the Department's action or .)roposed action; and

(g) A statement of the relief sought by petitioner, stating)recisely the action petitioner wants the Department to take with :espect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is lesigned to formulate agency action. Accordingly, the Department's :inal action may be different from the position taken by it in this)ermit. Persons whose substantial interests will be affected by ıny decision of the Department with regard to the application have :he right to petition to become a party to the proceeding. The)etition must conform to the requirements specified above and be :iled (received) within 14 days of receipt of this notice in the)ffice of General Counsel at the above address of the Department. 'ailure to petition within the allowed time frame constitutes a /aiver of any right such person has to request a hearing under ;ection 120.57, F.S., and to participate as a party to this)roceeding. Any subsequent intervention will only be at the ıpproval of the presiding officer upon motion filed pursuant to ;ule 28-5.207, Florida Administrative Code (F.A.C.).

This permit is final and effective on the date filed with the :lerk of the Department unless a petition is filed in accordance /ith the above paragraphs or unless a request for extension of time .n which to file a petition is filed within the time specified for :iling a petition and conforms to Rule 62-103.070, F.A.C.. Upon .imely filing of a petition or a request for an extension of time .his permit will not be effective until further Order of the ·epartment.

When the Order (Permit) is final, any party to the Order has .he right to seek judicial review of the Order pursuant to Section .20.68, Florida Statutes, by the filing of a Notice of Appeal)ursuant to Rule 9.110, Florida Rules of Appellate Procedure, with :he Clerk of the Department in the Office of General Counsel, 2600 ;lair Stone Road, Tallahassee, Florida 32399-2400; and by filing a :opy of the Notice of Appeal accompanied by the applicable filing :ees with the appropriate District Court of Appeal. The Notice of ıppeal must be filed within 30 days from the date the Final Order .s filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Peter J. Ware
Director of
District Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by certified mail before the close of business on January 31, 1995 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Laura Knight (Clerk) 1-31-95 (Date)

PJW/AEL/jw

Enclosures

Copies furnished to:

David A. Buff P.E.

Department of Environmental Protection

wton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

Virginia B. Wetherell
Secretary

PERMITTEE:

Southern Gardens Citrus
Processing Corporation
P.O. Box 130
Clewiston, FL 33440

I.D. No. 52FTM260015/06
Permit/Certification
Number: AO26-260253
Date of Issue: Jan. 30, 1995
Expiration Date: Jan. 30, 2000
County: Hendry
Latitude: 26° 44' 30" N
Longitude: 81° 07' 30" W
Section/Town/Range: 15/43S/32E
Project: Four Volatile Organic Liquid Storage Vessels (Tanks)

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 62-296, 62-297 and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For operation of (a) two vertical fixed roof fuel oil storage tanks (30,000 gallons each), one for No. 2 distillate fuel oil and one for No. 6 residual fuel oil; and (b) two vertical fixed roof D'Limonene storage tanks (24,000 gallons each). Air emissions of volatile organic compounds (VOC) are controlled by limiting the maximum true vapor pressure and throughput of the liquids stored.

The facility is located on the east side of C.R. 833, 0.5 mile south of S.R. 80, west of Clewiston, Hendry County, Florida.

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AO26-260253
Date of Issue: Jan. 30, 1995
Expiration Date: Jan. 30, 2000

SPECIFIC CONDITIONS:

FACILITY OPERATIONS:

1. All equipment, pipes, hoses, lids, fittings, etc., shall be operated/maintained in such a manner as to minimize leaks, fugitive emissions and spills of VOC. [Rule 62-296.320(1)(a), F.A.C.].

2. SGCPC (Southern Gardens Citrus Processing Corporation) shall take all reasonable precautions to prevent emissions of unconfined particulate matter. [Rule 62-296.310(3), F.A.C.].

3. SGCPC shall not discharge air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.].

4. The hours of operation for these storage tanks are not restricted.

5. Issuance of this permit does not relieve SGCPC from complying with applicable emission limiting standards or other requirements of Rules 62-210, 62-212, 62-252, 62-272, 62-273, 62-275, 62-296, and 62-297, F.A.C., or any other requirements under federal, state, or local law. SGCPC shall comply with all applicable requirements of Chapter 62-762, F.A.C. [Rules 62-210.300 and 62-4.070(3), F.A.C.].

CONDITIONS OF COMPLIANCE:

6. VOC emissions from the four volatile organic liquid storage vessels (tanks) shall not exceed any of the following limits [Rule 62-296.320(1)(a), F.A.C., and as specified in the permit application]:

Source	Maximum Pounds/Year
Distillate Fuel Oil Tank	56
Residual Fuel Oil Tank	1
Two D'Limonene Tanks	440
Total	497

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AO26-260253
Date of Issue: Jan. 30, 1995
Expiration Date: Jan. 30, 2000

SPECIFIC CONDITIONS:

7. The maximum true vapor pressure of any liquid stored in any of the four storage tanks shall not exceed 15.0 kPa (2.176 psi). [40 CFR 60.110b(c)].

8. The annual throughput of No. 2 distillate fuel oil shall not exceed 2,045,400 gallons. The annual throughput of No. 6 residual fuel oil shall not exceed 2,520,000 gallons. [Rule 62-296.320(1)(a), F.A.C., and as specified in the permit application].

9. The sum total combined annual throughput rate of D'Limonene through the two D'Limonene storage tanks shall not exceed 168,509 gallons. [Rule 62-296.320(1)(a), F.A.C., and as specified in the permit application].

10. SGCPC shall keep monthly records of fuel oil and D'Limonene throughput. At a minimum, the records shall indicate (a) the monthly throughput of No. 2 distillate fuel oil, (b) the monthly throughput of No. 6 residual fuel oil, (c) the monthly throughput of D'Limonene, and (d) a rolling cumulative 12 consecutive month total for each value required to be recorded. The records shall be maintained for a minimum of 2 years and made available to the Department upon request. [Rule 62-4.070(3), F.A.C.].

11. SGCPC's permit application (dated 11/23/93) identifies all of the VOC chemical species emitted from these sources. SGCPC shall notify the Department, in writing, of any proposed changes in VOC chemical species, prior to implementing the change. The notification shall provide updated maximum true vapor pressure data and maximum VOC emission calculations. Upon receiving such a notification, the Department may require SGCPC to conform to new or additional conditions. The Department will allow SGCPC a reasonable time to conform to any new or additional conditions. [Rule 62-4.070(3), F.A.C.].

GENERAL CONDITIONS:

12. An integral part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

REPORTS AND RECORD KEEPING:

13. SGCPC shall keep readily accessible records showing the dimension of each storage tank and an analysis showing the capacity of each storage tank. These records shall be kept for the life of each storage tank. [40 CFR 60.116b(a) and (b)].

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AO26-260253
Date of Issue: Jan. 30, 1995
Expiration Date: Jan. 30, 2000

SPECIFIC CONDITIONS:

Note: In the event of an emergency, the permittee shall contact the Department by calling (904) 413-9911. During normal business hours, the permittee shall call (813) 332-6975.

Issued this 30th day of January, 1995.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Peter J. Ware
Director of
District Management

PJW/AEL/ael

10 Pages Attached

PERMITTEE:
Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM26001506
Permit/Cert. No. AO26-260253
Date of Issue: Jan. 30, 1995
Expiration Date: Jan. 30, 2000

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 17-4.120 and 17-730.300 F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:
    ( ) Determination of Best Available Control Technology (BACT)
    ( ) Determination of Prevention of Significant Deterioration (PSD)
    ( ) Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
    ( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:
    (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
    (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
    (c) Records of monitoring information shall include:
        1. the date, exact place, and time of sampling or measurements;
        2. the person responsible for performing the sampling or measurements;
        3. the dates analyses were performed;
        4. the person responsible for performing the analyses;
        5. the analytical techniques or methods used;
        6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

AIR OPERATING PERMIT AMENDMENTS

ARMS UPDATED 0510015

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

November 2, 1995

FILE

CERTIFIED MAIL #Z 391 361 095
RETURN RECEIPT REQUESTED

Tristan Chapman
Vice President & General Manager
Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440

Hendry County - AP
DEP File No. AC26-241731
and AO26-260253
ARMS Facility ID # 0510015

Dear Mr. Chapman:

Thank you for your letter, through your representative KBN Engineering and Applied Science, Inc., dated July 21, 1995. We appreciate the fact that you notified us of an anomaly in the USEPA TANKS (Version 2.0) computer program.

The construction permit AC26-241731 is modified as follows:

FROM:

1. VOC emissions from the four volatile organic liquid storage vessels (tanks) shall not exceed any of the following limits [Reference Rule 17-296.320(1)(a), F.A.C., and as specified in the permit application]:

Source	Maximum Pounds/year
Distillate Fuel Oil Tank	56
Residual Fuel Oil Tank	1
Two D'Limonene Tanks	440
Total	497

To:

1. VOC emissions from the four volatile organic liquid storage vessels (tanks) shall not exceed any of the following limits [Reference Rule 62-296.320(1)(a), F.A.C., and as revised in the communication of July 21, 1995]:

Source	Maximum Pounds/year
Distillate Fuel Oil Tank	72
Residual Fuel Oil Tank	1
Two D'Limonene Tanks	2228
Total	2301

The operation permit AO26-260253, Specific Condition Number 6 reads exactly the same as Specific Condition Number 1 in the construction permit. Therefore the same changes apply to the operation permit.

This document becomes a part of both permit AC26-241731 and permit AO26-260253.

If you have any questions or comments, please contact Arthur Lyall at this office.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

David M. Knowles

David M. Knowles, P.E.
District Air Program
Administrator

DMK/AEL/jw

Copies furnished to:

David A. Buff, P.E.

AIR CONSTRUCTION PERMIT

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT MODIFICATION

April 25, 1997

CERTIFIED MAIL #P 482 205 307
RETURN RECEIPT REQUESTED

In the Matter of an Application
for permit by:

Southern Gardens Citrus Processing Corporation
Post Office Box 130
Clewiston, Florida 33440
_____/

DEP File No.: 0510015
DEP Permit Number: 0510015-003-AC
Hendry County - AP

The applicant, Southern Gardens Citrus Processing Corporation, applied on April 15, 1997 to the Department of Environmental Protection for a permit modification to permit 0510015-003-AC to increase No. 2 fuel usage in the boiler and as such increase D-Limonene production. The following changes (additions) to the permit are hereby entered and are now a part of the permit:

SPECIFIC CONDITION:

FROM:

Delete specific conditions 5,7 and 8.

TO:

Add Specific Conditions:

5. VOC emissions from the seven (4 existing and 3 new) volatile organic liquid storage vessels (tanks) shall not exceed any of the following limits [Rule 62- 296.320(1)(a), F.A.C., and as specified in the letter dated April 15, 1997]:

SOURCE	MAXIMUM POUNDS/YEAR
2 DISTILLATE FUEL OIL TANKS	135.2
2 RESIDUAL FUEL OIL TANKS	1.7
3 d' LIMONENE TANKS	3636.8
TOTAL	3773.7

7. The annual throughput of No. 2 distillate fuel oil shall not exceed 4,078,000 gallons. The annual throughput of No. 6 residual fuel oil shall not exceed 7,100,863 gallons.
[Reference Rule 62-296.320(1)(a), F.A.C., and as specified in the letter dated April 15, 1997]

8. The sum total combined annual throughput rate of d"limonene through the Three (3) d-limonene storage tanks shall not exceed 500,000 gallons.
[Reference Rule 62-296.320(1)(a), F.A.C., and as specified in the letter dated April 25, 1997]

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

David M. Knowles

David M. Knowles, P.E.
District Air Program Administrator
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881
(941) 458-4211

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by certified mail before the close of business on April 25, 1997 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, under section 120.52 (7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

[signature] 4-25-97
(Clerk) (Date)

DMK/JRS/jw
Copies furnished to:
David Buff, P.E.

Florida Department of
Environmental Protection

South District
2295 Victoria Avenue
Fort Myers, Florida 33901

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

PERMITTEE:

Southern Gardens Citrus
Processing Corporation
P.O. Box 1207
Clewiston, FL 33440

I.D. No. 52FTM260015/06
Permit/Certification
Number: AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994
County: Hendry
Latitude: 26° 44' 30" N
Longitude: 81° 07' 30" W
Section/Town/Range: 15/43S/32E
Project: Four Volatile Organic Liquid Storage Vessels (Tanks)

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-296, 17-297 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For construction (after-the-fact) of (a) two vertical fixed roof fuel oil storage tanks (30,000 gallons each), one for No. 2 distillate fuel oil and one for No. 6 residual fuel oil; and (b) two vertical fixed roof D'Limonene storage tanks (24,000 gallons each). Air emissions of volatile organic compounds (VOC) are controlled by limiting the maximum true vapor pressure and throughput of the liquids stored.

The facility is located on the east side of C.R. 833, 0.5 mile south of S.R. 80, west of Clewiston, Hendry County, Florida.

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems

GENERAL CONDITIONS:

when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 17-4.120 and 17-730.300 F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:
( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
(X) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:
(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994

GENERAL CONDITIONS:

(c) Records of monitoring information shall include:
1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994

SPECIFIC CONDITIONS:

1. VOC emissions from the four volatile organic liquid storage vessels (tanks) shall not exceed any of the following limits [Rule 17-296.320(1)(a), F.A.C., and as specified in the permit application]:

Source	Maximum Pounds/Year
Distillate Fuel Oil Tank	56
Residual Fuel Oil Tank	1
Two D'Limonene Tanks	440
Total	497

2. The maximum true vapor pressure of any liquid stored in any of the four storage tanks shall not exceed 15.0 kPa (2.176 psi). [40 CFR 60.110b(c)].

3. Southern Gardens Citrus Processing Corporation (SGCPC) shall keep readily accessible records showing the dimension of each storage tank and an analysis showing the capacity of each storage tank. These records shall be kept for the life of each storage tank. [40 CFR 60.116b(a) and (b)].

4. The annual throughput of No. 2 distillate fuel oil shall not exceed 2,045,400 gallons. The annual throughput of No. 6 residual fuel oil shall not exceed 2,520,000 gallons. [Rule 17-296.320(1)(a), F.A.C., and as specified in the permit application].

5. The sum total combined annual throughput rate of D'Limonene through the two D'Limonene storage tanks shall not exceed 168,509 gallons. [Rule 17-296.320(1)(a), F.A.C., and as specified in the permit application].

6. SGCPC shall not discharge air pollutants which cause or contribute to an objectionable odor. [Rule 17-296.320(2), F.A.C.].

7. The hours of operation for these storage tanks are not restricted.

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994

SPECIFIC CONDITIONS:

8. SGCPC shall determine the maximum true vapor pressure of D'Limonene from a standard reference text or by ASTM Method D2879-83. The determination shall be made no later than 90 days after the issue date of this permit.
[40 CFR 60.110b(c) and Rule 17-4.070(3), F.A.C.].

9. SGCPC shall file all test reports with the South District Office of the Department as soon as practical, but no later than 45 days after the test is complete.
[Rule 17-297.570(2), F.A.C.].

10. SGCPC shall notify the South District Office of the Department of Environmental Protection at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner. [Rule 17-297.340(1)(i), F.A.C.].

11. SGCPC shall keep monthly records of fuel oil and D'Limonene throughput. At a minimum, the records shall indicate (a) the monthly throughput of No. 2 distillate fuel oil, (b) the monthly throughput of No. 6 residual fuel oil, (c) the monthly throughput of D'Limonene, and (d) a rolling cumulative 12 consecutive month total for each value required to be recorded. The records shall be maintained for a minimum of 2 years and made available to the Department upon request. [Rule 17-4.070(3), F.A.C.].

12. All equipment, pipes, hoses, lids, fittings, etc., shall be operated/maintained in such a manner as to minimize leaks, fugitive emissions and spills of VOC.
[Rule 17-296.320(1)(a), F.A.C.].

13. SGCPC shall take all reasonable precautions to prevent emissions of unconfined particulate matter.
[Rule 17-296.310(3), F.A.C.].

14. SGCPC shall submit an annual operation report (DEP Form 17-213.900(4)) to the South District Office of the Department by March 1st of each year. The form should be reproduced and used for the annual submittals.
[Rule 17-4.070(3), F.A.C.].

PERMITTEE:

Southern Gardens Citrus
Processing Corporation

I.D. No. 52FTM260015/06
Permit/Cert. No. AC26-241731
Date of Issue: Jan. 24, 1994
Expiration Date: Oct. 24, 1994

SPECIFIC CONDITIONS:

15. SGCPC's permit application (dated 11/23/93) identifies all of the VOC chemical species emitted from these sources. SGCPC shall notify the Department, in writing, of any proposed changes in VOC chemical species, prior to implementing the change. The notification shall provide updated maximum true vapor pressure data and maximum VOC emission calculations. Upon receiving such a notification, the Department may require SGCPC to conform to new or additional conditions. The Department will allow SGCPC a reasonable time to conform to any new or additional conditions. [Rule 17-4.070(3), F.A.C.].

16. Issuance of this permit does not relieve SGCPC from complying with applicable emission limiting standards or other requirements of Rules 17-210, 17-212, 17-252, 17-272, 17-273, 17-275, 17-296, and 17-297, F.A.C., or any other requirements under federal, state, or local law. SGCPC shall comply with all applicable requirements of Chapter 17-762, F.A.C. [Rules 17-210.300 and 17-4.070(3), F.A.C.].

17. SGCPC shall submit an application for an operation permit (Certificate of Completion of Construction), and the results from the determination of the maximum true vapor pressure of D'Limonene, within 135 days of the issue date of this permit.

Note: In the event of an emergency, the permittee shall contact the Department by calling (904) 488-1320. During normal business hours, the permittee shall call (813) 332-6975.

Issued this 24th day of January, 1994.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Ronald D. Blackburn
Acting Director of
District Management

RDB/GM/gm

10 Pages Attached

PSD REPORT

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1.0 INTRODUCTION

Southern Gardens Citrus Processing Corporation (SGCPC) is a citrus processing facility located in Hendry County (see application form, Attachment SG-FI-E1). The SGCPC facility was originally permitted in June 1992 and began initial operations in January 1994. SGCPC currently holds construction and/or operating permits for four process steam boilers, a citrus peel dryer/waste heat evaporator, two pellet mills and three pellet coolers, a lime silo, four fuel oil storage tanks, and three D-limonene storage tanks.

SGCPC is proposing the addition of three citrus juice extractors to the existing juice extraction lines. Currently, the facility consists of three juice extraction lines with a total of 36 extractors. The current annual fruit processing capacity of the facility is approximately 17.5 million boxes per year. Under the plan, three additional extractors will be added bringing the total number of extractors to 39. With this addition, the maximum annual processing capacity of the facility will increase to 20 million boxes per year. The existing peel dryer, pellet mill, and process steam boilers are all capable of accommodating the increased production. No existing permitted production rates, capacities, or permit limits will require revision.

SGCPC is submitting this PSD analysis to address the PSD preconstruction review requirements, pursuant to rules and regulations implemented in the Clean Air Act (CAA) Amendments of 1977. The FDEP has PSD review and approval authority in Florida. Based on the PSD source applicability analysis, a PSD review is indicated for the following regulated pollutants: particulate matter (PM), PM with a particle size of 10 microns or less (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x), CO, and VOC emissions.

This application contains seven additional sections. A complete description of the facility, including air emission rates, is presented in Section 2.0. The air quality review requirements and new source review applicability are discussed in Section 3.0. Ambient monitoring requirements under PSD are addressed in Section 4.0. The best available control technology (BACT) analysis is presented in Section 5.0. The air quality impact analysis methodology is described in Section 6.0, and the impact analysis results are

presented in Section 7.0. Additional impacts on soils, vegetation and visibility are addressed in Section 8.0. The attachments contain supportive information.

2.0 DESCRIPTION OF SGCPC FACILITY

2.1 INITIAL FACILITY CONSTRUCTION

SGCPC initially permitted and constructed a citrus processing facility which included two steam boilers, a citrus peel dryer, two pellet mills and coolers, a lime silo, and associated juice extractors, evaporators, and juice, peel, and fuel oil storage and handling equipment. The initial air construction permit applications were submitted in December 1991, and the initial construction permits were issued in June 1992. The original applications were revised in November 1993 to reflect more up to date information, but the construction permits did not need to be revised.

A complete permitting history of the facility is provided in Table 2-1. All permits were issued by the Florida Department of Environmental Protection's (FDEP) South District office.

2.2 CURRENT FACILITY INFORMATION AND PROPOSED CHANGES

Several modifications have been permitted at the SGCPC facility since the original air construction permits were issued. The discussion provided below provides a description of the current facility configuration. For other permitting events, refer to Table 2-1. This section also describes the proposed extractors addition.

2.2.1 BOILER NOS. 1, 2, 3, AND 4

Currently, four process steam boilers are permitted at SGCPC. Boiler Nos. 1 and 2 are identical, while Boiler No. 3 is very similar to Boiler Nos. 1 and 2 in design capacity, and Boiler 4 is a much smaller package boiler. Boiler Nos. 1 and 2 have a maximum heat input capacity of 33.6 MMBtu/hr, Boiler 3 has a maximum heat input capacity of 35.6 MMBtu/hr, and Boiler 4 has a maximum heat input capacity of 6.3 MMBtu/hr. Boiler Nos. 1, 2, 3 are each subject to 40 CFR 60, Subpart Dc, which is the federal new source performance standards for small industrial boilers. Each boiler is permitted to operate up to 8,760 hr/yr. Boiler No. 4 was permitted as a standby boiler; i.e., Boiler No. 4 can operate only when one of the other boilers is shutdown. All the boilers discharge through the 55-foot-high common stack.

Boiler operation is limited by a total No. 2 fuel oil consumption limit of 4,078,000 gal/yr. The maximum allowable sulfur content is 0.5 percent. Although an individual boiler may operate at maximum capacity, the overall fuel oil usage cap limits total annual emissions.

The proposed extractors addition will not require modification of the existing boiler permit limits and restrictions. However, the additional fruit processing will potentially increase steam usage and result in an associated increase in boiler operation.

2.2.2 CITRUS FEED MILL: PEEL DRYER/WASTE HEAT EVAPORATOR

The 60,000 lb/hr (water evaporation rate) peel dryer operates with a maximum heat input rate of 84.0 MMBtu/hr. The maximum wet peel input rate is approximately 47 TPH at 74 percent moisture, with a dry peel product rate of approximately 20.5 TPH at 10 percent moisture. Wet peel and dry peel rates vary based on the moisture content of the wet peel as well as the moisture of the dried peel product. SGCPC utilizes 1.5 percent sulfur No. 6 fuel oil in the dryer, with a wet scrubber as control equipment. The peel dryer is permitted to operate up to 6,000 hr/yr.

The scrubbing system on the peel dryer/waste heat evaporator system is comprised of water sprays located in the exhaust stack. The sprays are located in the upper portion of the stack, and the liquid droplets fall downward through the stack in countercurrent flow to the exhaust gases. The base of the stack is comprised of a tank in which the scrubbing liquid is collected. The liquid is then recycled back to the water sprays at the top of the stack.

The inherent SO_2 absorption in the peel dryer, in combination with the wet scrubbing system, has been found to limit SO_2 emissions to below 0.5 lb/MMBtu heat input to the dryer. Based on the scrubber design, the particulate removal efficiency is a function of the total amount of water delivered to the spray nozzles. Therefore, SGCPC has an existing permit condition requiring the measurement of total water flow to the nozzles.

2.2.3 PELLET MILL

SGCPC's pellet mill consists of two pellet mills and three pellet coolers (Cooler Nos. 1, 2 and 3). The maximum permitted process rate through the pellet mill is 23.0 TPH, total both mills. Cooler No. 3 operates alone, while Cooler Nos. 1 and 2 are used simultaneously for standby operation when Cooler No. 3 is shutdown for repair or maintenance. Cooler Nos. 1 and 3 utilize a common cyclone collector, while Cooler No. 2 has its own cyclone collector. The cyclones are considered as inherent PM control equipment since they are utilized to collect product. The total maximum operating hours of the pellet mill are 6,000 hr/yr.

2.2.4 VOLATILE ORGANIC COMPOUND STORAGE TANKS

SGCPC has seven (7) VOC storage tanks; two (2) vertical fixed roof No. 2 fuel oil tanks (30,000 gallons each); two (2) vertical fixed roof No. 6 fuel oil tanks (30,000 gallons each); and three (3) vertical fixed roof D-Limonene storage tanks (24,000 gallons each). Throughput rates are limited by the specific material stored in the tanks. The maximum permitted annual throughput rates are:

- No. 2 fuel oil - 4,078,000 gallons,
- No. 6 fuel oil – 7,100,863 gallons, and
- D-Limonene – 500,000 gallons.

2.2.5 LIME SILO

SGCPC operates a previously permitted 50,000 lb capacity lime silo with a baghouse as control equipment. The lime silo is an unregulated emission unit.

2.2.6 PROPOSED CHANGES

SGCPC is proposing to add additional fruit processing capability to the facility by adding additional extractors and making other associated changes. These changes are summarized as follows:

- Add one juice extractor to Line B (increase from 12 to 13 extractors);
- Add two juice extractors to Line C (increase from 12 to 14 extractors);
- Integrate new extractors into fruit delivery system, peel/juice removal systems, and process control systems;

- Fruit receiving - add fourth unloading ramp; and
- Add provisions and tanks to load-out recovered molasses tanks.

2.3 FACILITY EMISSIONS

2.3.1 CURRENT ACTUAL FACILITY EMISSIONS

The SGCPC facility's current actual emissions, shown in Table 2-2, are based on actual operating data for 1998-1999. Actual emissions from all sources are based on Annual Operating Report (AOR) data, except as described as follows. The actual VOC emissions from the peel dryer and pellet cooler are based on the actual level of citrus oil recovery and the general FCPA emission factor for peel dryers and pellet coolers, as shown in Table 2-3. The 1998-1999 and 1999-2000 processing season data were used as representative of 1998 and 1999, respectively. Actual CO emissions from the peel dryer were estimated at 60 percent of VOC emissions, based on previous stack test results, although the latest stack testing indicated CO emissions at about 160 percent of VOC emissions.

2.3.2 FUTURE POTENTIAL EMISSIONS

Future potential emissions from the SGCPC facility are also presented in Table 2-2. The future potential is based on 20 million boxes of fruit per year. Based on the analysis of stack test data (see Attachment A), SGCPC proposes to lower the current allowable PM/PM_{10} emission rate for the pellet cooler. For purposes of estimating maximum potential VOC emissions, an overall citrus oil recovery of 50 percent was assumed. Future potential VOC emissions from the peel dryer and cooler are shown in Table 2-3, based on mass balance and the FCPA factors. The mass balance accounts for oil recovered, oil destroyed in the dryer, oil remaining in the pellets, oil in the juice, and oil in the wastewater.

The potential future maximum and annual emissions and emission factors for the peel dryer are shown in Table 2-4. The pellet cooler emissions are shown in Table 2-5. Future potential emissions from the four steam boilers do not change compared to the current potential emissions, and are shown in Table 2-6.

2.4 STACK PARAMETERS AND LOCATIONS

The stack locations and stack parameters for the facility's four boilers, citrus feed mill peel dryer, and pellet mill coolers are shown in Table 2-7. These sources are included in the atmospheric dispersion modeling analysis presented in Sections 6.0 and 7.0. Boiler No. 4 and Pellet Coolers Nos. 1 and 2 were not included in the modeling analysis since they can only operate when one of the larger main boilers is shutdown. The lime silo was also not included based on its very low PM emissions.

Table 2-1. Permit History of Southern Gardens Citrus Processing Corporation

Month/Year	Emissions Unit	Applicable Permit Numbers	Description
Dec-91	Boiler Nos. 1 and 2; Feed Mill/ Peel Dryer; Pellet Mills/Coolers 1 and 2	N/A	Original construction permit applications submitted.
Jun-92	Boiler No. 1 Boiler No. 2 Feed Mill/ Peel Dryer Pellet Mills/Coolers 1 and 2	AC26-206066 AC26-206068 AC26-206069 AC26-206072	Original air construction permits issued.
Nov-93	Boiler Nos. 1 and 2; Feed Mill/ Peel Dryer; Pellet Mills/Coolers 1 and 2	N/A	Applications to revise original air construction permits submitted.
	Fuel oil (2) and d-limonene (2) tanks; Lime Silo		Initial construction permit applications for 4 VOL tanks. Initial construction pemit application submitted.
Jan-94	Fuel oil (2) and d-limonene (2) tanks Lime Silo	AC26-241731 AC26-241213	Original construction permit issued. Original construction permit issued.
Nov-94	Boiler Nos. 1 and 2; Feed Mill/ Peel Dryer; Pellet Mills/Coolers 1 and 2	N/A	Phase II expansion applications submitted: increase operating hours and capacity of waste heat evaporator; increase number of juice extractors from 24 to 36.
Jan-95	Fuel oil (2) and d-limonene (2) tanks Lime Silo	AO26-260253 AO26-260252	Original operating permit issued for 4 VOL tanks. Original operating permit issued.
Feb-95	Boiler Nos. 1 and 2 Feed Mill/ Peel Dryer Pellet Mills/Coolers 1 and 2	AC26-260240 AC26-260242 AC26-260243	Phase II expansion air construction permits issued.
Feb-95	Boiler Nos. 1 and 2 Feed Mill/ Peel Dryer Pellet Mills/Coolers 1 and 2	AO26-260246 AO26-260247 AO26-260249	Initial air operating permits issued based on Phase II construction permits.
Sep-95	Boiler No. 3; Feed Mill/ Peel Dryer	N/A	Application to construct Boiler No. 3 and increase sulfur content of fuel oil used in peel dryer.
Mar-96	Feed Mill/Peel Dryer	0510015-002-AC	Air construction and air operating permit for feed mill revised to allow higher sulfur content in fuel oil.
Jul-96	Boiler No. 3 New fuel oil (2) and d-limonene tanks	051-0015-001-AC N/A	Boiler No. 3 air construction permit issued. Application to construct three new VOL tanks.
Sep-96	New fuel oil (2) and d-limonene tanks	0510015-003-AC	Construction permit for 3 VOL tanks.
Jul-97	Pellet Mill No. 3; Boiler Nos. 1, 2 and 3	0510015-005-AC	Air construction permit for Pellet Mill No. 3 and boiler operating flexibility issued.
Apr-97	Modify 4 fuel oil and 3 d-limonene tanks	0510015-003-AC	Modify tanks throughput and VOC limits.
Jul-98	Boiler No. 4	0510015-006-AC	Boiler No. 4 air construction permit issued.
Jun-00	Proposed Title V operating permit	0510015-004-AV	Proposed Title V permit sent to EPA for review.

Table 2-2. Summary of Emissions, Southern Gardens Citrus Processing Corporation

Source/Pollutant	Actual 1998-1999 Emissions[a] (TPY)	Future Potential Emissions[b] (TPY)
Boilers 1-4		
PM	1.43	4.08
PM_{10}	0.71	2.04
SO_2	20.8	141
NO_x	14.3	40.8
CO	3.57	10.2
VOC	0.14	0.41
Peel Dryer/WHE		
PM	15.3	96.2
PM_{10}	13.7	96.2
SO_2	20.5	126.0
NO_x	10.9	61.5
CO[d]	626	2,881
VOC	1,043	1,801
Pellet Cooler 1		
PM/PM_{10}	0.04	[c]
VOC	13.0	[c]
Pellet Cooler 2		
PM/PM_{10}	0.00	[c]
VOC	0.00	[c]
Pellet Cooler 3		
PM/PM_{10}	0.33	15.0
VOC	130.5	225.1
Totals:		
PM	17.1	115.3
PM_{10}	14.8	113.2
SO_2	41.3	266.7
NO_x	25.1	102.3
CO	629	2,892
VOC	1,187	2,026

Footnotes

[a] Actual emissions are an average of the 1998-1999 AOR emissions, except for NOx, VOC and CO.

[b] Total potential emissions for boilers are based on fuel cap, prorated to each boiler based on individual boiler capacities. Boiler No. 4 is a standby unit and was not considered.

[c] Boiler No. 4 and Pellet Cooler Nos. 1 and 2 are standby units; not considered in potential to emit.

[d] Future potential emissions based on 160% of VOC emissions.

Notes

Lime Silo emissions not considered in analysis because PM emissions are minimal. Current PM permit limits are 0.002 TPY. VOL Storage Tank emissions not considered because VOC emissions are minimal. Current VOC permit limits are 1.89 TPY.

Table 2-3 . Current Actual and Maximum Future VOC Emissions, Southern Gardens Citrus Processing Corp.

Parameter	Actual 1997-1998	Actual 1998-1999	Actual 1999-2000	Maximum Future Emissions
Boxes of Fruit (boxes/yr)	16,020,297	13,311,641	16,658,434	20,000,000
Available Oil in Fruit (lbs)	7,747,065	6,411,688	9,514,140	10,351,000
(lbs/box)	0.484	0.482	0.571	0.518
Cold press peel oil (lbs)	1,044,127	599,415	3,212,072	--
D-Limonene (lbs)	3,476,402	2,808,761	2,831,699	--
Oil Phase essence (lbs)	109,826	29,260	34,769	--
Total oil recovered (lbs)	4,630,355	3,437,436	6,078,540	5,175,500
(percent recovered)	59.77%	53.61%	63.89%	50.00%
Black water to sewer (a)	24,000	24,000	24,000	24,000
Oil in NFC juice (lbs) (b)	161,485	134,181	144,059	172,956
Total oil to dryer (COD)	2,955,225	2,840,071	3,291,541	5,002,544
Percent oil recovered/juice/ sewered	61.85%	55.70%	65.40%	51.67%
Pellets @ 11% H2O (TPY)	73,734	60,814	80,673	92,135
Pressed peel moisture (%)	70.0	70.0	70.0	67.0
Pressed peel to dryer (TPY)	218,744	180,415	239,330	248,485
VOC emitted- dryer/WHE				
(0.72 x COD) (c) (lbs)	2,127,762	2,044,851	2,369,910	3,601,832
(tons)	**1,064**	**1,022**	**1,185**	**1,801**
VOC destruction in dryer (d)	331,038	345,334	375,508	668,506
VOC from pellet coolers				
(0.09 x COD) (e) (lbs)	265,970	255,606	296,239	450,229
(tons)	**133**	**128**	**148**	**225**
VOC remaining in pellets (f)	206,455	170,279	225,884	257,978
SUMMARY				
Total oil available (lbs)	7,747,065	6,411,688	9,514,140	10,351,000
Oil recovered/sewered/juice (lbs)	4,815,840	3,595,617	6,246,599	5,372,456
VOC emitted- dryer/cooler (lbs)	2,393,733	2,300,457	2,666,148	4,052,061
(as percent of total oil available)	31%	36%	28%	39%
VOC destroyed in dryer (lbs)	331,038	345,334	375,508	668,506
(as percent of oil to dryer)	11%	12%	11%	13%
VOC in pellets (lbs)	206,455	170,279	225,884	257,978
VOC unaccounted for (lbs)	0	0	0	0

(a) Based on estimate of 100 lbs/day VOC to sewer.
(b) Based on 6 gal juice/box, 80% NFC, 7 lb juice/gal and 0.03% oil in juice, except 1999-2000 and future based on: 71% NFC and 0.029% oil in juice.
(c) Based on FCPA report equation which predicts that 72% of citrus oil to dryer (COD) is emitted out dryer stack. COD equals available oil minus total oil recovered.
(d) Assumes unaccounted for VOC is destroyed in the peel dryer:
i.e., (Total oil available) minus (Oil recovered) minus (VOC emitted from dryer/WHE) minus (VOC from pellet coolers) minus (VOC remaining in pellets)
(e) Based on FCPA report equation which predicts that 9% of citrus oil to dryer is emitted out pellet cooler stack.
(f) Based on average of 2.8 lb/ton pellets, from 03/05/97 and 04/07/99 stack testing.

Table 2-4. Future Potential Emissions for Peel Dryer/WHE at Southern Gardens Citrus Processing Corporation

Regulated Pollutant	Emission Factor	Reference	Short-Term Activity Factor [a]	Maximum Hourly Emissions (lb/hr)	Annual Activity Factor [b]	Annual Emissions (TPY)
Particulate (PM)	32.05 lb/hr	1	--	32.05	--	96.2
Particulate (PM10)	100% of PM	2	--	32.05	--	96.2
Sulfur dioxide	0.5 lb/MMBtu	3	84.0 MMBtu/hr	42.0	504,000 MMBtu/hr	126.0
Nitrogen oxides	1.5 lb/ton BDP	4	18.5 tons/hr BDP	27.7	82,000 tons/yr BDP	61.5
Carbon monoxide						
Early/Mids	58.05 lb/ton BDP	5	18.5 tons/hr BDP	1,071.1	--	--
Valencia	82.51 lb/ton BDP	5	18.5 tons/hr BDP	1,522.3	--	--
Annual Average	70.28 lb/ton BDP	5	--	--	82,000 tons/yr BDP	2,881.5
VOC						
Early/Mids	36.28 lb/ton BDP	6	18.5 tons/hr BDP	669.4	--	--
Valencia	51.57 lb/ton BDP	6	18.5 tons/hr BDP	951.4	--	--
Annual Average	43.93 lb/ton BDP	6	--	--	82,000 tons/yr BDP	1,800.9

See Table 6-4
191.81 g/s
In modeling

Footnotes

[a] Currently permitted heat input rate; throughput rate is maximum.

[b] Based on 20 million boxes of fruit per year; 8.2 lb bone dry peel per box, and 6,000 hr/yr.

BDP = bone dry peel

References:

1. Maximum emission based on Process Weight Formula, E = 17.31*P^0.16,where E is in lb/hr and P = 47 TPY throughput rate (62-296.320 (4)(a) F.A.C.).
2. Conservative assumption.
3. Currently permitted emission limit.
4. Maximum emissions based on stack test data.
5. Based on 160% of VOC emissions, derived from stack test data.
6. Emission factor based on General FCPA Emission Factor, maximum production rates and:
   Early/Mids -- 0.4275 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Valencia -- 0.6076 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Annual Average - assumes a 50/50 mix of Valencia and Early/Mids.
   Based on 90 lb fruit/box; 8.2 lb bone dry peel/box; 72% of oil to dryer emitted from dryer stack.

Table 2-5. Future Potential Emissions for Citrus Pellet Mill at Southern Gardens Citrus Processing Corporation

Regulated Pollutant	Emission Factor	Reference	Short-Term Activity Factor [a]	Maximum Hourly Emissions (lb/hr)	Annual Activity Factor [b]	Annual Emissions (TPY)
Particulate (PM)	5.00 lb/hr	1	--	5.0	6,000 hr/yr - See Table 6-4	15.0
Particulate (PM10)	100% % of PM	2	--	5.0	--	15.0
VOC						
Early/Mids	4.54 lb/ton BDP	3	18.5 TPH BDP	83.9	--	--
Valencia	6.45 lb/ton BDP	3	18.5 TPH BDP	119.3	--	--
Annual Average	5.49 lb/ton BDP	3	--	--	82,000 TPY BDP	225.1

Footnotes

[a] Based on maximum throughput rate.

[b] Based on 20 million boxes of fruit per year, 8.2 lb bone dry peel per box, and 6,000 hr/yr.

References:

1. Maximum emissions based on stack test data.
2. Conservative assumption.
3. Emissions based on General FCPA Emission Factor, maximum production rates and:
   Early/Mids -- 0.4275 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Valencia -- 0.6076 lb oil/box and a 50% oil recovery (51.67% overall oil recovered/juice/sewered).
   Annual Average -- assumes a 50/50 mix of Valencia and Early/Mids.
   Based on 90 lb of fruit/box; 8.2 lb bone dry peel/box; 9% of oil to dryer emitted from pellet cooler.

Table 2-6. Potential Emissions for Boiler Nos. 1, 2, 3, and 4, Southern Gardens Citrus Processing Corporation

Parameter	Boiler No. 1	Boiler No. 2	Boiler No. 3	Boiler No. 4	Total Boiler Nos. 1, 2, 3, and 4
OPERATING DATA					
Operating Time (hr/yr)	8,760	8,760	8,760	8,760	–
Heat Input Rate (MMBtu/hr)	33.6 X 0.5	33.6 X 0.5	35.6 X 0.5	6.3 X 0.5	–
Heat Input Rate (MMBtu/yr)	294,336	294,336	311,856	55,188	–
Fuel Oil Use (gal/hr) [a]	243.5	243.5	258.0	45.7	–
Fuel Oil Use (gal/yr)	2,132,870	2,132,870	2,259,826	399,913	4,078,000
Maximum Sulfur Content (Wt %)	0.5	0.5	0.5	0.5	0.5

Pollutant	Emission Factor [b]	No. 2 Fuel Oil lb/hr	No. 2 Fuel Oil TPY	No. 2 Fuel Oil lb/hr	No. 2 Fuel Oil TPY	No. 2 Fuel Oil lb/hr	No. 2 Fuel Oil TPY	No. 2 Fuel Oil lb/hr	No. 2 Fuel Oil TPY	No. 2 Fuel Oil TPY
EMISSIONS DATA										
SO_2: Fuel Oil	0.5 lb/MMBtu [d]	16.80	73.58	16.80	73.58	17.80	77.96	3.24	14.20 [c]	140.69
NO_X: Fuel Oil	20 lb/1000 gal	4.87	21.33	4.87	21.33	5.16	22.60	0.91	4.00	40.78
PM: Fuel Oil	2.00 lb/1000 gal	0.49	2.13	0.49	2.13	0.52	2.26	0.09	0.40	4.08
PM_{10}: Fuel Oil	1.00 lb/1000 gal	0.24	1.07	0.24	1.07	0.26	1.13	0.05 .79	0.20	2.04
VOC: Fuel Oil	0.556 lb/1000 gal	0.14	0.59	0.14	0.59	0.14	0.63	0.03	0.11	1.13
CO: Fuel Oil	5 lb/1000 gal	1.22	5.33	1.22	5.33	1.29	5.65	0.23	1.00	10.20

Note: NA = not applicable.

[a] Based on 138,000 Btu/gal for 0.5% S oil.

[b] Based on AP-42 factors for distillate oil fired commercial boilers or permit condition.

[c] Boiler No. 4 emissions factor based on AP-42 Factor = 142*S lb/1000 gallons.

[d] Based on current permit limit.

TPY for each of boilers is correct

Permit limitation is hardwired in permit

TPY limits

Table 2-7. Summary of Stack Parameters for Current and Future Sources Used in Modeling of Southern Gardens Citrus Processing Corporation

Emission Unit	Model ID	Stack Parameters				Operating Parameters				Relative Location [b]			
		Height		Diameter		Temperature		Velocity		X		Y	
		(ft)	(m)	(ft)	(m)	(°F)	(°K)	(ft/s)	(m/s)	(ft)	(m)	(ft)	(m)
CURRENT													
Combined Boiler Stack [a]	BoilerC	55	16.8	4.0	1.22	400	478	46.7	14.22	155	47.2	33	10.1
Citrus Peel Dryer [d]	Dryer/WHC	125	38.1	5.7	1.73 [c]	156	342	24.0	7.32	14	4.27	43	13.1
Citrus Pellet Cooler	PelletC	40	12.2	2.0	0.61	110	316	73.7	22.48	152	46.3	17	5.18
FUTURE													
Boiler No. 1		55	16.8	4.0	1.22	400	478	15.6	4.74	155	47.2	33	10.1
Boiler No. 2		55	16.8	4.0	1.22	400	478	15.6	4.74	155	47.2	33	10.1
Boiler No. 3		55	16.8	4.0	1.22	400	478	15.6	4.74	155	47.2	33	10.1
Combined Boiler Stack [a]	Boilers	55	16.8	4.0	1.22	400	478	46.7	14.22	155	47.2	33	10.1
Citrus Peel Dryer	Dryer/WH	125	38.1	5.7	1.73 [c]	175	353	24.5	7.45	14	4.27	43	13.1
Citrus Pellet Cooler	Pellet	40	12.2	2.0	0.61	110	316	73.7	22.48	152	46.3	17	5.18

Note:
Lime Silo not included, insignificant emissions.
Boiler No. 4 not modeled, much smaller unit that only operates if one of the main boilers is down.

[a] Common stack for Boiler Nos. 1-4; flow rate for Boiler Nos. 1-3 is 35,184 acfm (11,728 acfm each).

[b] Southeast corner of the Feed Mill building.

[c] Citruc pell dayer stack increased from 46 inches to 68 inches (See letter dated 10/99 from P. Wesson to Mr. Phillip Barbaccia, Environmental Administrator / Air Florida Department of Environmental Protection).

[d] Temperture and velocity from 4/18/2000 stack test.

3.0 AIR QUALITY REVIEW REQUIREMENTS AND APPLICABILITY

Federal and state air regulatory requirements for a new source of air pollution are discussed in Sections 3.1 to 3.4. The applicability of these regulations to the SGCPC proposed project is presented in Section 3.5.

3.1 NATIONAL AND STATE AAQS

The existing applicable national and Florida Ambient Air Quality Standards (AAQS) are presented in Table 3-1. Primary national AAQS were promulgated to protect the public health, and secondary national AAQS were promulgated to protect the public welfare from any known or anticipated adverse effects associated with the presence of pollutants in the ambient air. Areas of the country in violation of AAQS are designated as non-attainment areas, and new sources to be located in or near these areas may be subject to more stringent air permitting requirements.

Florida has adopted state AAQS in Rule 62-204.240. These standards are the same as the national AAQS, except in the case of SO_2. For SO_2, Florida has adopted the former 24-hour secondary standard of 260 $\mu g/m^3$, and former annual average secondary standard of 60 $\mu g/m^3$.

3.2 NATIONAL AND STATE AAQS AND PSD REQUIREMENTS

3.2.1 GENERAL REQUIREMENTS

Under federal and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued. Florida's State Implementation Plan (SIP), which contains PSD regulations, has been approved by EPA; therefore, PSD approval authority has been granted to the FDEP.

A "major facility" is defined as any one of 28 named source categories that have the potential to emit 100 TPY or more or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of

control equipment. Once a new source is determined to be a "major facility" for a particular pollutant, any pollutant emitted in amounts greater than the PSD significant emission rates is subject to PSD review. For an existing source for which a modification is proposed, the modification is subject to PSD review if the net increase in emissions due to the modification is greater than the PSD significant emission rates. The PSD significant emission rates are shown in Table 3-2.

EPA has promulgated limits to increases above a specified air quality baseline concentration level for SO_2, PM_{10}, and NO_2 that would constitute "significant deterioration". The EPA class designations and allowable PSD increments are presented in Table 3-1. The magnitude of the allowable increment depends on the classification of the area in which a new source (or modification) will be located or have an impact. Three classifications are designated based on criteria established in the Clean Air Act Amendments. Congress promulgated areas as Class I (international parks, national wilderness areas, and memorial parks larger than 5,000 acres, and national parks larger than 6,000 acres) or as Class II (all areas not designated as Class I). No Class III areas, which would be allowed greater deterioration than Class II areas, were designated. The State of Florida has adopted the EPA class designations and allowable PSD increments for SO_2, PM_{10}, and NO_2 increments.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. Federal PSD requirements are contained in 40 CFR 52.21, Prevention of Significant Deterioration of Air Quality. The State of Florida has adopted the federal PSD regulations by reference (Rule 62-212.400, F.A.C.). Major facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts:

1. Control technology review,
2. Source impact analysis,
3. Air quality analysis (monitoring),
4. Source information, and
5. Additional impact analyses.

In addition to these analyses, a new facility also must be reviewed with respect to Good Engineering Practice (GEP) stack height regulations. Discussions concerning each of these requirements are presented in the following sections.

3.2.2 CONTROL TECHNOLOGY REVIEW

The control technology review requirements of the federal and state PSD regulations require that all applicable federal and state emission-limiting standards be met, and that Best Available Control Technology (BACT) be applied to control emissions from the source. The BACT requirements are applicable to all regulated pollutants for which the increase in emissions from the facility exceeds the significant emission rate (see Table 3-2).

BACT is defined in 40 CFR 52.21 (b)(12), as:

> An emissions limitation (including a visible emission standard) based on the maximum degree of reduction of each pollutant subject to regulation under the Act which would be emitted by any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant, which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular part of a source or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means, which achieve equivalent results.

BACT was promulgated within the framework of the PSD requirements in the 1977 amendments of the CAA [Public Law 95-95; Part C, Section 165(a)(4)]. The primary purpose of BACT is to optimize consumption of PSD air quality increments and thereby enlarge the potential for future economic growth without significantly degrading air

quality (EPA, 1978; 1980). Guidelines for the evaluation of BACT can be found in EPA's *Guidelines for Determining Best Available Control Technology (BACT)* (EPA, 1978) and in the *PSD Workshop Manual* (EPA, 1980). These guidelines were promulgated by EPA to provide a consistent approach to BACT and to ensure that the impacts of alternative emission control systems are measured by the same set of parameters. In addition, through implementation of these guidelines, BACT in one area may not be identical to BACT in another area. According to EPA (1980), "BACT analyses for the same types of emissions unit and the same pollutants in different locations or situations may determine that different control strategies should be applied to the different sites, depending on site-specific factors. Therefore, BACT analyses must be conducted on a case-by-case basis."

The BACT requirements are intended to ensure that the control systems incorporated in the design of a proposed facility reflect the latest in control technologies used in a particular industry and take into consideration existing and future air quality in the vicinity of the proposed facility. BACT must, as a minimum, demonstrate compliance with new source performance standards (NSPS) for a source (if applicable). An evaluation of the air pollution control techniques and systems, including a cost-benefit analysis of alternative control technologies capable of achieving a higher degree of emission reduction than the proposed control technology, is required. The cost-benefit analysis requires the documentation of the materials, energy, and economic penalties associated with the proposed and alternative control systems, as well as the environmental benefits derived from these systems. A decision on BACT is to be based on sound judgment, balancing environmental benefits with energy, economic, and other impacts (EPA, 1978).

3.2.3 SOURCE IMPACT ANALYSIS

A source impact analysis must be performed for a proposed major source or major modification subject to PSD review, and for each pollutant for which the increase in emissions exceeds the PSD significant emission rate (Table 3-2). The PSD regulations specifically provide for the use of atmospheric dispersion models in performing impact analyses, estimating baseline and future air quality levels, and determining compliance

with AAQS and allowable PSD increments. Designated EPA models normally must be used in performing the impact analysis. Specific applications for other than EPA-approved models require EPA's consultation and prior approval. Guidance for the use and application of dispersion models is presented in the EPA publication *Guideline on Air Quality Models* (EPA, 1980).

To address compliance with AAQS and PSD Class II increments, a source impact analysis must be performed for the criteria pollutants. However, this analysis is not required for a specific pollutant if the net increase in impacts as a result of the new source or modification is below significant impact levels, as presented in Table 3-1. The significant impact levels are threshold levels that are used to determine the level of air impact analyses needed for the project. If the new or modified source's impacts are predicted to be less than significant, then the source's impacts are assumed not to have a significant adverse affect on air quality and additional modeling with other sources is not required. However, if the source's impacts are predicted to be greater than the significant impact levels, additional modeling with other sources is required to demonstrate compliance AAQS and PSD increments.

EPA has proposed significant impact levels for Class I areas as follows:

•	SO_2	3-hour	1 $\mu g/m^3$
		24-hour	0.2 $\mu g/m^3$
		Annual	0.1 $\mu g/m^3$
•	PM_{10}	24- hour	0.3 $\mu g/m^3$
		Annual	0.2 $\mu g/m^3$
•	NO_2	Annual	0.1 $\mu g/m^3$

Although these levels have not been officially promulgated as part of the PSD review process and may not be binding for states in performing PSD review, the proposed levels serve as a guideline in assessing a source's impact in a Class I area. The EPA action to incorporate Class I significant impact levels in the PSD process is part of implementing NSR provisions of the 1990 CAA Amendments. Because the process of developing the

regulations will be lengthy, EPA believes that the proposed rules concerning the significant impact levels is appropriate in order to assist states in implementing the PSD permit process.

Various lengths of record for meteorological data can be used for impact analysis. A 5-year period is normally used with corresponding evaluation of highest, second-highest short-term concentrations for comparison to AAQS or PSD increments. The meteorological data are selected based on an evaluation of measured weather data from a nearby weather station that represents weather conditions at the project site. The criteria used in this evaluation include determining the distance of the project site to the weather station; comparing topographical and land use features between the locations; and determining availability of necessary weather parameters.

The term "highest, second-highest" (HSH) refers to the highest of the second-highest concentrations at all receptors (i.e., the highest concentration at each receptor is discarded). The second-highest concentration is important because short-term AAQS specify that the standard should not be exceeded at any location more than once a year. If fewer than 5 years of meteorological data are used in the modeling analysis, the highest concentration at each receptor normally must be used for comparison to air quality standards.

The term "baseline concentration" evolves from federal and state PSD regulations and refers to a concentration level corresponding to a specified baseline date and certain additional baseline sources. By definition, in the PSD regulations as amended August 7, 1980, baseline concentration means the ambient concentration level that exists in the baseline area at the time of the applicable baseline date. A baseline concentration is determined for each pollutant for which a baseline date is established and includes:

1. The actual emissions representative of facilities in existence on the applicable baseline date; and
2. The allowable emissions of major stationary facilities that commenced construction before January 6, 1975, for SO_2 and PM(TSP) concentrations, or

February 8, 1988, for NO_2 concentrations, but that were not in operation by the applicable baseline date.

The following emissions are not included in the baseline concentration and therefore affect PSD increment consumption:

1. Actual emissions from any major stationary facility on which construction commenced after January 6, 1975, for SO_2 and PM(TSP) concentrations, and after February 8, 1988, for NO_2 concentrations; and
2. Actual emission increases and decreases at any stationary facility occurring after the baseline date.

In reference to the baseline concentration, the term "baseline date" actually includes three different dates:

- The major facility baseline date, which is January 6, 1975, in the cases of SO_2 and PM(TSP), and February 8, 1988, in the case of NO_2.
- The minor facility baseline date, which is the earliest date after the trigger date on which a major stationary facility or major modification subject to PSD regulations submits a complete PSD application.
- The trigger date, which is August 7, 1977, for SO_2 and PM(TSP), and February 8, 1988, for NO_2.

3.2.4 AIR QUALITY MONITORING REQUIREMENTS

In accordance with requirements of 40 CFR 52.21(m), any application for a PSD permit must contain an analysis of continuous ambient air quality data in the area affected by the proposed major stationary facility or major modification. For a new major facility, the affected pollutants are those that the facility potentially would emit in significant amounts. For a major modification, the pollutants are those for which the net emissions increase exceeds the significant emission rate (see Table 3-2).

Ambient air monitoring for a period of up to 1 year generally is appropriate to satisfy the PSD monitoring requirements. A minimum of 4 months of data is required. Existing

data from the vicinity of the proposed source may be used if the data meet certain quality assurance requirements; otherwise, additional data may need to be gathered. Guidance in designing a PSD monitoring network is provided in EPA's *Ambient Monitoring Guidelines for Prevention of Significant Deterioration* (EPA, 1987a).

The regulations include an exemption that excludes or limits the pollutants for which an air quality analysis must be conducted. This exemption states that FDEP may exempt a proposed major stationary facility or major modification from the monitoring requirements with respect to a particular pollutant if the emissions increase of the pollutant from the facility or modification would cause, in any area, air quality impacts less than the *de minimis* levels presented in Table 3-2.

3.2.5 SOURCE INFORMATION/GOOD ENGINEERING PRACTICE STACK HEIGHT

Source information must be provided to adequately describe the proposed project. The general type of information required for this project is presented in Section 2.0.

The 1977 CAA Amendments require that the degree of emission limitation required for control of any pollutant not be affected by a stack height that exceeds GEP or any other dispersion technique. On July 8, 1985, EPA promulgated final stack height regulations (EPA, 1985a). The Florida DEP has adopted identical regulations (Rule 62-210.550, F.A.C.). GEP stack height is defined as the highest of:

1. 65 meters (m); or
2. A height established by applying the formula:

   $Hg = H + 1.5L$

   where: Hg = GEP stack height,

   H = Height of the structure or nearby structure, and

   L = Lesser dimension (height or projected width) of nearby structure(s); or

A height demonstrated by a fluid model or field study.

"Nearby" is defined as a distance up to five times the lesser of the height or width dimensions of a structure or terrain feature, but not greater than 0.8 km. Although GEP stack height regulations require that the stack height used in modeling for determining compliance with AAQS and PSD increments not exceed the GEP stack height, the actual stack height may be greater.

The stack height regulations also allow increased GEP stack height beyond that resulting from the above formula in cases where plume impaction occurs. Plume impaction is defined as concentrations measured or predicted to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain that exceeds the height calculated by the GEP stack height formula.

3.2.6 ADDITIONAL IMPACT ANALYSIS

In addition to air quality impact analyses, federal and State of Florida PSD regulations require analyses of the impairment to visibility and the impacts on soils and vegetation that would occur as a result of the proposed source [40 CFR 52.21(o); Rule 62-212.400]. These analyses are to be conducted primarily for PSD Class I areas. Impacts as a result of general commercial, residential, industrial, and other growth associated with the source also must be addressed. These analyses are required for each pollutant emitted in significant amounts (Table 3-2).

3.3 NON-ATTAINMENT RULES

Based on the current non-attainment provisions, all major new facilities and modifications to existing major facilities located in a non-attainment area must undergo non-attainment review. A new major facility is required to undergo this review if the proposed pieces of equipment have the potential to emit 100 TPY or more of the non-attainment pollutant.

3.4 EMISSION STANDARDS

3.4.1 NEW SOURCE PERFORMANCE STANDARDS

The NSPS are a set of national emission standards that apply to specific categories of new sources. As stated in the CAA Amendments of 1977, these standards "shall reflect the

degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction the Administrator determines has been adequately demonstrated."

3.4.2 FLORIDA RULES

FDEP emission standards apply to several emission units at SGCPC. The steam boilers are subject to FDEP's small boiler rule contained in Rule 62-296.405, F.A.C. This rule requires that BACT be applied for PM and SO_2 emissions. The citrus peel dryer and pellet coolers are subject to the process weight table regulation contained in Rule 62-296.320(4). This rule limits PM emissions based upon the process input weight rate. This rule also limits visible emissions from these sources to 20 percent opacity.

3.5 PSD APPLICABILITY FOR SGCPC

3.5.1 AREA CLASSIFICATION

The project site is located in Hendry County, which has been designated by EPA and FDEP as an attainment area for all criteria pollutants. Hendry County and surrounding counties are designated as PSD Class II areas for SO_2, PM(TSP), and NO_2. The nearest Class I area to the site is the Everglades National Park (ENP), located about 102 km (62 miles) south of the SGCPC facility site.

3.5.2 PSD REVIEW

Pollutant Applicability

As discussed in Sections 1.0 and 2.0, based upon the estimated future potential emissions for the SGCPC facility, the proposed extractors addition will trigger PSD new source review. As a result, PSD review is required for each pollutant whose emissions exceed the PSD significant emission rates (see Table 3-1). As shown in Table 3-3, the following pollutant increases exceed the PSD significant emission rates: PM, PM_{10}, SO_2, NO_x, CO and VOC.

BACT Review

The BACT review requirement is only applicable to the proposed new juice extractors, since no physical change or change in the method of operation will occur for the other

emission units at the facility. EPA's PSD regulations are codified at 40 CFR 52.21. This rule requires, among other things, that BACT be employed to control emissions from a proposed new source or modification. The EPA rules governing control technology review state:

> "A major modification shall apply best available control technology for each pollutant subject to regulation under the Act for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit." (40 CFR 52.21 (j)(3)).

Therefore, BACT does not apply to an emissions unit at which there is no physical change or change in the method of operation.

Ambient Monitoring

Based on the estimated increase in emissions due to the proposed SGCPC project, a PSD preconstruction ambient monitoring analysis is required for PM_{10}, SO_2, NO_x, VOC and CO. However, if the increase in impacts of a pollutant is less than the *de minimis* monitoring concentration, then an exemption from the preconstruction ambient monitoring requirement may be granted for that pollutant. In addition, if an acceptable ambient monitoring method for the pollutant has not been established by EPA, monitoring is not required.

Based on the modeling analysis results presented in Section 7.0, pre-construction ambient monitoring analysis for PM_{10}, SO_2, NO_x, and CO may be exempted for this facility because the project's impact are predicted to be below the applicable *de minimis* monitoring concentration for these pollutants. A pre-construction ambient monitoring analysis is required for ozone, since the potential increase in VOC emissions is greater than 100 TPY. This analysis is presented in Section 4.0.

GEP Stack Height Analysis

The GEP stack height regulations allow any stack to be at least 65 m [213 feet (ft)] high. All of the stacks at the SGCPC facility do not exceed the *de minimis* GEP stack height and will not be increased. As a result, the facility stacks do not exceed GEP stack height.

3.6 EMISSION STANDARDS

3.6.1 NEW SOURCE PERFORMANCE STANDARDS

Boiler Nos. 1, 2, and 3 are subject to 40 CFR 60, Subpart Dc, the federal NSPS for Small Industrial-Commercial-Institutional Steam Generating Units. According to the NSPS, the boilers may emit no more than 0.5 lb/MMBtu of SO_2, or as an alternative, must burn fuel oil with a maximum sulfur content of 0.5 percent. In addition, the boilers are subject to a 20 percent opacity limitation, except up to 6 minutes per hour, the opacity must not exceed 27 percent. The boilers all comply with this requirement.

The seven VOC storage tanks are subject to 40 CFR 60, Subpart Kb, the federal NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

According to the NSPS, the tanks would be subject only to the following requirement of the NSPS:

The recordkeeping requirement specified in 40 CFR 60.116b(b), which states:

> The owner or operator of each storage vessel as specified in 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Each storage vessel with a design capacity less than 75 m^3 is subject to no provision of this subpart other than those required by this paragraph.

The tanks all comply with this requirement and no other federal NSPS apply to the SGCPC facility.

3.6.2 FLORIDA RULES

The steam boilers are subject to FDEP's small boiler rule, contained in Rule 62-296.405, F.A.C., which requires that BACT be applied for PM and SO_2 emissions. Boiler Nos. 1

and 2 were issued BACT determinations under this rule in the initial air construction permits issued to the SGCPC facility in 1992 (refer to Attachment B). Although BACT analyses were submitted for Boiler No. 3 in 1997 (in support of a overall boiler fuel cap request), and for Boiler No. 4 in the air permit application, specific BACT determinations were not issued by the FDEP.

The citrus peel dryer and pellet coolers are subject to the process weight table regulation contained in Rule 62-296.320(4). This rule limits PM emissions based upon the process input weight rate. This rule also limits visible emissions from these sources to 20 percent opacity. The peel dryer and the pellet coolers comply with these limitations.

Table 3-1. National and State AAQS, Allowable PSD Increments, and Significant Impact Levels ($\mu g/m^3$)

Pollutant	Averaging Time	AAQS			PSD Increments		Significant Impact Levels[d]
		National Primary Standard	National Secondary Standard	State of Florida	Class I	Class II	
Particulate Matter[a] (PM_{10})	Annual Arithmetic Mean	50	50	50	4	17	1
	24-Hour Maximum	150[b]	150[b]	150[b]	8	30	5
Sulfur Dioxide	Annual Arithmetic Mean	80	NA	60	2	20	1
	24-Hour Maximum	365[b]	NA	260[b]	5	91	5
	3-Hour Maximum	NA	1,300[b]	1,300[b]	25	512	25
Carbon Monoxide	8-Hour Maximum	10,000[b]	10,000[b]	10,000[b]	NA	NA	500
	1-Hour Maximum	40,000[b]	40,000[b]	40,000[b]	NA	NA	2,000
Nitrogen Dioxide	Annual Arithmetic Mean	100	100	100	2.5	25	1
Ozone[a]	1-Hour Maximum	235[c]	235[c]	235[c]	NA	NA	NA
Lead	Calendar Quarter Arithmetic Mean	1.5	1.5	1.5	NA	NA	NA

Note: Particulate matter (PM_{10}) = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.
NA = Not applicable, i.e., no standard exists.

[a] On July 18, 1997, EPA promulgated revised AAQS for particulate matter and ozone. For particulate matter, $PM_{2.5}$ standards were introduced with a 24-hour standard of 65 $\mu g/m^3$ (3-year average of 98th percentile) and an annual standard of 15 $\mu g/m^3$ (3-year average at community monitors). Implementation of these standards are many years away. The ozone standard was modified to be 0.08 ppm for 8-hour average; achieved when 3-year average of 99th percentile is 0.08 ppm or less. FDEP has not yet adopted these standards.

[b] Short-term maximum concentrations are not to be exceeded more than once per year.

[c] Achieved when the expected number of days per year with concentrations above the standard is fewer than 1.

[d] Maximum concentrations.

Sources: Federal Register, Vol. 43, No. 118, June 19, 1978. 40 CFR 50. 40 CFR 52.21. Rule 62-204, F.A.C.

Table 3-2. PSD Significant Emission Rates and *De Minimis* Monitoring Concentrations

Pollutant	Regulated Under	Significant Emission Rate (TPY)	*De Minimis* Monitoring Concentration ($\mu g/m^3$)
Sulfur Dioxide	NAAQS, NSPS	40	13, 24-hour
Particulate Matter (PM_{10})	NAAQS	15	10, 24-hour
Nitrogen Oxides	NAAQS, NSPS	40	14, annual
Carbon Monoxide	NAAQS, NSPS	100	575, 8-hour
Volatile Organic Compounds (Ozone)	NAAQS, NSPS	40	100 TPY[a]
Lead	NAAQS	0.6	0.1, 3-month
Sulfuric Acid Mist	NSPS	7	NM
Total Fluorides	NSPS	3	0.25, 24-hour
Total Reduced Sulfur	NSPS	10	10, 1-hour
Reduced Sulfur Compounds	NSPS	10	10, 1-hour
Hydrogen Sulfide	NSPS	10	0.2, 1-hour
Asbestos	NESHAP	0.007	NM
Beryllium	NESHAP	0.0004	0.001, 24-hour
Mercury	NESHAP	0.1	0.25, 24-hour
Vinyl Chloride	NESHAP	1	15, 24-hour

Note: Ambient monitoring requirements for any pollutant may be exempted if the impact of the increase in emissions is below *de minimis* monitoring concentrations.

NAAQS = National Ambient Air Quality Standards.
NESHAP = National Emission Standards for Hazardous Air Pollutants.
NM = No ambient measurement method.
NSPS = New Source Performance Standards.
PM_{10} = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.
PSD = prevention of significant deterioration.
TPY = tons per year.
TSP = total suspended particulate matter.
$\mu g\ m^3$ = micrograms per cubic meter.

[a] No *de minimis* concentration; an increase in VOC emissions of 100 TPY or more will require monitoring analysis for ozone.

Source: F.A.C., Rule 62-212.400, Tables 212.400-2 and 212.400-3.

Table 3-3. PSD Applicability for Proposed Extractors Addition, SGCPC

Pollutant	Actual 1998-1999 Emissions (TPY)	Future Potential 2000-2001 Emissions (TPY)	Net Change in Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
PM	17.1	115.3	98.2	25	Yes
PM_{10}	14.8	113.2	98.4	15	Yes
SO_2	41.3	266.7	225.4	40	Yes
NO_x	25.1	102.3	77.2	40	Yes
CO	629	2,892	2,263	100	Yes
VOC	1,187	2,026	839	40	Yes

4.0 AMBIENT MONITORING ANALYSIS

4.1 INTRODUCTION

In accordance with requirements of 40 CFR 52.21(m) and Rule 62-212.400(5)(f), F.A.C., any application for a PSD permit must contain an analysis of continuous ambient air quality data in the area affected by the proposed major stationary facility or major modification. For a new major facility, the affected pollutants are those that the facility potentially would emit in significant amounts. For a major modification, the pollutants are those for which the net emissions increase exceeds the significant emission rate.

Ambient air monitoring for a period of up to 1 year is generally appropriate to satisfy the PSD monitoring requirements. A minimum of 4 months of data is required. Existing data from the vicinity of the proposed source may be used if the data meet certain quality assurance requirements; otherwise, additional data may need to be gathered. Guidance in designing a PSD monitoring network is provided in EPA's Ambient Monitoring Guidelines for Prevention of Significant Deterioration (EPA, 1987).

An exemption from the preconstruction ambient monitoring requirements is also available if certain criteria are met. If the predicted increase in ambient concentrations due to the proposed modification is less than the specified *de minimis* concentration for a particulate pollutant, the modification can be exempted from the preconstruction air monitoring requirements for that pollutant.

As described in Section 3.5.2, PM_{10}, SO_2, NO_x, and CO can be exempted from the preconstruction ambient monitoring requirements. However, a preconstruction air monitoring analysis is required for ozone. This analysis is presented in the following section. In addition, existing ambient air quality data for the SGCPC vicinity and for Everglades National Park Class I area, for all pollutants requiring PSD review, is presented to support the modeling analysis in Section 7.0 and the AQRV analysis presented in Section 8.0.

4.2 VICINITY OF SGCPC

As shown in Table 7-1, the proposed project's maximum impacts are below the *de minimis* monitoring concentrations (Table 3-2) for SO_2, PM_{10}, NO_x, and CO. Therefore, the proposed project is not subject to preconstruction air monitoring. Background concentrations are necessary to determine total ambient air quality impacts to demonstrate compliance with AAQS. "Background concentrations" are defined as concentrations due to sources other than those specifically included in the modeling analysis. For all pollutants, background would include other point sources not included in the modeling (i.e., faraway sources or small sources), fugitive emission sources, and natural background sources.

4.2.1 PM_{10} AMBIENT BACKGROUND CONCENTRATIONS

Presented in Table 4-1 is a summary of existing ambient PM_{10} data for monitors located in the vicinity of the SGCPC facility. Data are presented for the last 2 years of record, 1997 to 1998. As shown, two PM_{10} monitors were operational in the vicinity of Clewiston during this period. These stations, located in Clewiston, operated in 1997 but were shutdown in 1998. Several stations were operated in Belle Glade during 1997. Only one station operated in Belle Glade during 1998.

The monitors show that ambient PM_{10} concentrations were well below the ambient air quality standards of 150 $\mu g/m^3$, maximum 24-hour average, and 50 $\mu g/m^3$, annual average at all sites. Monitors in Belle Glade appear to exhibit higher air quality levels than those in Clewiston.

For purposes of an ambient PM_{10} background concentration for use in the modeling analysis, the PM_{10} concentrations of 38 $\mu g/m^3$, 2nd high 24-hour average; and 23 $\mu g/m^3$, annual average, recorded at the Clewiston, 115 S. Lopez Street, monitor during 1997 were selected. These concentrations were utilized for the 24-hour and annual average background PM_{10} concentrations in the air quality impact analysis, although these monitors are impacted by the existing U.S. Sugar Clewiston facility, which is included explicitly in the modeling analysis. All other major point sources of PM within 50 km are also included explicitly in the modeling analysis. Therefore, this monitor would be

influenced significantly by point sources and would represent a conservative estimate of actual background concentrations.

4.2.2 SO_2 AMBIENT BACKGROUND CONCENTRATIONS

Presented in Table 4-2 is a summary of existing continuous ambient SO_2 data for monitors located in the vicinity of SGCPC facility. Data are presented for the last two years of record, 1997 to 1998. As shown, no SO_2 monitors were operational in the vicinity of Clewiston during this period. The nearest SO_2 monitoring stations west located in South Bay. This station, located in South Bay at 300 North U.S. 27, operated in 1997 but was shutdown in 1998. One station also operated in Riviera Beach during 1997 and 1998, but this station is more than 50 km from SGCPC.

The monitor at South Bay shows that ambient SO_2 concentrations were well below the ambient air quality standards of: 1,300 $\mu g/m^3$, maximum 3-hour average; 260 $\mu g/m^3$, maximum 24-hour average; and 60 $\mu g/m^3$, annual average. The monitor in Riviera Beach is not considered to be representative of the Clewiston area due to the distance this monitor is from Clewiston.

For purposes of an ambient SO_2 background concentration for use in the modeling analysis, the SO_2 concentrations of 47 $\mu g/m^3$, 2nd high 3-hour average; 13 $\mu g/m^3$, 2nd high 24-hour average; and 5 $\mu g/m^3$, annual average; recorded at the South Bay monitor during 1997 were selected. These concentrations were utilized for the 3-hour, 24-hour, and annual average background SO_2 concentrations in the air quality impact analysis since this monitor is impacted by the existing major sources in Belle Glade and South Bay (i.e., sugar mills), which are included explicitly in the modeling analysis. All other major point sources of SO_2 are also explicitly included in the modeling analysis. Therefore, this monitor would be influenced by point sources and would represent a conservative estimate of actual background concentrations.

4.2.3 CO AMBIENT BACKGROUND CONCENTRATIONS

Presented in Table 4-3 is a summary of existing continuous ambient CO data for monitors located in the vicinity of SGCPC. Data are presented for the last 2 years of

record, 1997 to 1998. As shown, no CO monitors were operational in the vicinity of Clewiston during this period. The nearest CO monitoring stations were located in West Palm Beach.

The CO monitors show that ambient CO concentrations were well below the ambient air quality standards of: 35 ppm (40,000 $\mu g/m^3$), maximum 1-hour average; and 9 ppm (10,000 $\mu g/m^3$) maximum 8-hour average. The monitor in West Palm Beach is not considered to be representative of the SGCPC area due to the distance this monitor is from SGCPC, but is the closest monitoring station.

For purposes of an ambient CO background concentration for use in the modeling analysis, the second highest 1-hour CO concentration of 5 ppm (5,555 $\mu g/m^3$) and the second highest 8-hour concentration of 3 ppm (3,333 $\mu g/m^3$), recorded at the West Palm Beach monitor during 1997 was selected. These concentrations are very conservative since this monitor is impacted by significant mobile sources.

4.2.4 AMBIENT OZONE CONCENTRATIONS

Presented in Table 4-4 is a summary of existing continuous ambient ozone data for monitors located in the vicinity of the SGCPC facility. Data are presented for the last 2 years of record, 1997 to 1998. As shown, no ozone monitors were operational in the vicinity of Clewiston during this period. The nearest ozone monitoring stations were located in West Palm Beach.

The ozone monitors show that ambient ozone concentrations were below the ambient air quality standards of: 0.12 ppm (235 $\mu g/m^3$), maximum 1-hour average allowed to be exceeded on average one day per year; and 0.08 ppm (157 $\mu g/m^3$), average annual fourth highest 8-hour average. The monitor in West Palm Beach is considered to be conservative for the SGCPC site due to the significant number of mobile sources in the West Palm Beach area compared to the SGCPC site.

4.3 EVERGLADES NATIONAL PARK CLASS I AREA

Presented in Table 4-5 is a summary of existing ambient PM/PM_{10}, SO_2 and NO_2 monitoring data for monitors located in the vicinity of the Everglades National Park Class I area. One PM_{10} monitor and one SO_2 monitor were located directly in the Everglades National Park in 1997 and 1998. The nearest NO_2 data is from a site located in downtown Miami.

The monitoring data show that ambient PM_{10} concentrations were well below the ambient air quality standards of 150 $\mu g/m^3$, maximum 24-hour average, and 50 $\mu g/m^3$, annual average, and ambient SO_2 concentrations were extremely low and are representative of natural background concentrations.

Table 4-1. Summary of PM_{10} Ambient Monitoring Data Collected Near Clewiston

Year	County	Station ID	Monitor Location	Number of Observations	Concentration ($\mu g/m^3$) Maximum 24-Hour	2nd High 24-Hour	Annual Average
1997	Hendry	0660-002-J02	Clewiston - 115 S. Lopez Street	55	43	38	23
	Hendry	1720-002-J02	Clewiston - Delta Ranch SR 832	51	60	39	23
	Palm Beach	0240-008-G01	Belle Glade - 38754 SR 80	61	45	39	20
	Palm Beach	0240-004-J02	Belle Glade - SR 717, Municipal Golf	57	43	39	20
	Palm Beach	0240-006-J02	Belle Glade - 273 SE Avenue E	60	47	44	22
	Palm Beach	3420-010-J02	Belle Glade - PO Box 484	55	81	75	26
	Palm Beach	3420-011-J02	Belle Glade - SR 80	61	36	36	21
1998	Palm Beach	12-099-0008	Belle Glade - 38754 SR 80	50	82	59	27

$\mu g/m^3$ = micrograms per cubic meter

Table 4-2. Summary of SO_2 Monitoring Data Collected Near Clewiston

Year	County	Station ID	Monitor Location	Number of Observations	Concentration ($\mu g/m^3$) Maximum 3-Hour	2nd High 3-Hour	Maximum 24-Hour	2nd High 24-Hour	Annual Average
1997	Palm Beach	4150-001-J02	South Bay- 300 North US 27	8,486	55	47	19	13	5
	Palm Beach	3840-004-G02	Riviera Beach- 1050 15th Street	8,274	165	154	50	37	4
1998	Palm Beach	12-099-3004	Riviera Beach- 1050 15th Street	8,299	177 (0.068 ppm)	31 (0.012 ppm)	24 (0.009 ppm)	10 (0.004 ppm)	3 (0.001 ppm)

$\mu g/m^3$ = micrograms per cubic meter

Table 4-3. Summary of Carbon Monoxide Ambient Monitoring Data Near Clewiston

Year	County	Station ID	Monitor Location	Number of Observations	Concentration (ppm) Maximum 1-Hour	2nd-High 1-Hour	Maximum 8-Hour	2nd High 8-Hour
1997	Palm Beach	4760-004-G01	West Palm Beach - 3730 Belvedere Road	8,232	11	10	7	3
	Palm Beach	4760-005-G01	West Palm Beach - 4356 Okeechobee Blvd.	3,547	7	7	5	3
	Palm Beach	4760-006-G01	West Palm Beach - 50 South Military Trail	843	6	5	4	3
1998	Palm Beach	12-099-1004	West Palm Beach - 3700 Belvedere Road	8,280	6.0	5.6	2.7	2.5
	Palm Beach	12-099-1006	West Palm Beach - 50 South Military Trail	8,476	5.4	5.3	3.0	3.0

Note: ppm = parts per million.

Table 4-4. Summary of Continuous Ozone Ambient Monitoring Data Collected Near Clewiston

Year	County	Station ID	Monitor Location	Number of Observations	Concentration (ppm) Maximum 1-Hour	2nd High 1-Hour	3rd High 1-Hour
1997	Palm Beach	3420-007-G01	Royal Palm Beach Royal Palm Beach Storage	8,005	0.087	0.078	0.074
1998	Palm Beach	12-099-0007	West Palm Beach- 10999 Okeechobee Blvd.	8,424	0.094	0.092	0.087

ppm = parts per million

Table 4-5. Summary of Sulfur Dioxide, PM_{10}, and NO_x Monitoring Data Collected in or Near the Everglades National Park

Year	County	Station ID	Monitor Location	Number of Observations	Concentration ($\mu g/m^3$) Maximum 24-Hour	2nd High 24-Hour	Annual Average
SO_2 Monitoring Data							
1997	Dade	National Park Service	Within Everglades National Park	94	0.52	0.18	0.044
1998	Dade	National Park Service	Within Everglades National Park	66	0.72	0.68	0.13
PM_{10} Monitoring Data							
1990	Dade	National Park Service	Within Everglades National Park	89	79	44	20
1991	Dade	National Park Service	Within Everglades National Park	53	38	37	18
NO_x Monitoring Data							
1997	Dade	2700-002-G01	Miami- 864 NW 3rd Street	8,477	NA	NA	31
	Dade	0860-027-G01	Miami- Rosensteil School	7,854	NA	NA	13
1998	Dade	12-025-4002	Miami- 864 NW 3rd Street	8,477	NA	NA	28 (0.015 ppm)
	Dade	12-025-0027	Miami- Rosensteil School	7,019	NA	NA	11 (0.006 ppm)

Source: Improve, NPS.

5.0 BACT ANALYSIS

As discussed in Section 3.0, BACT analysis is required for the SGCPC for the following sources: the three new juice extractors. The pollutants requiring BACT analysis are PM, PM_{10}, SO_2, VOC, CO, and NO_x. The BACT analysis is presented in this section.

5.1 REQUIREMENTS

The control technology review requirements of the federal and state PSD regulations require that all applicable federal and state emission-limiting standards be met, and that BACT be applied to control emissions from the source. The BACT requirements are applicable to all regulated pollutants for which the increase in emissions from the facility or modification exceeds the significant emission rate.

BACT is defined in 40 CFR 52.21 as:

> An emissions limitation, including a visible emission standard, based on the maximum degree of reduction of each pollutant emitted which the department, on a case by case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of such pollutant. If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of a source or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice, or operation.

The requirements for BACT were promulgated within the framework of PSD in the 1977 amendments of the CAA [Public Law 95-95; Part C, Section 165(a)(4)]. The primary purpose of BACT is to optimize consumption of PSD air quality increments and thereby enlarge the potential for future economic growth without significantly degrading air quality (EPA, 1978; 1980). Guidelines for the evaluation of BACT can be found in EPA's Guidelines for Determining Best Available Control Technology (BACT) (EPA, 1978) and in the PSD Workshop Manual (EPA, 1980). These guidelines were promulgated by EPA to provide a consistent approach to BACT and to ensure that the impacts of alternative

emission control systems are measured by the same set of parameters. In addition, through implementation of these guidelines, BACT in one area may not be identical to BACT in another area. According to EPA (1980):

> BACT analyses for the same types of emissions unit and the same pollutants in different locations or situations may determine that different control strategies should be applied to the different sites, depending on site-specific factors. Therefore, BACT analyses must be conducted on a case-by-case basis.

The BACT requirements are intended to ensure that the control systems incorporated in the design of a proposed facility reflect the latest in control technologies used in a particular industry and take into consideration existing and future air quality in the vicinity of the proposed facility. BACT must, as a minimum, demonstrate compliance with NSPS for a source (if applicable). An evaluation of the air pollution control techniques and systems, including a cost-benefit analysis of alternative control technologies capable of achieving a higher degree of emission reduction than the proposed control technology, is required. The cost-benefit analysis requires the documentation of the materials, energy, and economic penalties associated with the proposed and alternative control systems, as well as the environmental benefits derived from these systems. A decision on BACT is to be based on sound judgment, balancing environmental benefits with energy, economic, and other impacts (EPA, 1978).

Under federal EPA PSD rules, control technology review requirements are clarified for major modifications to existing major facilities. Title 40, CFR 52.21(j)(3) reads as follows:

> A major modification shall apply best available control technology for each pollutant subject to regulation under the ACT for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

Thus, BACT applies to only those emissions units undergoing a physical change or a change in the method of operation as a result of the modification. A physical change or change in the method of operation does not include an increase in the hours of operation of a unit, or an increase in the production rate of a unit, unless such increase would be prohibited under a federally enforceable permit condition which was established after January 6, 1975 [40 CFR 52.21(b)(2)(iii)(*f*)]. Florida's PSD regulations (Rule 62-212.400,

F.A.C.), although worded differently than the EPA regulations, were intended to be applied in the same manner as the EPA regulations.

The following section presents the BACT analysis.

5.2 NEW JUICE EXTRACTORS

The new juice extractors process raw citrus fruit by removing the peel and extracting the citrus juice within the fruit. The juice and peel are then sent for further processing. The only air pollutant potentially released by the juice extractors is VOC. The magnitude of VOC released, although not quantifiable, is extremely small. The mechanism of juice removal and subsequent transport allows little opportunity for escape to the atmosphere. Limited measurement of VOC emissions from the SGCPC juice extractors building confirms this.

The extractor building at SGCPC has a number of roof vents and floor vents. It would be extremely costly to control the small emissions which might emanate through these vents. Therefore, VOC controls on the extractor building were not considered further.

As discussed in the regulatory requirements section (Section 5.1), BACT review does not apply to any emissions unit which is not undergoing a physical change or a change in the method of operation. Although the existing steam boilers, peel dryer and pellet coolers may experience an increase in operating hours and/or production rates as a result of the extractors addition, with an associated emissions increase, their permitted capacities are sufficient. These emissions units will not undergo a physical change or a change in the method of operation, as defined under the PSD regulations. As a result, BACT does not apply to these emissions units.

6.0 AIR QUALITY IMPACT ANALYSIS

6.1 AIR MODELING ANALYSIS APPROACH

An air quality impact analysis of the SGCPC facility was conducted for four pollutants for which AAQS have been set: SO_2, NO_2, PM_{10}, and CO. The air quality modeling analysis was performed using the Industrial Source Complex Short-Term (ISCST3) model, Version 98356, currently recommended for regulatory applications, to assess maximum ground-level impacts due to the SGCPC facility and other sources in the area. The analysis followed EPA and FDEP modeling guidelines for assessing compliance with the AAQS and PSD increments.

The impact analysis used screening and refinement phases to determine the maximum pollutant impacts associated with the SGCPC facility. The difference between the two modeling phases is the density of the receptor grid spacing used when predicting concentrations. Concentrations are predicted for the screening phase using a coarse (i.e., large spacing) receptor grid and a 5-year meteorological data record. In this analysis, the receptor grid consisted of a polar receptor grid with a 10-degree angular spacing between receptors. In order to assure receptor grid spacing of less than 100 m, 2-degree angular spacing between receptors are used for property boundary areas that exceed 575 m from the modeling origin.

Refinements of the maximum predicted concentrations from the screening phase are typically performed in the vicinity of the receptors of the screening receptor grid at which the highest predicted concentrations occurred over the 5-year period. Generally, if maximum concentrations predicted in another year are within 10 percent of the overall maximum concentration predicted for the 5-year period, then the other concentrations are refined as well. Modeling refinements are performed to determine maximum concentrations with a receptor grid spacing of 100 m or less.

The domain of a refined receptor grid will generally extend to all adjacent screening receptors surrounding a particular screening grid receptor. The air dispersion model is then executed with the refined grid for the entire year of meteorology during which the

maximum concentration in the screening phase occurred. This approach is used to ensure that a valid maximum concentration is obtained.

Because the SGCPC facility is located about 102 km (62 miles) north of the Everglades National Park (ENP) PSD Class I area, an increment analysis was conducted at the ENP.

A more detailed description of the model, along with the emission inventory, meteorological data, and screening receptor grids, is presented in the following sections.

6.2 SIGNIFICANT IMPACT ANALYSIS

6.2.1 SITE VICINITY

A significant impact analysis is performed for all criteria pollutants that are emitted in amounts greater than the applicable PSD significant emission rates. For each pollutant, a significant impact analysis is performed to determine a project's maximum air quality impact and the distance at which the project's impacts are below significant impact levels (SIL). This distance defines the significant impact area (i.e., distance from the source where impacts due to project emissions fall below SIL). If the project's maximum impacts are less than the SIL, no additional modeling with other sources is needed and the impact analysis is complete. However, if the project's impacts are predicted to be greater than the SIL for a particular pollutant, then additional, more detailed modeling analyses are required for that pollutant. The additional analyses include AAQS and PSD increment analyses. Both of these detailed analyses require that the cumulative air quality impacts from other facilities that are in the vicinity of the proposed project's plant be addressed in the impact evaluation. A more detailed description of these analyses is provided in the following sections.

6.2.2 PSD CLASS I AREAS

If the project is within 150 km of a PSD Class I area, then a significant impact analysis is also performed at the PSD Class I area. Currently, the EPA has proposed SIL for PSD Class I areas. If the project's impacts are above the SIL, then a more detailed air modeling analysis is performed with PSD increment consuming and expanding background facilities to determine increment consumption at the PSD Class I area.

Because the SGCPC facility is located approximately 98.5 km from the Everglades National Park (ENP), a PSD Class I area, a significant impact analysis was conducted at the ENP. Current FDEP policies stipulate that the highest annual average and highest short-term (i.e., 24 hours or less) concentrations are to be compared to the applicable SIL.

6.3 AAQS AND PSD CLASS II INCREMENT ANALYSES

In general, when 5 years of meteorological data are used, the highest annual and the highest, second-highest (H2H) short-term concentrations are to be compared to the applicable AAQS and allowable PSD Class II increments. The H2H is calculated for a receptor field by:

1. Eliminating the highest concentration predicted at each receptor,
2. Identifying the second-highest concentration at each receptor, and
3. Selecting the highest concentration among these second-highest concentrations.

This approach is consistent with most air quality standards and all allowable PSD increments, which permit a short-term average concentration to be exceeded once per year at each receptor.

For the AAQS analysis, the future emissions of the SGCPC facility are modeled together with other emission sources. Additionally, a non-modeled background concentration is added to the maximum predicted air quality to determine a total air quality concentration. The maximum annual and H2H short-term total concentrations are compared to the AAQS.

For the PSD Class II increment analysis, the PSD increment consuming sources at the SGCPC facility site are modeled with other PSD consuming or expanding sources. Since the SGCPC facility was constructed in 1994, after the PM_{10}/SO_2 and NO_x PSD baseline dates (January 1, 1985 and March 8, 1988, respectively), the entire facility is increment consuming. The maximum annual and H2H short-term PSD increment are compared to the allowable PSD Class II increments.

6.4 PSD CLASS I INCREMENT ANALYSIS

For PM_{10}, SO_2 and NO_2, which have established PSD Class I allowable increments, a detailed PSD increment analysis was not performed because the Class I analysis showed these pollutant impacts were not significant.

6.5 MODEL SELECTION

The ISCST3 dispersion model (Version 00101) was used to evaluate all pollutant impacts. This model is currently available on the EPA's Internet web site, Support Center for Regulatory Air Models (SCRAM), within the Technical Transfer Network (TTN). A listing of ISCST3 model features is presented in Table 6-1. The ISCST3 model is designed to calculate hourly concentrations based on hourly meteorological data (i.e., wind direction, wind speed, atmospheric stability, ambient temperature, and mixing heights). The ISCST3 model is applicable to sources located in either flat or rolling terrain where terrain heights do not exceed stack heights. These areas are referred to as simple terrain. The model can also be applied in areas where the terrain exceeds the stack heights. These areas are referred to as complex terrain.

Since the terrain surrounding the SGCPC facility is flat, the modeling analysis assumed that all receptors were at the base elevation of the facility (i.e., flat terrain assumption in ISCST3).

In this analysis, the EPA regulatory default options were used to predict all maximum impacts. The ISCST3 model can run in the rural or urban land use mode, which affects stability dispersion coefficients, wind speed profiles, and mixing heights. Land use can be characterized based on a scheme recommended by EPA (Auer, 1978). If more than 50 percent of the land use within a 3-km radius circle around a project is classified as industrial or commercial, or high-density residential, then the urban option should be selected. Otherwise, the rural option is appropriate. Based on reviews of aerial and U.S. Geological Survey (USGS) topographical maps and a site visit, the land use within a 3-km (1.9-mile) radius of the SGCPC facility site is considered to be rural (i.e., very little heavy industrial, light-moderate industrial, commercial, or compact residential land use categories). Therefore, the rural mode was used in the air dispersion model to predict

impacts from the SGCPC facility and other emission sources considered in the modeling analysis.

The ISCST3 model was used to predict maximum pollutant concentrations for averaging the annual and 24-hour, 8-hour, 3-hour, and 1-hour averaging periods. The predicted concentrations were then compared to applicable significant impact levels, monitoring *de minimis* levels, allowable PSD increments, and the AAQS.

For predicting maximum impacts at the Everglades National Park (ENP), a PSD Class I area, the California Puff (CALPUFF) model was used. CALPUFF, Version 5.4 (07/00), is a Lagranginan Puff model that is recommended by FDEP and EPA for predicting the pollutant impacts at receptor distances beyond 50 km. For this project, CALPUFF was used in a screening mode using a circle of receptors spaced at 1 degree intervals and at a distance of 98.5 km from the facility. This represents the minimum distance between SGCPC and the ENP PSD Class I area.

6.6 METEOROLOGICAL DATA

Meteorological data used in the ISCST3 model to determine air quality impacts consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) offices located in Fort Myers and Ruskin, respectively. Concentrations were predicted using 5 years of hourly meteorological data from 1987 through 1991. The NWS office in Fort Myers and Ruskin are the closest primary weather stations to the study area considered to have meteorological data representative of the project site. The Fort Myers and Ruskin stations meteorological data have been used for previous air modeling studies for the SGCPC facility.

The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling height. The wind speed, cloud cover, and cloud ceiling values were used in the ISCST3 meteorological preprocessor program to determine atmospheric stability using the Turner stability scheme. Based on the temperature measurements at morning and afternoon, mixing heights were calculated from the radiosonde data at Fort

Myers using the Holzworth approach (Holzworth, 1972). Hourly mixing heights were derived from the morning and afternoon mixing heights using the interpolation method developed by EPA (Holzworth, 1972). The hourly surface data and mixing heights were used to develop a sequential, hourly meteorological data set (i.e., wind direction, wind speed, temperature, stability, and mixing heights). Because the observed hourly wind directions at the NWS stations are classified into one of thirty-six 10-degree sectors, the wind directions were randomized within each sector to account for the expected variability in air flow. These calculations were performed using the EPA RAMMET meteorological preprocessor program.

6.7 EMISSION INVENTORY

6.7.1 SGCPC FACILITY

Current and future short-term and annual emissions used in the modeling for SGCPC are presented in Table 6-2. The current emissions are representative of current actual emissions, while future emissions are representative of future maximum emissions. Since the SGCPC facility was constructed in 1994, the entire facility consumes PSD increment. Stack parameters and source locations for the current and future operating conditions are presented in Table 2-7. It is noted that SGCPC has recently increased the stack diameter of the peel dryer/waste heat evaporator (WHE) from 46 inches to a new diameter of 68 inches (5.7 ft). The intent is to improve operation of the WHE and relieve back-pressure on the peel dryer.

6.7.2 OTHER EMISSION SOURCES

The emission inventories for other non-SGCPC facilities were developed mainly from databases from previous air modeling studies performed by Golder Associates for SGCPC, from the recent U.S. Sugar Clewiston Boiler No. 4 application, and from air permit data. For the AAQS and PSD Class II increment analysis, all other major sources located within 50 km of the significant impact area were included, as well as large emission sources located beyond that distance.

Sulfur Dioxide

A summary of all SO_2 emitting facilities located within 50 km of the significant impact area (2 km for SO_2), associated locations with respect to the SGCPC facility, and associated SO_2 emissions, is provided in Table 6-3. Using the North Carolina Screening Method, sources to be included in the AAQS and PSD Class II increment air modeling analyses were identified. Emissions from Osceola Farms and Florida Power & Light's Fort Myers and Martin power plants were also included in this analysis. These sources are outside the significant impact area of the project, but are large sources which could affect maximum impacts. The individual source emissions, stack, and operating parameters for the AAQS and PSD Class II modeling analyses were developed and are presented in Table 6-4.

The facilities considered in the PSD Class I increment analysis are also presented in Table 6-4. All PSD increment consuming or expanding sources within these facilities are included in the analysis.

Each source listed in Table 6-4 includes a description of the source, the ID name of the source used in the air modeling analysis, and whether the source consumes or expands PSD increment. Facilities with PSD-affecting sources may have PSD baseline sources. PSD baseline source emissions and stack configurations no longer exist but were in effect during the SO_2 PSD baseline period of 1974-75. These sources expand PSD increment and are represented in the PSD increment air modeling analyses as negative emission sources.

Particulate Matter

A summary of all PM_{10} emitting facilities located within 50 km of the significant impact area of 3.5 km, their locations with respect to the SGCPC facility, and their PM emissions are provided in Table 6-5. Using the North Carolina Screening Method, sources were identified to be included in the AAQS and PSD Class II increment air modeling analysis. Also, emissions from Florida Power & Light's Fort Myers and Martin power plants were included in this analysis. These sources are outside the significant impact area of the project, but are large sources which could affect maximum impacts. The individual

source emissions, stack, and operating parameters for the AAQS and PSD Class II modeling analyses were developed and are presented in Table 6-6. A PSD Class I increment modeling analysis is not required for PM_{10}.

Each source listed in Table 6-6 includes a description of the source, the ID name of the source used in the air modeling analysis, and whether the source consumes or expands PSD increment. Facilities with PSD-affecting sources may have PSD baseline sources. PSD baseline source emissions and stack configurations no longer exist but were in effect during the PM_{10} PSD baseline period of 1974-75. These sources expand PSD increment and are represented in the PSD increment air modeling analyses as negative emission sources.

Carbon Monoxide

A summary of all CO emitting facilities located within 50 km of the significant impact area of 2 km, their locations with respect to the SGCPC facility, and their CO emissions are provided in Table 6-7. Using the North Carolina Screening Method, sources to be included in the AAQS and PSD Class II increment air modeling analysis were identified. Emissions from Florida Power & Light's Fort Myers and Martin power plants were included in this analysis as were emissions from Osceola Farms and Atlantic Sugar Association. These sources are outside the significant impact area of the project, but are large sources which could affect maximum impacts. The individual source emissions, stack, and operating parameters for the AAQS modeling analyse were developed and are presented in Table 6-8. A PSD Class I increment modeling analysis is not required for CO. Each source listed in Table 6-8 includes a description of the source, the ID name of the source used in the air modeling analysis.

6.8 BUILDING DOWNWASH EFFECTS FOR SGCPC FACILITY

Based on the building dimensions associated with buildings and structures at the facility, all stacks at the SGCPC facility will comply with the good engineering practice (GEP) stack height regulations. However, these stacks are less than GEP height. Therefore, the potential for building downwash to occur was considered in the air modeling analysis for these stacks.

Generally, a stack is considered to be within the influence of a building if it is within the lesser of 5 times L, where L is the lesser dimension of the building height or projected width. The ISCST3 model uses two procedures to address the effects of building downwash. For both methods, the direction-specific building dimensions are input for H_b and l_b for 36 radial directions, with each direction representing a 10-degree sector. The H_b is the building height and l_b is the lesser of the building height or projected width. For short stacks (i.e., physical stack height is less than $H_b + 0.5\ l_b$), the Schulman and Scire (1980) method is used. The features of the Schulman and Scire method are as follows:

1. Reduced plume rise as a result of initial plume dilution,
2. Enhanced plume spread as a linear function of the effective plume height, and
3. Specification of building dimensions as a function of wind direction.

For cases where the physical stack height is greater than $H_b + 0.5\ l_b$, but less than GEP, the Huber-Snyder (1976) method is used. Both downwash algorithms affect stacks that are within the influence of a building, without regard for the actual distance the stack or stack s plume is from the building during any given moment.

The building dimensions considered in the air modeling analysis for the SGCPC facility are presented in Table 6-9. The location of the buildings and stacks can be found on the site plot plan (Figure 6-1). At the SGCPC facility, several stacks are influenced by one or more buildings. For the modeling analysis, direction-specific building dimensions are input for H_b and l_b for 36 radial directions, with each direction representing a 10-degree sector. All direction-specific building parameters were calculated with the Building Profile Input Program (BPIP), Version 95086. The BPIP program was used to generate building data for the ISCST3 model input. A detailed listing of direction-specific building data used in the air modeling analysis is provided in Attachment C.

6.8 RECEPTOR LOCATIONS

For predicting maximum concentrations in the vicinity of the SGCPC facility, an array of discrete polar receptors were used. The number of discrete receptors was 166; 64 of these receptors are located along the property line of SGCPC facility. Property line receptors are all 100 m or less between receptors. The other discrete receptors are located in four concentric rings outside the property boundary at 300, 400, 500, and 600 meters. A summary of the boundary receptors at SGCPC facility is presented in Table 6-10.

Modeling refinements were performed, as needed, by employing a polar receptor grid with a maximum spacing of 100 m along each radial and an angular spacing between radials of 1 or 2 degrees. At a distance of less than 575 m, the angular distance between receptors is 100 m or less and additional refinements may not be performed. At distances of 600 m and beyond, modeling refinements are performed by employing an angular spacing between radials of 1 or 2 degrees and a spacing interval along radials of 100 m.

Pollutant concentrations were also predicted at 51 receptors located along the boundaries of the ENP PSD Class I Area. A listing of the 51 Class I receptors is presented in Table 6-11. Due to the large distance from the SGCPC facility to the ENP, additional receptor refinements were not performed for these areas.

6.9 BACKGROUND CONCENTRATIONS

Total air quality impacts were predicted for the AAQS analysis by adding the maximum annual and highest, second-highest short-term concentrations due to all modeled sources to estimated background concentrations. Background concentrations are concentrations due to sources not explicitly included in the modeling analysis. These concentrations consist of two components:

- Impacts due to other non-modeled emission sources (i.e., point sources not explicitly included in the modeling inventory), and
- Natural and fugitive emission sources.

The non-modeled background concentrations were obtained from air quality monitoring data, as described in Section 4.0, and are as follows:

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)
PM_{10}	24-hour	38
	Annual	23
SO_2	3-hour	47
	24-hour	13
	Annual	5
CO	1-hour	5,555
	8-hour	3,333

Table 6-1. Major Features of the ISCST3 Model

ISCST3 Model Features
• Polar or Cartesian coordinate systems for receptor locations
• Rural or one of three urban options which affect wind speed profile exponent, dispersion rates, and mixing height calculations
• Plume rise due to momentum and buoyancy as a function of downwind distance for stack emissions (Briggs, 1969, 1971, 1972, and 1975; Bowers, et al., 1979).
• Procedures suggested by Huber and Snyder (1976); Huber (1977); and Schulman and Scire (1980) for evaluating building wake effects
• Procedures suggested by Briggs (1974) for evaluating stack-tip downwash
• Separation of multiple emission sources
• Consideration of the effects of gravitational settling and dry deposition on ambient particulate concentrations
• Capability of simulating point, line, volume, area, and open pit sources
• Capability to calculate dry and wet deposition, including both gaseous and particulate precipitation scavenging for wet deposition
• Variation of wind speed with height (wind speed-profile exponent law)
• Concentration estimates for 1-hour to annual average times
• Terrain-adjustment procedures for elevated terrain including a terrain truncation algorithm for ISCST3; a built-in algorithm for predicting concentrations in complex terrain
• Consideration of time-dependent exponential decay of pollutants
• The method of Pasquill (1976) to account for buoyancy-induced dispersion
• A regulatory default option to set various model options and parameters to EPA recommended values (see text for regulatory options used)
• Procedure for calm-wind processing including setting wind speeds less than 1 m/s to 1 m/s.

Note: ISCST3 = Industrial Source Complex Short-Term.
Source: EPA, 1998.

Two more months

rerun sum files

Table 6-2. Short-term and Annual Emissions used in Modeling of SGCPC

	Short-term Emissions					Long Term Emissions [a]				
	Current		Future			Current		Future		
	lb/hr	g/s	lb/hr	g/s		TPY	g/s	TPY	g/s	
	Boilers					**Boilers**				
PM_{10}	0.79	0.10	0.79 [b]	0.10	No change	PM_{10}	0.71 [e]	0.02	2.04 [b]	0.06
SO_2	54.64	6.88	54.64 [b]	6.88		SO_2	20.79 [e]	0.60	140.69 [b]	4.04
NO_X	15.81	1.99	15.81 [b]	1.99		NO_X	14.28 [e]	0.41	40.78 [b]	1.17
CO	3.95	0.50	3.95 [b]	0.50		CO	3.57 [e]	0.10	10.20 [b]	0.29
	Peel Dryer/WHE					**Peel Dryer/WHE**				
PM_{10}	11.30 [f]	1.42	18.50 [c]	~~2.33~~ 4.04 in model	See Table 2-4/PM10	PM_{10}	13.73 [e]	0.39	41.0	1.18
SO_2	19.62 [f]	2.47	42.00 [c]	5.29		SO_2	20.49 [e]	0.59	126.0	3.62
NO_X	10.40 [f]	1.31	27.70 [c]	3.49		NO_X	10.87	0.31	61.5	1.77
CO	339.00 [f]	42.71	926.00 [c]	~~116.68~~ 191.81	See Table 2-4	CO	625.8	17.99	1970	56.64
	Pellet Coolers					**Pellet Coolers**				
PM_{10}	0.19 [f]	0.02	2.00 [d]	~~0.25~~ 0.63	See Table 2-5	PM_{10}	0.36	0.01	6.00	0.17

[a] From Table 2-2 Summary of Emissions, .

[b] Table 2-6. Future Potential Emissions for Boiler Nos. 1, 2, 3, and 4.

[c] Table 2-3. Future Potential Emissions for Citrus Feed Mill

[d] Table 2-4. Future Potential Emissions for Citrus Pellet Mill

[e] Actual emissions are an average of the 1998-1999 AOR emissions.

[f] Data from 4/18/2000 stack test.

Δ = 4.04 - 1.42 = 2.62

Δ = 5.29 - 2.47

Δ = 191.81 - 42.71 = 149.10

5.29
2.47
2.82

Table 6-3. Summary of SO_2 Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses for SGCPC (revised 8/1/2000)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to S. Garden [a] X (km)	Relative to S. Garden [a] Y (km)	Relative to S. Garden [a] Distance (km)	Relative to S. Garden [a] Direction (deg)	Maximum SO_2 Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -2 x 20)	Include In Modeling Analysis ?
510003	US Sugar Clewiston	Hendry	506.1	2956.9	18.5	-0.7	18.5	92	7,806	330	YES
510001	Everglades Sugar	Hendry	509.6	2954.2	22.0	-3.4	22.3	99	607	405	YES
990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	35.8	-2.4	35.9	94	98	678	NO
990332	Okeelanta Power	Palm Beach	525.0	2937.4	37.4	-20.2	42.5	118	939	810	YES
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	47.3	-4.3	47.5	95	2,555	910	YES
990061	U.S. Sugar - Bryant	Palm Beach	538.8	2968.1	51.2	10.5	52.3	78	2,698	1,005	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	56.6	10.4	57.5	80	2,023	1,111	YES [c]
	Lee County Resource Recovery	Lee	424.0	2946.0	-63.6	-11.6	64.6	260	490	1,253	NO
710002	FPL - Fort Myers	Lee	422.1	2952.9	-65.5	-4.7	65.7	266	68,536	1,273	YES [c]
850001	FPL - Martin	Martin	543.1	2992.9	55.5	35.3	65.8	58	93,788	1,275	YES [c]
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	65.3	-12.4	66.5	101	1,217	1,289	NO
850102	Bechtel Indiantown	Martin	545.6	2991.5	58.0	33.9	67.2	60	2,629	1,304	NO
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	71.6	20.7	74.5	74	504	1,451	NO
850007	Dickerson	Martin	569.5	2995.9	81.9	38.3	90.4	65	58	1,768	NO
990234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	98.2	2.6	98.2	88	1,533	1,925	NO
850021	Stuart Contracting	Martin	575.2	3006.8	87.6	49.2	100.5	61	100	1,969	NO
990568	Lake Worth Generating	Palm Beach	592.8	2943.7	105.2	-13.9	106.1	98	468	2,082	NO
990045	Lake Worth Utilities	Palm Beach	592.8	2943.7	105.2	-13.9	106.1	98	5,031	2,082	NO
990042	FPL - Riviera Beach	Palm Beach	594.2	2960.6	106.6	3.0	106.6	88	73,475	2,093	NO
110120	North Broward Resource Recovery	Broward	583.6	2907.6	96.0	-50.0	108.2	118	896	2,125	NO
	Fort Pierce Utilities	St. Lucie	566.8	3036.3	79.2	78.7	111.7	45	2,708	2,193	NO
110119	South Broward Resource Recovery	Broward	579.6	2883.3	92.0	-74.3	118.3	129	1,318	2,325	NO
110037	FPL - Lauderdale	Broward	580.1	2883.3	92.5	-74.3	118.6	129	47,858	2,333	NO
250020	Tarmac	Dade	562.9	2861.7	75.3	-95.9	121.9	142	2,792	2,399	NO
110036	FPL - Port Everglades	Broward	587.4	2885.3	99.8	-72.3	123.2	126	170,215	2,425	NO
	Dade Co. Resource Recovery	Dade	564.3	2857.4	76.7	-100.2	126.2	143	857	2,484	NO
	Vero Beach Power	St. Lucie	567.1	3056.5	79.5	98.9	126.9	39	18,496	2,498	NO

[a] Southern Gardens East and North Coordinates (km) 487.6 2957.6

[b] Proposed project's emissions are significant to 2 km. Emission inventory is limited to facilities within 52km of SGC.

[c] Large source beyond screening area included in modeling analysis.

Table 6-4. Summary of SO_2 Sources Included in the Air Modeling Analysis for SGCPC (revised 8/1/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
0510003	US Sugar - Clewiston [c]												
		PSD Baseline (On-crop season only)											
		Unit 1 PSD Baseline	USSBRL1B	23.1	1.86	344.0	30.20	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	USSBLR2B	23.1	1.86	343.0	35.70	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	USSBLR3B	27.4	2.29	342.0	14.70	-48.30	-33.20	EXP	No	Yes	Yes
		East Pellet Plant PSD Baseline	EPELLET	12.2	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		West Pellet Plant PSD Baseline	WPELLET	15.7	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		On-crop season future											
		Unit 1	USSBRL1F	65.0	2.44	347.0	15.36	78.79	73.73	CON	Yes	Yes	Yes
		Unit 2	USSBLR2F	65.0	2.44	338.0	13.86	78.49	73.44	CON	Yes	Yes	Yes
		Unit 3	USSBLR3F	65.0	2.44	333.2	6.78	47.08	47.08	CON	Yes	Yes	Yes
		Unit 4	USSBLR4F	45.7	2.51	344.3	20.28	21.53	3.68	CON	Yes	Yes	Yes
		Unit 7	USSBLR7F	68.6	2.59	405.4	20.77	13.91	12.65	CON	Yes	Yes	Yes
		Off-crop season future											
		Unit 1	USSBRL1N	65.0	2.44	347.0	14.05	51.64	24.29	CON	Yes	Yes	Yes
		Unit 2	USSBLR2N	65.0	2.44	338.0	12.68	51.27	24.02	CON	Yes	Yes	Yes
		Unit 3	USSBLR3N	65.0	2.44	333.2	6.20	30.74	30.20	CON	Yes	Yes	Yes
		Unit 4	USSBLR4N	45.7	2.51	344.3	0.00	0.00	0.00	CON	Yes	Yes	Yes
		Unit 7	USSBLR7N	68.6	2.59	405.4	23.60	17.39	15.81	CON	Yes	Yes	Yes
0510001	Everglades Sugar [a] Main Boiler		EVERGLAD	21.9	1.10	477.0	10.10	34.90	34.90	NO	Yes	No	No
0990332	Okeelanta Corp.												
		Boiler 4 PSD Baseline	OKBLR4B	22.9	2.29	333.0	7.36	-10.95	-10.95	EXP	No	Yes	Yes
		Boiler 5 PSD Baseline	OKBLR5B	22.9	2.29	333.0	12.07	-15.64	-15.64	EXP	No	Yes	Yes
		Boiler 6 PSD Baseline	OKBLR6B	22.9	2.29	334.0	8.74	-15.64	-15.64	EXP	No	Yes	Yes
		Boiler 10 PSD Baseline	OKBLR10B	22.9	2.29	334.0	10.35	-17.15	-17.15	EXP	No	Yes	Yes
		Boiler 11 PSD Baseline	OKBLR11B	22.9	2.29	342.0	9.89	-16.79	-16.79	EXP	No	Yes	Yes
		Okeelanta Power Blrs 1,2,3 [b]	OKCOGEN	68.6	3.05	438.7	17.46	27.00	27.00	CON	Yes	Yes	Yes
0990026	Sugar Cane Growers [a]												
		Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	41.20	41.20	CON	Yes	Yes	Yes
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	16.20	16.20	CON	Yes	Yes	Yes
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	38.20	38.20	CON	Yes	Yes	Yes
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	27.90	27.90	CON	Yes	Yes	Yes
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	23.50	23.50	CON	Yes	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	24.4	1.40	344.0	11.40	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	SUGCN3B	24.4	1.60	344.0	15.60	-4.40	-4.40	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	SUGCN4B	25.9	1.63	344.0	11.20	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 5 PSD Baseline	SUGCN5B	24.4	1.40	344.0	15.20	-16.20	-16.20	EXP	No	Yes	Yes

Table 6-4. Summary of SO_2 Sources Included in the Air Modeling Analysis for SGCPC (revised 8/1/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
		Unit 6&7 PSD Baseline	SUGCN67B	12.2	1.52	606.0	11.20	-51.00	-51.00	EXP	No	Yes	Yes
0990061	US Sugar-Bryant [a]												
		Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	45.70	45.70	CON	Yes	Yes	Yes
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	109.50	109.50	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	USSBRY1B	19.8	1.68	494.0	44.30	-36.50	-36.50	EXP	No	Yes	Yes
		Unit 2&3 PSD Baseline	USBRY23B	19.8	1.68	344.0	37.90	-73.00	-73.00	EXP	No	Yes	Yes
0990019	Osceola Farms [a]												
		Unit 2	OSBLR2	27.4	1.52	339.0	18.63	17.12	17.12	CON	Yes	Yes	Yes
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	30.74	30.74	CON	Yes	Yes	Yes
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	17.12	17.12	CON	Yes	Yes	Yes
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	18.00	18.00	CON	Yes	Yes	Yes
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	33.39	33.39	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	OSBLR1B	22.0	1.52	342.0	8.18	-5.07	-5.07	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	OSBLR2B	22.0	1.52	341.0	18.10	-16.32	-16.32	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	OSBLR3B	22.0	1.93	341.0	14.50	-7.26	-7.26	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	OSBLR4B	22.0	1.83	341.0	18.80	-13.61	-13.61	EXP	No	Yes	Yes
52FTM360002	FPL Fort Myers												
		Unit 1 PSD	FMU1	91.8	2.90	422.0	29.90	-585.50	-585.50	EXP	No	Yes	Yes
		Unit 2 PSD	FMU2	121.2	5.52	408.0	19.20	-1334	-1334.0	EXP	No	Yes	Yes
		HRSGs 1 - 6	FMYCT1_6	228.6	5.79	377.6	14.2	0.40	0.4	CON	Yes	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	117.00	4.42	797.0	35.7	54.1	54.1	CON	Yes	No	No
0850001	FPL Martin												
		Units 1&2	MART12	152.1	7.99	420.9	21.03	1743.79	1743.79		No	No	No
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	12.90	12.90	CON	No	No	Yes
		Diesl Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	0.51	0.51	CON	No	No	Yes
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	470.40	470.40	CON	No	No	Yes

[a] Facilities or sources within facilities that operate only during the November 1 through May 31 crop season

[b] Sugar mill sources that operate all year

[c] Future data represents worst case emissions for May 1 through September 31 off-crop season operation, and October 1-April 30 for on-crop season. Updated from PSD modeling information, Golder Associates (7/18/00). Baseline data represents November 1 through April 30

Note: EXP = PSD expanding source.
CON = PSD consuming source.
NO = Source does not affect PSD increment.

Table 6-5. Summary of PM Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to S. Garden [a] X (km)	Relative to S. Garden [a] Y (km)	Relative to S. Garden [a] Distance (km)	Relative to S. Garden [a] Direction (deg)	Maximum PM Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -1) x 20	Include in Modeling Analysis ?
510003	US Sugar Clewiston	Hendry	506.1	2956.9	18.5	-0.7	18.5	92	2,190	300.3	YES
510001	Everglades Sugar	Hendry	509.6	2954.2	22.0	-3.4	22.3	99	41	375.2	NO
990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	35.8	-2.4	35.9	94	30	647.6	NO
990332	Okeelanta Power	Palm Beach	525.0	2937.4	37.4	-20.2	42.5	118	283	780.1	NO
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	47.3	-4.3	47.5	95	1,032	879.9	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	51.2	10.5	52.3	78	979	975.3	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	56.6	10.4	57.5	80	700	1081.0	NO
710002	FPL - Fort Myers	Lee	422.1	2952.9	-65.5	-4.7	65.7	266	1,685	1243.4	YES [c]
850001	FPL -Martin	Martin	543.1	2992.9	55.5	35.3	65.8	58	9,103	1245.5	YES [c]
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	65.3	-12.4	66.5	101	684	1259.3	NO
850102	Bechtel Indiantown	Martin	545.6	2991.5	58.0	33.9	67.2	60	270	1273.6	NO
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	71.6	20.7	74.5	74	30	1420.6	NO
500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	98.2	2.6	98.2	88	26	1894.7	NO
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	105.2	-13.9	106.1	98	468	2052.3	NO
500042	FPL -Riviera Beach	Palm Beach	594.2	2960.6	106.6	3.0	106.6	88	3,340	2062.8	NO
112120	North Broward Resource Recovery	Broward	583.6	2907.6	96.0	-50.0	108.2	118	103	2094.8	NO
[a] Southern Gardens East and North Coordinates (km)			487.6	2957.6							

[b] Proposed project's emissions are significant to 3.5 km. Emission inventory is limited to facilities within 53.5 km of the SGC facility.

[c] Large source beyond screening area included in modeling analysis.

Table 6-6. Summary of PM Sources Included in the Air Modeling Analysis (revised 8/7/00)

APIS Number	Facility	Units	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II
510003	US Sugar - Clewiston [b]										
		PSD Baseline (On-crop season only)									
		Unit 1 PSD Baseline	USSBRL1B	23.1	1.86	344.0	30.20	-7.48	EXP	No	Yes
		Unit 2 PSD Baseline	USSBLR2B	23.1	1.86	343.0	35.70	-7.04	EXP	No	Yes
		Unit 3 PSD Baseline	USSBLR3B	27.4	2.29	342.0	14.70	-4.57	EXP	No	Yes
		East Pellet Plant PSD Baseline	EPELLET	12.2	1.52	347.0	8.54	-1.69	EXP	No	Yes
		West Pellet Plant PSD Baseline	WPELLET	15.7	1.52	347.0	8.54	-0.82	EXP	No	Yes
		Units 5&6 PSD Baseline	USBLR56B	23.1	1.86	494.0	44.30	-52.92	EXP	No	Yes
		Off-crop season future									
		Unit 1	USSBLR1F	65.0	2.44	347.0	12.05	9.11	CON	Yes	Yes
		Unit 2	USSBLR2F	65.0	2.44	338.7	12.05	9.11	CON	Yes	Yes
		Unit 3	USSBLR3F	65.0	2.44	333.2	8.47	9.33	CON	Yes	Yes
		Unit 4	USSBLR4F	45.7	2.51	344.3	0.00	0.00	CON	Yes	Yes
		Unit 7	USSBLR7F	68.6	2.59	405.4	23.60	2.79	CON	Yes	Yes
		On-crop season future									
		Unit 1	USSBLR1N	65.0	2.44	347.0	19.20	14.52	CON	Yes	Yes
		Unit 2	USSBLR2N	65.0	2.44	338.7	17.32	13.09	CON	Yes	Yes
		Unit 3	USSBLR3N	65.0	2.44	333.2	8.47	9.33	CON	Yes	Yes
		Unit 4	USSBLR4N	45.7	2.51	344.3	24.03	10.55	CON	Yes	Yes
		Unit 7	USSBLR7N	68.6	2.59	405.4	23.60	2.79	CON	Yes	Yes
990026	Sugar Cane Growers [a]										
		Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	6.49	CON	Yes	Yes
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	12.95	CON	Yes	Yes
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	12.45	CON	Yes	Yes
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	12.45	CON	Yes	Yes
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	8.57	CON	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	24.4	1.40	344.0	11.40	-18.94	EXP	No	Yes
		Unit 3 PSD Baseline	SUGCN3B	24.4	1.60	344.0	15.60	-5.70	EXP	No	Yes
		Unit 4 PSD Baseline	SUGCN4B	25.9	1.63	344.0	11.20	-10.90	EXP	No	Yes
		Unit 5 PSD Baseline	SUGCN5B	24.4	1.40	344.0	15.20	-9.10	EXP	No	Yes
		Unit 6&7 PSD Baseline	SUGCN67B	12.2	1.52	606.0	11.20	-2.50	EXP	No	Yes
710002	FPL - Fort Myers [c]										
		Unit 1 PSD	FMU1	91.8	2.90	422.0	29.90	-21.30	EXP	No	Yes
		Unit 2 PSD	FMU2	121.2	5.52	408.0	19.20	-48.50	EXP	No	Yes
		HRSGs 1 - 6	FMYCT1_6	228.6	5.79	377.6	14.2	7.56	CON	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	117.00	4.42	797.0	35.7	37.68	CON	Yes	Yes
		Colling Towers 1 - 12	FMYCT112	164.64	9.75	304.3	7.59	1.61	CON	Yes	Yes

Table 6-6. Summary of PM Sources Included in the Air Modeling Analysis (revised 8/7/00)

APIS Number	Facility	Units	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled in: AAQS	Modeled in: Class II
850001	FPL -Martin [c]										
		Units 1&2	MART12	152.1	7.99	420.9	21.03	218.00	CON	Yes	Yes
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	0.01	CON	Yes	Yes
		Diesel Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	0.22	CON	Yes	Yes
		Units 3&4 PSD	MART34	64 9	6.10	410.9	18.90	30.54	CON	Yes	Yes
990061	US Sugar-Bryant [a]										
		Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	12.59	CON	Yes	Yes
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	43.66	CON	Yes	Yes
		Unit 1 PSD Baseline	USSBRY1B	19.8	1.68	494.0	44.30	-82.40	EXP	No	Yes
		Unit 2&3 PSD Baseline	USBRY23B	19.8	1.68	344.0	37.90	-12.04	EXP	No	Yes

[a] Facilities or sources within facilities that operate only during the October 1 through April 30 crop season

[b] Future data represents worst case emissions for May 1 through September 31 off-crop season operation, and October 1-April 30 for on-crop season. Updated from PSD modeling information, Golder Associates (7/18/00). Baseline data represents November 1 through April 30

Note: EXP = PSD expanding source
CON = PSD consuming source
NO = Source does not effect PSD increment.

Table 6-7. Summary of CO Facilities Considered for Inclusion in the AAQS Air Modeling Analyses (revised 8/21/2000)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to U.S. Sugar [a] X (km)	Relative to U.S. Sugar [a] Y (km)	Relative to U.S. Sugar [a] Distance (km)	Relative to U.S. Sugar [a] Direction (deg)	Maximum CO Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -2) x 20	Include in Modeling Analysis ?
510003	US Sugar Clewiston	Hendry	506.1	2956.9	18.5	-0.7	18.5	92	64,644	330.3	YES
510001	Everglades Sugar	Hendry	509.6	2954.2	22.0	-3.4	22.3	99	15	405.2	NO
990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	35.8	-2.4	35.9	94	10	677.6	NO
990332	Okeelanta Power	Palm Beach	525.0	2937.4	37.4	-20.2	42.5	118	3,297	810.1	YES
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	47.3	-4.3	47.5	95	33,771	909.9	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	51.2	10.5	52	78	19,958	1005.3	YES
990016	Osceola Farms [c]	Palm Beach	544.2	2968.0	56.6	10.4	57.5	80	25,175	1111.0	YES
360119	Lee County Resource Recovery	Lee	424.0	2946.0	-63.6	-11.6	64.6	260	238	1253.0	NO
710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-65.5	-4.7	65.7	266	4,478	1273.4	YES
850001	FPL -Martin [c]	Martin	543.1	2992.9	55.5	35.3	65.8	58	2,285	1275.5	YES
990016	Atlantic Sugar Association [c]	Palm Beach	552.9	2945.2	65.3	-12.4	66.5	101	25,065	1289.3	YES
850102	Bechtel Indiantown	Martin	545.6	2991.5	58.0	33.9	67.2	60	1,651	1303.6	NO
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	71.6	20.7	74.5	74	30	1450.6	NO
500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	98.2	2.6	98.2	88	1,562	1924.7	NO
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	105.2	-13.9	106.1	98	204	2082.3	NO
	[a] Southern Gardens East and North Coordinates (km)		487.6	2957.6							

[b] Proposed project's emissions are significant to 2 kilometers.
Emission inventory is limited to facilities within 52 km of Southern Gardens facility but includes major sources outside the proposed project's significant impact distance.

[c] Large source beyond screening area included in modeling analysis.

Table 6-8. Summary of CO Sources Included in the Air Modeling Analysis (revised 8/18/2000)

APIS Number	Facility	Units	ISCST3 ID Name	Stack Parameters				Emission Rate (g/s)
				Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	
510003	US Sugar Clewiston [b]	Unit 1	USSBRL1	65.0	2.44	347.0	19.20	811.79
		Unit 2	USSBLR2	65.0	2.44	338.0	17.32	732.19
		Unit 3	USSBLR3	65.0	2.44	333.2	8.47	334.28
		Unit 4	USSBLR4	45.7	2.51	344.3	25.35	518.43
		Unit 7	USSBLR7	68.6	2.59	405.4	25.96	71.62
990332	Okeelanta	Cogen Blrs 1,2,& 3	OKCOGEN	68.6	3.05	438.7	17.46	94.61
990026	Sugar Cane Growers [a]	Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	547.09
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	187.61
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	467.71
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	359.60
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	381.02
990061	U.S. Sugar -Bryant [a]	Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	760.91
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	1309.77
990016	Osceola Farms [a]	Unit 2	OSBLR2	27.4	1.52	339.0	18.63	317.52
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	128.77
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	317.52
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	374.22
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	310.40
0710002	FPL Fort Myers	Gas Turbines 1 - 12	FMGT112	9.8	3.47	797.0	57.73	61.69
		HRSGs 1-6	FMCT1_6	38.1	5.79	377.6	21.43	32.51
		CT 1 - 2	FMCT1_2	24.4	6.25	852.00	39.1	34.32
850001	FPL -Martin	Units 1&2	MART12	152.1	7.99	420.9	21.03	38.92
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	-
		Diesl Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	-
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	26.66
990016	Atlantic Sugar [a]	Unit 1	ATLSUG1	27.4	1.83	346.0	17.97	299.90
		Unit 2	ATLSUG2	27.4	1.83	350.0	23.36	585.60
		Unit 3	ATLSUG3	27.4	1.83	350.0	21.56	180.20
		Unit 4	ATLSUG4	27.4	1.83	344.0	25.16	180.20
		Unit 5 [b]	ATLSUG5	27.4	1.68	339.0	19.24	209.10

[a] Facilities or sources with facilities that operate only during the October 1 through April 30 crop season.

[b] Sugar mill sources that operate all year.

Table 6-9. Structure Dimensions Used in the SGCPC Modeling Analysis

Structure	Actual Building Dimensions					
	Height		Length		Width	
	ft	m	ft	m	ft	m
Boiler Building	26	7.9	50	15.2	95	29.0
Juice Building	34	10.4	302	92.0	79	24.1
Concentrate Tank Farm	49	14.9	183	55.8	158	48.2
Small Concentrate Tank	45	13.7	84	25.6	82	25.0
Feed Mill	41	12.5	170	51.8	50	15.2
Pulp Storage	43	13.0	144	43.9	80	24.4
Peel Bins	45	13.7	74	22.6	26	7.9
Cooling Towers	30	9.1	110	33.5	220	67.1
Aseptic Tank Farm	30	9.1	364	110.9	367	111.9
Refrigeration Bldg.	23	7.0	110	33.5	60	18.3
Fruit Bin	47	14.3	96	29.3	34	10.4

Table 6-10. Property Boundaries Receptors Used in the SGCPC Modeling Analysis

Direction (Degrees)	Distance (m)	Direction (Degrees)	Distance (m)	Direction (Degrees)	Distance (m)
10	545	150	257	312	610
20	566	160	238	314	630
22	573	170	229	316	653
24	581	180	227	318	678
26	589	190	232	320	706
28	598	200	244	322	712
30	609	210	267	324	692
32	587	220	305	326	673
34	557	230	367	328	657
36	529	240	482	330	642
38	505	250	483	332	628
40	484	260	461	334	616
50	406	270	454	336	605
60	359	280	461	338	595
70	331	290	483	340	586
80	316	300	524	342	578
90	311	302	535	344	570
100	316	304	547	346	564
110	331	306	561	348	559
120	359	308	576	350	554
130	339	310	592	360	541
140	288				

Note: Distances are relative to the SE corner of the feed mill building. Distances greater than 575 meters are at 2-degree spacing and less than 100 meters between receptors.

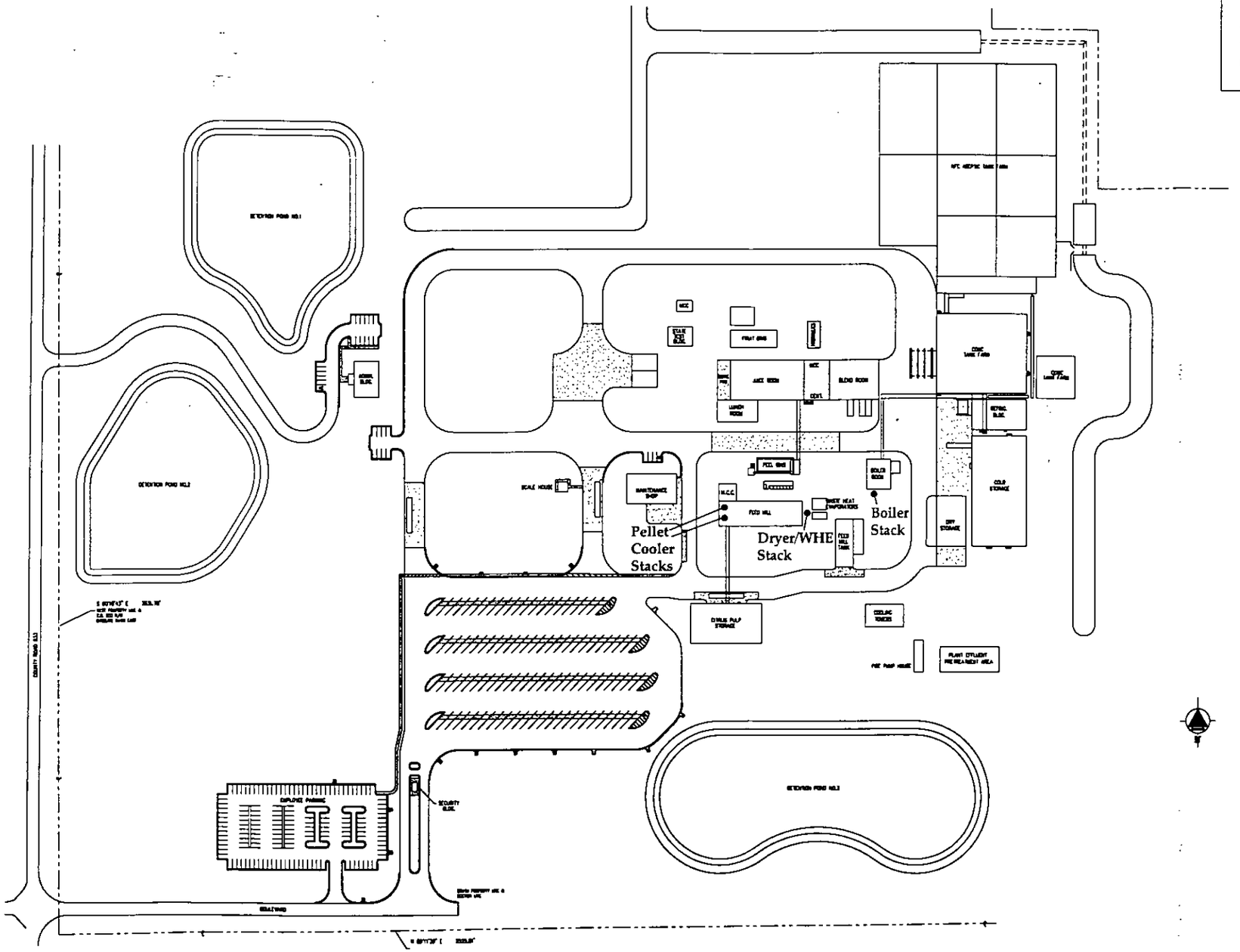
Table 6-11. Everglades National Park Receptors Utilized in the PSD Class I Modeling Analysis

UTM Coordinates (m)		UTM Coordinates (m)	
East	North	East	North
557000	2789000	540000	2848600
556600	2792000	535000	2848600
556000	2796000	530000	2848600
553000	2796500	525000	2848600
548000	2796500	520000	2848600
542700	2796500	514500	2848600
542700	2800000	514500	2843000
542700	2805000	514500	2838000
542700	2810000	514500	2832500
542000	2811000	510000	2832500
541300	2814000	505000	2832500
542700	2816000	500000	2832500
544100	2820000	495000	2832500
543500	2824600	494500	2837000
545000	2829000	491500	2841000
545700	2832200	488500	2845500
546200	2835700	483000	2848500
548600	2837500	480000	2852500
550300	2839000	475000	2854000
545000	2839000	473500	2857000
540000	2839000	473500	2860000
550500	2844000	469000	2860000
545000	2844000	464000	2860000
540000	2844000	459500	2863200
550300	2848600	454000	2863200
545000	2848600		

Note: Southern Gardens coordinates are 487600E, 2957600N.
m = meter.

Figure 6-1
Facility Plot Plan
0037568Y\F1\WP\Figure6-1.dwg

Golder Associates



Legend

- Stack Location

SOUTHERN GARDENS CITRUS
1" = 100' 5/9/00

7.0 AIR MODELING ANALYSIS RESULTS

7.1 SIGNIFICANT IMPACT ANALYSIS

7.1.1 SITE VICINITY

The maximum predicted SO_2, PM_{10}, NO_x, and CO concentrations from the screening analysis due to the SGCPC facility only are compared to the EPA significant impact levels in Table 7-1. Based upon the modeling results, the facility was determined have a significant impact for SO_2 and PM_{10}. Additional detailed modeling analyses are, therefore, required for each of these pollutants. The additional analyses include a comparison of impacts of all future source emissions to the AAQS for SO_2, PM_{10}, and CO and a PSD Class II increment analysis for SO_2 and PM_{10}. The distances of the project's significant impact were determined to be 2 km for SO_2 and CO and 3.5 km for PM_{10}.

7.1.2 EVERGLADES NATIONAL PARK PSD CLASS I AREA

The maximum predicted SO_2, PM_{10}, NO_x, and CO concentrations due to the SGCPC facility only are compared to the proposed EPA Class I significant impact levels in Table 7-2. The maximum predicted SO_2, PM_{10}, and NO_x concentrations are below the EPA significant impact levels. Therefore, no further PSD Class I increment modeling is required.

7.2 AAQS ANALYSES

The maximum predicted SO_2 and PM_{10} concentrations from the screening analysis due to all future sources are presented in Table 7-3. Refined modeling was performed for these concentrations. The refined modeling results are added to a measured non-modeled background concentration to produce a cumulative total air quality concentration that can be compared with the AAQS. A summary of the maximum predicted total concentrations is presented in Table 7-4.

The maximum predicted total SO_2 concentrations are 10.7, 91, and 215 $\mu g/m^3$, respectively, for the annual, 24-hour and 3-hour averaging times. These concentrations are all below the AAQS of 60, 260, and 1,300 $\mu g/m^3$, respectively, for these averaging times. These maximums are predicted to occur near the SGCPC facility property boundary.

The maximum predicted total PM_{10} concentrations are 25.1 and 60.0 $\mu g/m^3$, respectively, for the annual and 24-hour averaging times. These concentrations are all below the AAQS of 50 and 150 $\mu g/m^3$, respectively, for these averaging times. These maximums are predicted to occur near the SGCPC facility property boundary.

The maximum predicted total CO concentrations are 4,204 $\mu g/m^3$ for the 8-hour averaging time, and 7,580 $\mu g/m^3$ for the 1-hour averaging time. These concentrations are below the AAQS of 40,000 $\mu g/m^3$ for the 1-hour averaging time and 10,000 $\mu g/m^3$ for the 8-hour averaging time.

7.3 PSD CLASS II ANALYSIS

The maximum predicted SO_2 and PM_{10} PSD increment consumption from the screening analysis due to all PSD-affecting sources are compared with the allowable PSD Class II increments in Table 7-5. Refinements were not performed because all maximum impacts occurred at the SGCPC property boundary. A summary of the PSD Class II analysis is presented in Table 7-6.

The maximum predicted SO_2 PSD increment consumption is 2.5, 77.2, and 168 $\mu g/m^3$, respectively for the annual, 24-hour and 3-hour averaging times. These concentrations are all below the allowable PSD Class II increments of 20, 91, and 512 $\mu g/m^3$, respectively, for these averaging times.

The maximum predicted PM_{10} PSD increment consumption is 1.2 and 22.0 $\mu g/m^3$, respectively, for the annual and 24-hour averaging times. These concentrations are all below the allowable PSD Class II increments of 17 and 30 $\mu g/m^3$, respectively, for these averaging times.

Table 7-1. Maximum Predicted Pollutant Impacts for the Project Only at SGCPC

Averaging Time	Concentration[a] (ug/m3)	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)	EPA Significant Impact Level (mg/m^3)
SO_2					
Annual	0.3	230	1000	87123124	
	0.3	180	1000	88123124	
	0.3	230	1000	89123124	1
	0.4 [c]	244	600	90123124	
	0.3	240	1000	91123124	
HIGH 24-Hour	5.1	180	1500	87021824	
	5.9	188	1000	88020624	
	5.3	50	500	89052324	5
	6.6	230	500	90051124	
	5.1	290	600	91052824	
HIGH 3-Hour	19.7	180	400	87032112	
	17.8	40	600	88052312	
	19.7	300	600	89021515	25
	19.2	302	535	90050212	
	19.7	300	524	91040712	
PM_{10}					
Annual	1.0	110	331	87123124	
	1.3	120	359	88123124	
	1.3	120	359	89123124	1
	1.2	240	482	90123124	
	1.0	240	482	91123124	
HIGH 24-Hour	20.7	180	227	87030524	
	21.5	180	227	88020624	
	17.9	90	311	89052424	5
	20.8	100	316	90011224	
	24.8	120	359	91122924	
NO_X					
Annual	0.3	230	700	87123124	
	0.4	110	331	88123124	
	0.4	110	331	89123124	1
	0.5 [c]	244	900	90123124	
	0.4	240	1000	91123124	
CO					
HIGH 8-Hour	662	180	500	87032116	
	584	180	700	88021616	
	705	190	700	89012416	500
	864	230	500	90051116	
	670	308	576	91052416	
HIGH 1-Hour	1521	80	1000	87021617	
	1598	120	359	88050414	
	1645	120	359	89051813	2,000
	1604	60	359	90051812	
	1661	290	483	91053011	

[a] Based on 5-year meteorological record, Fort Myers/Ruskin, 1987-91

[b] Relative to Southeast corner of Feed Mill building

[c] Refined values

Note: YYMMDDHH = Year, Month, Day, Hour Ending
High = Highest Concentration in 5 years.

Table 7-2. Maximum Pollutant Concentrations Predicted for the Proposed Project at the ENP PSD Class I Area as Compared to Proposed EPA Class I Significant Impact Levels

Pollutant	Averaging Time	Concentrations (ug/m^3)	Proposed EPA Class I Significant Impact Levels (ug/m^3)
SO_2	Annual	0.0055	0.1
	24-Hour	0.066	0.2
	3-Hour	0.32	1.0
PM_{10}	Annual	0.0078	0.2
	24-Hour	0.087	0.3
NO_2	Annual	0.0270	0.1

Note: Maximum Impacts predicted with CALPUFF Model and Fort Myers/Tampa meteorological data for the ISCST3 model, 1987-91, enhanced for CALPUFF.

Table 7-3. Maximum Predicted Pollutant Impacts Due to All Future Modeled Sources
AAQS Screening Analysis, SGCPC

Averaging Time	Concentration[a] (ug/m^3)	Receptor Location Direction (degree)	Distance (m)	Time Period (YYMMDDHH)
SO_2				
Annual	4.4	110	331	87123124
	5.4	110	331	88123124
	4.9	110	331	89123124
	5.6	240	700	90123124
	5.0	240	700	91123124
HSH 24-Hour	50	110	331	87010124
	49	110	331	88050624
	44	110	331	89050224
	34	110	331	90102524
	78	110	331	91030424
HSH 3-Hour	143	110	331	87031012
	159	110	331	88070115
	151	100	316	89051118
	157	100	316	90011215
	168	110	331	91030415
PM_{10}				
Annual	1.6	110	331	87123124
	2.1	120	359	88123124
	2.1	120	359	89123124
	2.1	240	482	90123124
	1.8	240	482	91123124
HSH 24-Hour	20.5	180	227	87030424
	22.0	120	359	88050624
	17.7	110	331	89050624
	18.1	110	331	90010924
	21.3	120	359	91021124
CO				
H2H 8-Hour	786	180	500	87022316
	657	240	700	88110716
	754	190	500	89052716
	833	230	600	90032316
	846	300	524	91051016
H2H 1-Hour	1,971	360	2000	87120205
	2,051	230	400	88052011
	2,054	110	331	89042712
	1,990	180	300	90041814
	2,023	360	2000	91020620

[a] Based on 5-year meteorological record, Fort Myers/Ruskin, 1987-91

[b] Relative to Southeast corner of Feed Mill building

Note: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 7-4. Maximum Refined Impacts as Compared to AAQS, SGCPC

Averaging Time/ Pollutant	Concentration (ug/m^3) Total	Contributed from Modeled	Contributed from Background	Receptor Location Direction (degrees)	Receptor Location Distance (m)	Period Ending (YYMMDDHH	Florida AAQS (ug/m^3)
SO_2							
Annual	10.7	5.7	5	242	600	90123124	60
HSH 24-hour	90.9	77.9	13	110	331	91030424	260
HSH 3-hour	215	168	47	110	331	91030415	1,300
PM_{10}							
Annual	25.1	2.1	23	240	482	90123124	50
HSH 24-hour	60.0	22.0	38	120	359	88050624	150
CO							
H2H 8-Hour	4,204	871	3,333	232	600	90032316	10,000
	4,179	846	3,333	300	524	91051016	
H2H 1-Hour	7,528	1,973	5,555	6	2000	87120205	40,000
	7,580	2,025	5,555	358	2000	91020620	

Table 7-5. Maximum Predicted Pollutant Impacts Due to All Future Modeled Sources
PSD Class II Screening Analysis, SGCPC

Averaging Time	Concentration [a] (ug/m^3)	Receptor Location Direction (degree)	Receptor Location Distance (m)	Time Period (YYMMDDHH)
SO_2				
Annual	1.8	110	331	87123124
	2.5	110	331	88123124
	2.0	110	331	89123124
	1.7	240	700	90123124
	1.0	240	1000	91123124
HSH 24-Hour	49	110	331	87010124
	49	110	331	88050624
	43	110	331	89050224
	34	110	331	90102524
	77	110	331	91030424
HSH 3-Hour	143	110	331	87031012
	159	110	331	88070115
	151	100	316	89051118
	157	100	316	90011215
	168	110	331	91030415
PM_{10}				
Annual	1.0	110	331	87123124
	1.2	120	359	88123124
	1.2	120	359	89123124
	1.2	240	482	90123124
	0.9	240	482	91123124
HSH 24-Hour	20.5	180	227	87030424
	22.0	120	359	88050624
	16.9	120	359	89041124
	18.0	110	331	90010924
	21.3	120	359	91021124

[a] Based on 5-year meteorological record, Fort Myers/Ruskin, 1987-91

[b] Relative to Southeast corner of Feed Mill building

Note: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 7-6. Maximum Refined Impacts as Compared to PSD Class II Increments, SGCPC

Averaging Time/ Pollutant	Concentration (ug/m^3)	Receptor Location Direction (degrees)	Receptor Location Distance (m)	Period Ending (YYMMDDHH)	Allowable PSD Class II Increment (ug/m^3)
SO_2					
Annual	2.5	110	331	88123124	20
24-hour	77.2	110	331	91030424	91
3-hour	168	110	331	91030415	512
PM_{10}					
Annual	1.2	120	359	88123124	17
24-hour	22.0	120	359	88050624	30

8.0 IMPACT ANALYSES

8.1 VICINITY OF CLEWISTON

The primary vegetation in the vicinity of the SGCPC facility is sugar cane and citrus groves. Some vegetable farming, nurseries, and sod farms are also located in the general area. According to the soil survey of Hendry County (USDA Soil Conservation Service, 1990), soils in the vicinity of the SGCPC facility include Immokalee sand and Myakka sand. These soils are characterized as poorly drained soils found on broad flatwoods with a dark gray sand surface layer about 5 inches thick and a sandy subsoil. They have a high water table within 10 inches of the surface for about 5 months in most years. Natural vegetation consists of South Florida slash pine and saw palmetto.

As described in the air quality impact analysis (Section 7.0), the maximum predicted SO_2, NO_2, and PM_{10} concentrations in the vicinity of the site as a result of the facility are predicted to be below the AAQS. Since the AAQS are designed to protect the public welfare, including effects on soils and vegetation, no detrimental effects on soils or vegetation should occur in this area due to the facility. The potential impacts of SO_2, NO_2, PM, and CO upon soils, vegetation, and visibility in the Everglades National Park are addressed in the following sections.

8.2 PSD CLASS I AREA

This section focuses on the ecological effects of the proposed facility modification on Air Quality Related Values (AQRV), as defined under PSD regulations, in the Everglades National Park (ENP). The ENP is the closest Class I area to the SGCPC facility, and is located approximately 98.5 km south of the SGCPC facility. The AQRVs are defined as being:

> "All those values possessed by an area except those that are not affected by changes in air quality and include all those assets of an area whose vitality, significance, or integrity is dependent in some way on the air environment. These values include visibility and those scenic, cultural, biological, and recreational resources of an area that are affected by air quality. Important attributes of an area are those values or assets that make an area significant as a monument, preserve, or primitive area. They are the assets that are to be preserved if the area is to achieve the purposes for which it was set aside" (Federal Register, 1978).

The AQRVs include freshwater and coastal wetlands, dominant plant communities, unique and rare plant communities, soils and associated periphyton, and the wildlife dependent on these communities for habitat. Rare, endemic, threatened, and endangered species of the national park and bioindicators of air pollution (e.g., lichens) are also evaluated.

A screening approach was used that compared the maximum predicted ambient concentration of air pollutants of concern in the Everglades NP (Table 8-1) with effect threshold limits for both vegetation and wildlife as reported in the scientific literature. A literature search was conducted that specifically addressed the effects of air contaminants on plant species reported to occur in the park. While the literature search focused on such species as cabbage palm, Eastern red cedar, lichens, and species of the hardwood swamplands and mangrove forest, few specific citations that addressed these species were found. It is recognized that effect threshold information is not available for all species found in the Everglades National Park, although studies have been performed on a few of the common species and on other similar species that can be used as indicators of effects.

8.2.1 IMPACTS TO SOILS

For soils, the potential and hypothesized effects of atmospheric deposition include:

- Increased soil acidification,
- Alteration in cation exchange,
- Loss of base cations, and
- Mobilization of trace metals.

The potential sensitivity of specific soils to atmospheric inputs is related to two factors. First, the physical ability of a soil to conduct water vertically through the soil profile is important in influencing the interaction with deposition. Second, the ability of the soil to resist chemical changes, as measured in terms of pH and soil cation exchange capacity (CEC), is important in determining how a soil responds to atmospheric inputs.

The soils of the Everglades National Park are generally classified as histosols or entisols. Histosols (peat soils) are organic and have extremely high buffering capacities based on their CEC, base saturation, and bulk density. Therefore, they would be relatively insensitive to atmospheric inputs. The entisols are shallow sandy soils overlying limestone, such as the soils found in the pinelands. The direct connection of these soils with subsurface limestone tends to neutralize any acidic inputs. Moreover, the groundwater table is highly buffered due to the interaction with subsurface limestone formations, which results in high alkalinity (as $CaCO_3$).

The relatively low sensitivity of the soils to acid inputs coupled with the extremely low ground-level concentrations of contaminants projected for the Everglades National Park from the SGCPC facility emissions precludes any significant impact on soils.

8.2.2 IMPACTS TO VEGETATION

In general, the effects of air pollutants on vegetation occur primarily from SO_2, NO_2, O_3, and PM. Effects from minor air contaminants such as fluoride, chlorine, hydrogen chloride, ethylene, ammonia, hydrogen sulfide, CO, and pesticides have also been reported in the literature. The effects of air pollutants are dependent both on the concentration of the contaminant and the duration of the exposure. The term "injury," as opposed to damage, is commonly used to describe all plant responses to air contaminants and will be used in the context of this analysis. Air contaminants are thought to interact primarily with plant foliage, which is considered to be the major pathway of exposure. For purposes of this analysis, it was assumed that 100 percent of each air contaminant of concern is accessible to the plants.

Injury to vegetation from exposure to various levels or air contaminants can be termed acute, physiological, or chronic. Acute injury occurs as a result of a short-term exposure to a high contaminant concentration and is typically manifested by visible injury symptoms ranging from chlorosis (discoloration) to necrosis (dead areas). Physiological or latent injury occurs as the result of a long-term exposure to contaminant concentrations below that which results in acute injury symptoms. Chronic injury results from repeated exposure to low concentrations over extended periods of time,

often without any visible symptoms, but with some effect on the overall growth and productivity of the plant. In this assessment, 100 percent of the particular air pollutant in the ambient air was assumed to interact with the vegetation. This is a conservative approach.

The concentration of the pollutant, duration of exposure, and frequency of exposures influence the response of vegetation and wildlife to atmospheric pollutants. The pattern of pollutant exposure expected from the facility is that of a few episodes of relatively high ground-level concentration which occur during certain meteorological conditions interspersed with long periods of extremely low ground-level concentrations. If there are any effects of stack emissions on plants and animals they will be from the short-term, higher doses. A dose is the product of the concentration of the pollutant and duration of the exposure.

Sulfur Dioxide

Sulfur is an essential plant nutrient usually taken up as sulfate ions by the roots from the soil solution. When sulfur dioxide in the atmosphere enters the foliage through pores in the leaves, it reacts with water in the leaf interior to form sulfite ions. Sulfite ions are highly toxic. They interact with enzymes, compete with normal metabolites, and interfere with a variety of cellular functions (Horsman and Wellburn, 1976). However, within the leaf, sulfite is oxidized to sulfate ions, which can then be used by the plant as a nutrient. Small amounts of sulfite may be oxidized before they prove harmful.

SO_2 gas at elevated levels has long been known to cause injury to plants. Acute SO_2 injury usually develops within a few hours or days of exposure, and symptoms include marginal, flecked, and/or intercostal necrotic areas that appear water-soaked and dullish green initially. This injury generally occurs to younger leaves. Chronic injury usually is evident by signs of chlorosis, bronzing, premature senescence, reduced growth, and possible tissue necrosis (EPA, 1982). Observed SO_2 effect levels for several plant species and plant sensitivity groupings are presented in Tables 8-2 and 8-3, respectively.

Many studies have been conducted to determine the effects of high-concentration, short-term SO_2 exposure on natural community vegetation. Sensitive plants include ragweed, legumes, blackberry, southern pine, and red and black oak. These species are injured by exposure to 3-hour SO_2 concentrations of 790 to 1,570 $\mu g/m^3$. Intermediate plants include locust and sweetgum. These species are injured by exposure to 3-hour SO_2 concentrations of 1,570 to 2,100 $\mu g/m^3$. Resistant species (injured at concentrations above 2,100 $\mu g/m^3$ for 3 hours) include white oak and dogwood (EPA, 1982).

A study of native Floridian species (Woltz and Howe, 1981) demonstrated that cypress, slash pine, live oak, and mangrove exposed to 1,300 $\mu g/m^3$ SO_2 for 8 hours were not visibly damaged. This finding support the levels cited by other researchers on the effects of SO_2 on vegetation. A corroborative study (McLaughlin and Lee, 1974) demonstrated that approximately 20 percent of a cross-section of plants ranging from sensitive to tolerant was visibly injured at 3-hour SO_2 concentrations of 920 $\mu g/m^3$.

Two lichen species indigenous to the park area exhibited signs of SO_2 damage in the form of decreased biomass gain and photosynthetic rate as well as membrane leakage when exposed to concentrations of 200 to 400 $\mu g/m^3$ for 6 hours/week for 10 weeks (Hart et al., 1988).

By comparing the maximum 8-hour SO_2 concentration of 0.176 $\mu g/m^3$ with the lowest concentrations that cause plant injury, it can be shown that the amount of SO_2 in the park area is less than 0.1 percent of the most conservative concentration (200 $\mu g/m^3$) that caused injury to SO_2-sensitive species.

The 24-hour and annual SO_2 concentrations predicted within the park due to the SGCPC facility are 0.066 and 0.0055 $\mu g/m^3$, respectively. These levels are much lower than those known to cause damage to test species. Jack pine seedlings exposed to SO_2 concentrations of 470 to 520 $\mu g/m^3$ for 24 hours demonstrated inhibition of foliar lipid synthesis; however, this inhibition was reversible (Malhotra and Kahn, 1978). Black oak exposed to 1,310 $\mu g/m^3$ SO_2 for 24 hours a day for 1 week demonstrated a 48 percent reduction in photosynthesis (Carlson, 1979). By comparison of these levels, it is apparent

that the modeled 24-hour incremental increase of SO_2 is well below (i.e., 0.01 percent) the concentrations that caused damage in SO_2-sensitive plants. The modeled annual incremental increase in SO_2 (0.0055 $\mu g/m^3$) adds slightly to background levels of this gas and poses only a minimal threat to area vegetation.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is another emission of concern for the proposed plant expansion. This compound can injure plant tissue with symptoms usually appearing as irregular white to brown collapsed lesions between the leaf veins and near the margins. Conversely, non-injurious levels of NO_2 can be absorbed by plants, enzymatically transformed into ammonia, and incorporated into plant constituents such as amino acids (Matsumaru et al., 1979).

Plant damage can occur through either acute (short-term, high concentration) or chronic (long-term, relatively low concentration) exposure. For plants that have been determined to be more sensitive to NO_2 exposure than others, acute (1, 4, 8 hours) exposure caused 5 percent predicted foliar injury at concentrations ranging from 3,800 to 15,000 $\mu g/m^3$ (Heck and Tingey, 1979). Chronic exposure of selected plants (some considered NO_2-sensitive) to NO_2 concentrations of 2,000 to 4,000 $\mu g/m^3$ for 213 to 1,900 hours caused reductions in yield of up to 37 percent and some chlorosis (Zahn, 1975).

By comparison of published toxicity values for NO_2 exposure to short-term (i.e., 1-, 3-, and 8-hour averaging times) and long-term (annual averaging time) modeled concentrations, the possibility of plant damage in the park can be examined for both acute and chronic exposure situations, respectively. The 1-, 3-, and 8-hour estimated NO_2 concentrations due to the SGCPC facility only at the point of maximum impact in the park area are 0.312, 0.221, and 0.116 $\mu g/m^3$, respectively. These concentrations are less than 0.01 percent of the levels that cause foliar injury to sensitive plant species. For a chronic exposure, the annual estimated NO_2 concentration due to the facility only at the point of maximum impact in the park (0.0027 $\mu g/m^3$) is less than 0.001 percent of the levels that caused minimal yield loss and chlorosis in plant tissue.

Although it has been shown that simultaneous exposure to SO_2 and NO_2 results in synergistic plant injury (Ashenden and Williams, 1980), the magnitude of this response is generally only 3 to 4 times greater than either gas alone and usually occurs at unnaturally high levels of each gas. Therefore, the concentrations within the park are still far below the levels that potentially cause plant injury for either acute or chronic exposure.

Particulate Matter

Although information pertaining to the effects of PM on plants is scarce, baseline concentrations are available (Mandoli and Dubey, 1988). Ten species of native Indian plants were exposed to levels of PM that ranged from 210 to 366 $\mu g/m^3$ for an 8-hour averaging period. Damage in the form of a higher leaf area/dry weight ratio was observed at varying degrees for most plants tested. Concentrations of PM lower than 163 $\mu g/m^3$ did not appear to be injurious to the tested plants.

By comparison of published toxicity values for PM exposure (i.e., 8-hour averaging time) concentrations, the possibility of plant damage in the park due to the project can be determined. The 8-hour estimated PM concentration due to the project only at the point of maximum impact in the park area is 0.19 $\mu g/m^3$. This concentration is approximately 0.1 percent of the lower value that affected plant foliage. The extremely small additional impact the facility is predicted to have on the ENP will not cause any adverse affects to vegetation.

Carbon Monoxide

As with PM, information pertaining to the effects of CO on plants is scarce. The main effect of high concentrations of CO is the inhibition of cytochrome *c* oxidase, the terminal oxidase in the mitochondrial electron transfer chain. Inhibition of cytochrome *c* oxidase depletes the supply of ATP, the principal donor of free energy required for cell functions. However, this inhibition only occurs at extremely high concentrations of CO. Pollok et al. (1989) reported that exposure to $CO:O_2$ ratio of 25 (equivalent to an ambient CO concentration of 6.85×10^6 $\mu g/m^3$) resulted in stomatal closure in the leaves of the

sunflower (*Helianthus annuus*). Naik et al. (1992) reported cytochrome *c* oxidase inhibition in corn, sorghum, millet, and Guinea grass at $CO:O_2$ ratios of 2.5 (equivalent to an ambient CO concentration of 6.85×10^5 $\mu g/m^3$). These plants were considered the species most sensitive to CO-induced inhibition of cytochrome *c* oxidase. The predicted annual average CO impact due to the SGCPC facility only at the ENP (0.38 $\mu g/m^3$) is well below these published effects levels.

Summary

In summary, the phytotoxic effects on the ENP from the SGCPC facility emissions are expected to be minimal. It is important to note that the substances were evaluated with the assumption that 100 percent was available for plant uptake. This is rarely the case in a natural ecosystem.

8.2.3 IMPACTS TO WILDLIFE

A wide range of physiological and ecological effects to fauna has been reported for gaseous and particulate pollutants (Newman, 1981; Newman and Schreiber, 1988). The most severe of these effects have been observed at concentrations above the secondary ambient air quality standards. Physiological and behavioral effects have been observed in experimental animals at or below these standards. No observable effects to fauna are expected at concentrations below the values reported in Table 8-4.

The major air quality risk to wildlife in the United States is from continuous exposure to pollutants above the National Ambient Air Quality Standards. This occurs in non-attainment areas, e.g., Los Angeles Basin. Risks to wildlife also may occur for wildlife living in the vicinity of an emission source that experiences frequent upsets or episodic conditions resulting from malfunctioning equipment, unique meteorological conditions, or startup operations (Newman and Schreiber, 1988). Under these conditions, chronic effects (e.g., particulate contamination) and acute effects (e.g., injury to health) have been observed (Newman, 1981).

For impacts on wildlife, the lowest threshold values of SO_2, NO_x, and particulates which are reported to cause physiological changes are shown in Table 8-4. These values are up

to several orders of magnitude larger than maximum predicted concentrations for the Class I area. No effects on wildlife AQRVs from SO_2, NO_x, and particulates are expected. These results are considered indications of the risk of other air pollutant emissions predicted from the facility.

8.3 IMPACTS ON VISIBILITY

8.3.1 REGIONAL HAZE

Introduction

A change in visibility is characterized by either a change in the visual range, defined as the greatest distance that a large dark object can be seen, or by a change in the light-extinction coefficient (b_{ext}). The b_{ext} is the attenuation of light per unit distance due to the scattering and absorption by gases and particles in the atmosphere. A change in the extinction coefficient produces a perceived visual change that is measured by a visibility index called the deciview. The deciview (dv) is defined as:

$$dv = 10 \ln (1 + b_{exts} / b_{extb})$$

where b_{exts} is the extinction coefficient calculated for the source, and

b_{extb} is the background extinction coefficient.

The source extinction coefficient is determined from NO_x, SO_2, and PM_{10} emission increases from the facility. The background extinction coefficient s for each area evaluated are based on existing ambient monitoring data. Based on predicted SO_4, NO_3, and PM_{10} concentrations, the facility's emissions were compared to a 5 percent change in light extinction of the background levels. This is equivalent to a change in deciview of 0.5.

The modeling analysis determined the deciview change at the Everglades National Park, a PSD Class I area located 102 km from the SGCPC facility.

8.3.2 ANALYSIS METHODOLOGY

Following the recommendations of the Interagency Workgroup on Air Quality Modeling (IWAQM) Phase II report, a level II screening analysis was performed using the

California Puff (CALPUFF) long-range transport model, along with an enhanced ISC meteorological data record from Palm Beach. The CALPUFF postprocessor model CALPOST was used to summarize the daily deciview values predicted with the CALPUFF model, and hourly relative humidity data from West Palm Beach.

CALPUFF was used in a manner recommended by the IWAQM Phase 2 Summary Report (EPA, 12/98). A summary of the recommended parameter settings used with CALPUFF are presented in Attachment D with the recommended parameter settings presented in Appendix B of the IWAQM Phase II Summary Report. The CALPUFF model was used in an ISC screening mode with an "enhanced" ISCST3 meteorological data set.

The following CALPUFF settings/values were implemented in the Level II screening analysis:

- Use of seven pollutant species of SO_2, SO_4, NO_x, HNO_3, NO_3, PM_{10}, and CO.
- Use of MESOPUFF II scheme for chemical transformation with CALPUFF default background concentrations
- Include both dry and wet deposition and plume depletion
- Use Agricultural, unirrigated land use; minimum mixing height of 50 m
- Use transitional plume rise, stack-tip downwash, and partial plume penetration
- Use puff plume element dispersion, PG/MP coefficients, rural mode, and ISC building downwash scheme
- Use partial plume path adjustment terrain effects
- Generate an hourly RH file for each year processed

8.3.3 EMISSION INVENTORY

Based on recommendations of the IWAQM Phase II Report, the increase in emissions due to the SGCPC facility only were used in the air modeling analysis. Therefore, the emission rates used in the CALPUFF analysis for the facility Dryer/WHE are 2.82 g/s for SO_2; 2.18 g/s for NO_x, 149.10 g/s for CO, and 2.62 g/s for PM_{10}. The boiler had no increase net emissions due to current and future emission rates being equal. The pellet cooler emission rate for PM_{10} was 0.61 g/s.

8.3.4 BUILDING WAKE EFFECTS

The air modeling analysis included the SGCPC facility building dimensions to account for the effects of building-induced downwash on the emission sources. Dimensions for all significant building structures were processed with the Building Profile Input Program (BPIP), Version 95086, and were included in the CALPUFF model.

8.3.5 RECEPTOR LOCATIONS

Receptors were located along a circle that was centered over the SGCPC facility and with a radius equal to the minimum distance between the SGCPC facility and ENP (98.5 km). The circle was comprised of 360 polar receptors, spaced at 1-degree intervals. Because the area's terrain is flat, all receptors were assumed to be at the SGCPC facility's elevation.

8.3.6 BACKGROUND VISUAL RANGE AND RELATIVE HUMIDITY FACTORS

Daily background extinction coefficients were calculated using the CALPOST model and hourly relative humidity data provided by the CALPUFF model. Annual dry-hygroscopic and non-hygroscopic extinction coefficients were provided by the National Park Service. For the ENP, the dry and non-hygroscopic values are 5.59 and 14.91 $\mu g/m^3$), respectively. The extinction values are based on the average of the cleanest measured 20-percentile days. For input to CALPOST, the dry hygroscopic extinction was divided by three and represented as the monthly sulfate background. The non-hygroscopic extinction was represented as the monthly soot background.

Summary of Monthly Background Extinctions ($\mu g/m^3$) for ENP

Modeled Area	Dry-Hygroscopic	Non-Hygroscopic
Everglades National Park	1.86	14.91

8.3.7 METEOROLOGICAL DATA

A 5-year data record was used which consisted of hourly surface observations and twice-daily mixing height data obtained from National Weather Service (NWS) offices located in Fort Myers and Ruskin, respectively. The data record was for the years 1987 through

1991. The surface and upper data were preprocessed into an ASCII modeling format by EPA's PCRAMMET meteorological preprocessing program. An anemometer height of 20 feet was used for the modeling analysis.

Additional meteorological parameters were added to the meteorological data records for use with the CALPUFF model. The additional parameters include friction velocity, Monin-Obukhov length, and surface roughness used for calculating dry deposition; precipitation type code and precipitation rate used for calculating wet deposition, and short-wave solar radiation and relative humidity use for calculating chemical transformation rates. The dry deposition parameters were added to the meteorological data records using the PCRAMMET model in dry deposition mode. Using the guidance provided in Section 3.1 of the PCRAMMET User's Manual (8/98), the following input values were selected:

1. Surface roughness at both application and measurement sites: 0.15 m
2. Noontime Albedo: 0.14
3. Bowen Ratio: 0.8
4. Anthropogenic Heat flux: 0
5. Minimum Monin-Obukhov Length: 2 m
6. Fraction of Net Radiation Absorbed by Ground: 0.15

Hourly precipitation amounts, relative humidity and short-wave radiation values were added separately to the meteorological data set. These parameters were obtained from the West Palm Beach surface data available from Solar and Meteorological Surface Observation Network (SAMSON) data.

Based on the precipitation classification scheme provided in the CALPUFF User's Manual (Table 2-11) (7/95), each hour's precipitation code was set to 0 or 2. An hour in which no precipitation occurred received a code of 0. If precipitation occurred the code was set to 2. All precipitation is in the form of rain.

8.3.8 CHEMICAL TRANSFORMATION

Conservative chemical transformation assumptions were assumed for the air modeling analysis. It is assumed that all NO_x emissions are initially NO_2. The CALPUFF model is then used to predict 24-hour SO_4, NO_3, and PM_{10} concentrations and f(RH). Daily deciviews are then calculated by CALPUFF based on the daily impacts of the proposed project at the ENP.

Results

0.104 dV or 1.04%

The maximum predicted change in visibility of ~~0.63~~ deciviews is well below the criteria of ~~1.04 percent or 0.104~~ deciview. Therefore, it is concluded that the facility will not result in a significant impact on the visibility at the ENP.

5.0% or .5 dV Correct this

Modeling is correct

1986 0.104

PST V1.3 87

Table 8-1. Maximum Predicted Pollutant Impacts Due to Project Only at PSD Class I Area, SGCPC

Pollutant	Concentration in ($\mu g/m^3$) for Averaging Times				
	Annual	24-Hour	8-Hour	3-Hour	1-Hour
Sulfur Dioxide (SO_2)	0.0055	0.066	0.176	0.324	0.436
Nitrogen Oxides (NC	0.0027	0.042	0.116	0.221	0.312
Particulates (PM_{10})	0.0078	0.087	0.190	0.330	0.540
Carbon Monoxide (C	0.380	4.2	10.3	18.9	39.50

Table 8-2. SO_2 Effects Levels for Various Plant Species

Plant Species	Observed Effect Level ($\mu g/m^3$)	Exposure (Time)	Reference
Sensitive to tolerant	920 (20 percent displayed visible injury)	3 hours	McLaughlin and Lee, 1974
Lichens	200-400	6 hr/wk for 10 weeks	Hart *et al.*, 1988
Cypress, slash pine, live oak, mangrove	1,300	8 hours	Woltz and Howe, 1981
Jack pine seedlings	470-520	24 hours	Malhotra and Kahn, 1978
Black oak	1,310	Continuously for 1 week	Carlson, 1979

Table 8-3. Sensitivity Groupings of Vegetation Based on Visible Injury at Different SO_2 Exposures[a]

Sensitivity Grouping	SO_2 Concentration		Plants
	1-Hour	3-Hour	
Sensitive	1,310 - 2,620 $\mu g/m^3$ (0.5 - 1.0 ppm)	790 - 1,570 $\mu g/m^3$ (0.3 - 0.6 ppm)	Ragweed Legumes Blackberry Southern pines Red and black oaks White ash Sumacs
Intermediate	2,620 - 5,240 $\mu g/m^3$ (1.0 - 2.0 ppm)	1,570 - 2,100 $\mu g/m^3$ (0.6 - 0.8 ppm)	Maples Locust Sweetgum Cherry Elms Tuliptree Many crop and garden species
Resistant	>5,240 $\mu g/m^3$ (>2.0 ppm)	>2,100 $\mu g/m^3$ (>0.8 ppm)	White oaks Potato Upland cotton Corn Dogwood Peach

[a] Based on observations over a 20-year period of visible injury occurring on over 120 species growing in the vicinities of coal-fired power plants in the southeastern United States.

Source: EPA, 1982a.

Table 8-4. Examples of Reported Effects of Air Pollutants on Animals at Concentrations Below National Secondary Ambient Air Quality Standards

Pollutant	Reported Effect	Concentration ($\mu g/m^3$)	Exposure
Sulfur Dioxide[1]	Respiratory stress in guinea pigs	427 to 854	1 hour
	Respiratory stress in rats	267	7 hours/day; 5 day/week for 10 weeks
	Decreased abundance in deer mice	13 to 157	Continually for 5 months
Nitrogen Dioxide[2,3]	Respiratory stress in mice	1,917	3 hours
	Respiratory stress in guinea pigs	96 to 958	8 hours/day for 122 days
Particulates[1]	Respiratory stress, reduced respiratory disease defenses	120 PbO_3	continually for 2 months
	Decreased respiratory disease defenses in rats, same with hamsters	100 $NiCl_2$	2 hours

Source:

[1] Newman and Schreiber, 1988.

[2] Gardner and Graham, 1976.

[3] Trzeciak et al., 1977.

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ATTACHMENT A

PEEL DRYER TEST DATA

Table A-1. SO_2/PM Source Testing Conducted on Citrus Peel Dryer and Citrus Pellet Mill, Southern Gardens

Date	Heat Input Rate	Production Rate		PM Emissions			SO2 Emissions		
	(MMBtu/hr)	(TPH PP)	(TPH BDP)	(lb/hr)	(gr/dscf)	(lb/ton BDP)	(lb/hr)	lb/MMBtu)	lb/ton BDP)
Citrus Peel Dryer									
5/26/94	35.0	43.33	14.99 [a]	3.15	0.026	0.21	4.31	0.12	0.29
2/24/95	50.3	39.08	13.52 [a]	4.16	0.026	0.31	5.75	0.11	0.43
4/2/96	78.3	33.18	11.48 [a]	7.07	0.038	0.62	10.25	0.12	0.89
3/5/97	45.9	43.30	14.99	6.00	0.037	0.40	21.85	0.48	1.46
4/1/98	69.7	45.62	15.09	10.18	0.062	0.67	11.48	0.17	0.76
4/6/99	65.8	48.82	13.87	6.84	0.046	0.49	10.26	0.16	0.74
4/18/00	75.7	46.69	13.72	11.34	0.060	0.83	19.62	0.23	1.43
Citrus Pellet Mill									
3/4/97	--	--	14.78 [b]	0.19	0.0028		--	--	--

PP = Pressed peel
BDP = Bone dry peel

[a] Actual data not available; used same ratio of pressed peel to bone dry peel from 1997 testing
[b] Based on 16.8 TPH pellets with an assumed moisture of 12%.

Table A-2. Summary of Source Testing Conducted on Peel Dryer at Southern Gardens Citrus Processing Facility

Pollutant	EPA Test Method	12/21/95 Process Rate = 12.90 TPH BDP			03/05/97 Process Rate = 14.99 TPH BDP Heat Input = 45.9 MMBtu/hr			04/07/99 Process Rate = 13.16 TPH BDP Heat Input = 52.9 MMBtu/hr			04/12/00 Process Rate = 14.27 TPH BDP Heat Input = 79.5 MMBtu/hr		
		lb/hr	ppm	lb/ton BDP [a]	lb/hr	ppm	lb/ton BDP [b]	lb/hr	ppm	lb/ton BDP [c]	lb/hr	ppm	lb/ton BDP [d]
VOC (as C)	25	194.1	4,224	15.05	--	--	--	--	--	--	279.7	6,995	19.60
VOC (as propane)	25A	118.9 [a]	2,168	[a]	367.1	2,234	24.49	267	2,407	20.28	212.67	1,460	14.90
CH4	25A	--	5	--	0.1	2	--	0.8	18	0.06		9	0.0
CO	10	128.2	1,195	9.94	190.1	2,294	12.68	164	2,331	12.46	339.0	3,685	23.76
NOx	7E	12.5	71	0.97	--	--	--	5.9	51	0.45	10.4	69	0.73
O2	3A	--	13.2%	--	--	12.6%	--	--	9.9%	--	--	8.7%	--

BDP = Bone dry peel

[a] Testing was performed using modified Method 25 A using condensate trap, and is not considered to be valid measurement.

[b]

[c]

[d]

ATTACHMENT B

BACT DETERMINATION FOR BOILER NOS. 1 AND 2 - FEBRUARY 1992

Department of Environmental Protection

Lawton Chiles
Governor

South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

Virginia B. Wetherell
Secretary

FAX TRANSMITTAL LETTER

TO:

NAME: Paul Wesson DATE: 9-19-95

AGENCY: BACT Southern Gardens For Boilers 1+2

TELEPHONE #: (904)336-5600 FAX #: 904-336-6603

NUMBER OF PAGES (INCLUDING COVER SHEET): 3

FROM:

NAME: David Knowles

DEPT. OF ENVIRONMENTAL PROTECTION - SO. DISTRICT, FT. MYERS

TELEPHONE # (813) 332-6975 FAX # (813) 332-6969
SUNCOM # 748-6975 SUNCOM FAX # 748-6969

TRANSMITTAL ON A NEC/NEFAX 340

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

SENDER'S NAME: Marcia

COMMENTS:

Best Available Control Technology (BACT) Determination
Southern Gardens Citrus Processing Corp.
Hendry County

The applicant plans to construct two 800 HP Johnson boilers at a new citrus processing facility in Hendry County. The 33.44 MMBtu/hr boilers will operate up to 3600 hours per year for a 150 day operating season.

This BACT determination is required for the source as set forth in the Florida Administrative Code Rule 17-2.600(6) - Emission Limiting and Performance Standards.

BACT Determination Requested by the Applicant:

Particulate and sulfur dioxide emissions to be controlled by the firing of No. 6 fuel oil with a maximum of 0.7 percent sulfur, by weight.

Date of Receipt of a BACT Application:

December 19, 1991

Review Group Members:

The determination was based upon comments received from the Permitting and Standards Section and the South District.

BACT Determination by DER:

The amount of particulate and sulfur dioxide emissions from the boilers will be limited by the firing of No. 2 fuel oil with a maximum of 0.5 percent sulfur, by weight.

BACT Determination Rational:

Sulfur in fuel is a primary air pollution concern, since most of the fuel sulfur becomes sulfur dioxide and particulate emissions from oil burning are related to sulfur content.

Part 60, subpart Dc, section 60.42c(d) of the Federal Register states, "...no owner or operator of an affected facility that combusts oil shall cause to be discharged ...any gases that contain sulfur dioxide in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil ...that contains greater than 0.5 weight percent sulfur." This standard applies to all units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

Based on the information presented in this analysis, the Department has determined that BACT for the boilers is represented by firing No. 2 fuel oil with a sulfur content not to exceed 0.5 percent, by weight

Details of the Analysis May be Obtained by Contacting:

Michael Hewett, BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommend by:

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

February 4, 1992
Date

Approved by:

Steve Smallwood, P.E., Director
Division of Air Resource Management

February 17, 1992
Date

END

ATTACHMENT C

AIR MODELING ANALYSIS DIRECTION-SPECIFIC BUILDING DATA

DATE : 06/30/00
TIME : 17:21:32
BPIP data for Southern Gardens 8/30/99

==========
BPIP PROCESSING INFORMATION:
==========

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in feet will be converted to meters using a conversion factor of 0.3048. Output will be in meters.

UTMP is set to UTMN. The input is assumed to be in a local X-Y coordinate system as opposed to a UTM coordinate system. True North is in the positive Y direction.

Plant north is set to 0.00 degrees with respect to True North.

BPIP data for Southern Gardens 8/30/99

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
DRYER/WH	38.10	0.00	34.29	65.00
BOILERS	16.76	0.00	34.29	65.00
PELLET	12.19	0.00	34.29	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.
** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

BPIP (Dated: 95086)
DATE : 06/30/00
TIME : 17:21:32

BPIP data for Southern Gardens 8/30/99

BPIP output is in meters

SO BUILDHGT DRYER/WH	12.50	12.50	12.50	12.50	12.50	12.50
SO BUILDHGT DRYER/WH	12.50	12.50	12.50	12.50	12.50	13.72
SO BUILDHGT DRYER/WH	13.72	13.72	13.72	13.72	13.72	12.50
SO BUILDHGT DRYER/WH	12.50	12.50	12.50	12.50	12.50	12.50
SO BUILDHGT DRYER/WH	12.50	12.50	12.50	12.50	12.50	13.72
SO BUILDHGT DRYER/WH	13.72	13.72	13.72	13.72	13.72	12.50
SO BUILDWID DRYER/WH	53.68	53.90	52.49	49.49	44.98	39.11
SO BUILDWID DRYER/WH	32.04	24.01	15.24	24.01	32.04	18.14
SO BUILDWID DRYER/WH	20.57	22.37	23.50	23.91	23.59	51.82
SO BUILDWID DRYER/WH	53.68	53.90	52.49	49.49	44.98	39.11
SO BUILDWID DRYER/WH	32.04	24.01	15.24	24.01	32.04	18.14
SO BUILDWID DRYER/WH	20.57	22.37	23.50	23.91	23.59	51.82
SO BUILDHGT BOILERS	7.92	7.92	7.92	7.92	7.92	7.92
SO BUILDHGT BOILERS	7.92	12.50	12.50	12.50	13.72	13.72
SO BUILDHGT BOILERS	7.92	7.92	7.92	7.92	7.92	7.92

SO	BUILDHGT	BOILERS	7.92	7.92	7.92	7.92	7.92	7.92
SO	BUILDHGT	BOILERS	7.92	7.92	7.92	7.92	7.92	7.92
SO	BUILDHGT	BOILERS	7.92	7.92	7.92	7.92	7.92	7.92
SO	BUILDWID	BOILERS	20.04	24.22	27.68	30.29	31.98	32.70
SO	BUILDWID	BOILERS	32.42	24.01	15.24	24.01	15.16	18.14
SO	BUILDWID	BOILERS	31.98	30.29	27.68	24.22	20.04	15.24
SO	BUILDWID	BOILERS	20.04	24.22	27.68	30.29	31.98	32.70
SO	BUILDWID	BOILERS	32.42	31.16	28.96	31.16	32.42	32.70
SO	BUILDWID	BOILERS	31.98	30.29	27.68	24.22	20.04	15.24
SO	BUILDHGT	PELLET	7.92	7.92	7.92	7.92	7.92	7.92
SO	BUILDHGT	PELLET	7.92	12.50	12.50	12.50	13.72	13.72
SO	BUILDHGT	PELLET	13.72	7.92	7.92	7.92	7.92	7.92
SO	BUILDHGT	PELLET	7.92	7.92	7.92	7.92	7.92	7.92
SO	BUILDHGT	PELLET	7.92	0.00	0.00	0.00	7.92	7.92
SO	BUILDHGT	PELLET	7.92	7.92	7.92	7.92	7.92	7.92
SO	BUILDWID	PELLET	20.04	24.22	27.68	30.29	31.98	32.70
SO	BUILDWID	PELLET	32.42	24.01	15.24	24.01	15.16	18.14
SO	BUILDWID	PELLET	20.57	30.29	27.68	24.22	20.04	15.24
SO	BUILDWID	PELLET	20.04	24.22	27.68	30.29	31.98	32.70
SO	BUILDWID	PELLET	32.42	0.00	0.00	0.00	32.42	32.70
SO	BUILDWID	PELLET	31.98	30.29	27.68	24.22	20.04	15.24

ATTACHMENT D

CALPUFF PARAMETER SETTINGS

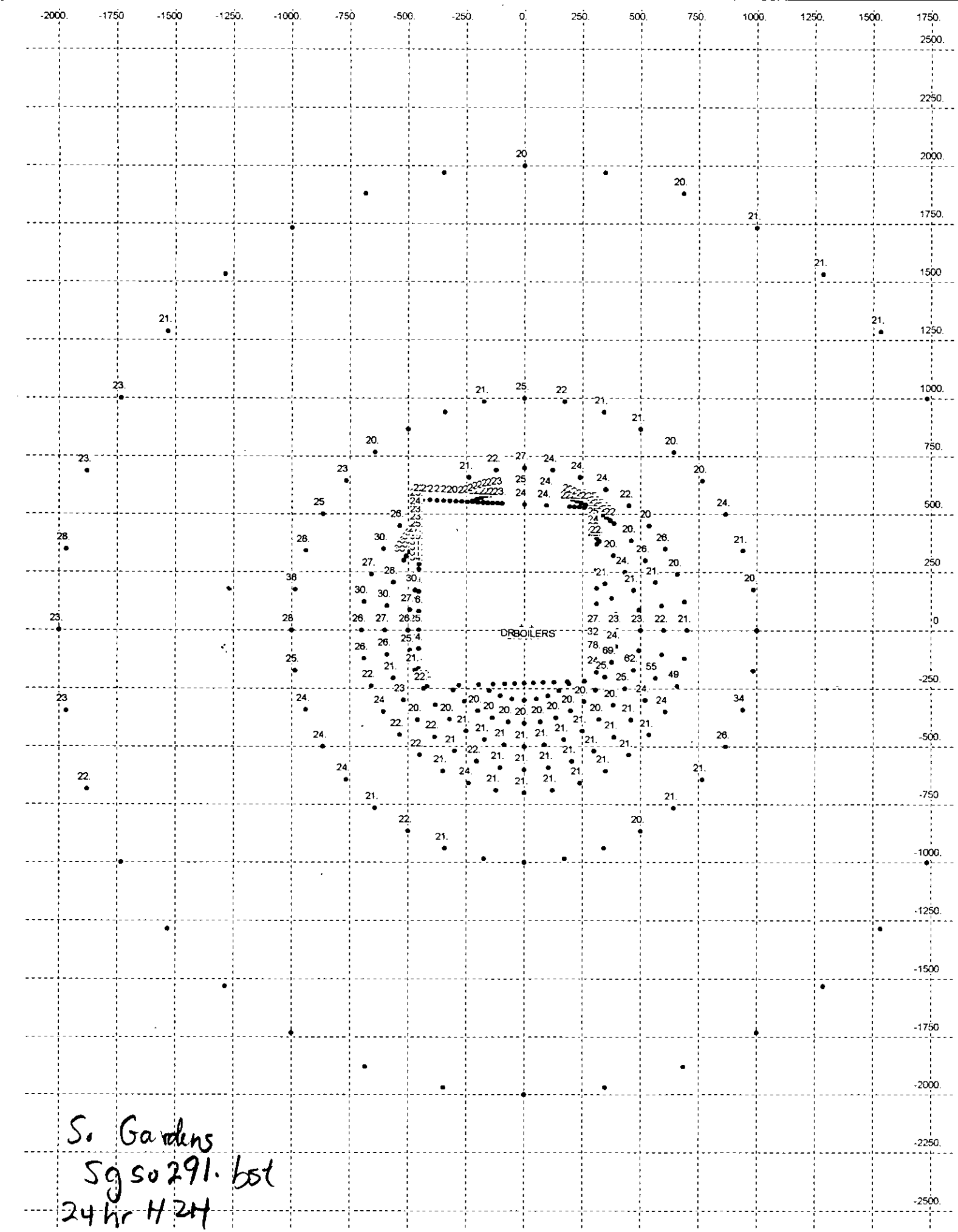
Table C-1. IWAQM Phase II Calpuff Default Options, Southern Gardens						
		Sorted by Calpuff.lst order				
Calpuff.lst Input Group Number	Description	Variable	Seq	Description	Default Value	Modeled Value
1	Run Control	METRUN	1	Do we run all periods (1) or a subset (0)?	0	0
1		IBYR	2	Beginning year	User Defined	1987
1		IBMO	3	Beginning month	User Defined	1
1		IBDY	4	Beginning day	User Defined	1
1		IBHR	5	Beginning hour	User Defined	1
1		IRLG	5	Length of run (hours)	User Defined	8760
1		NSPEC	6	Number of species modeled (for MESOPUFF II chemistry)	5	7
1		NSE	7	Number of species emitted	3	4
1		ITEST	8		2	2
1		MRESTART	9	Restart options (0 = no restart) allows splitting runs into smaller segments	0	0
1		NRESPD	10		0	0
1		METFM	11	Format of input meteorology (1 = CALMET, 2 = ISC)	2	2
1		AVET	12	Averaging time lateral dispersion parameters (minutes)	60	60
2	Tech Options	MGAUSS	1	Near-field vertical distribution (1 = Gaussian)	1	1
2		MCTADJ	2	Terrain adjustments to plume path (3 = Plume path)	3	3
2		MCTSG	3	Do we have subgrid hills? (0 = No) allows CTDM-like treatment for subgrid scale hills	0	0
2		MSLUG	4	Near-field puff treatment (0 = No slugs)	0	0
2		MTRANS	5	Model transitional plume rise? (1 = Yes)	1	1
2		MTIP	6	Treat stack tip downwash? (1 = Yes)	1	1
2		MSHEAR	7	Treat vertical wind shear? (0 = No)	0	0
2		MSPLIT	8	Allow puffs to split? (0 = No)	0	0
2		MCHEM	9	MESOPUFF-II Chemistry? (1 = Yes)	1	1
2		MWET	10	Model wet deposition? (1 = Yes)	1	1
2		MDRY	11	Model dry deposition? (1 = Yes)	1	1
2		MDISP	12	Method for dispersion coefficients (3 = PG & MP)	3	3
2		MTURBVW	13	Turbulence characterization? (Only if MDISP = 1 or 5)	3	NA
2		MDISP2	14	Backup coefficients (Only if MDISP = 1 or 5)	3	NA
2		MROUGH	15	Adjust PG for surface roughness? (0 = No)	0	0
2		MPARTL	16	Model partial plume penetration? (0 = No)	1	1
2		MTINV	17	Elevated inversion strength (0 = compute from data)	0	0
2		MPDF	18	Use PDF for convective dispersion? (0 = No)	0	0
2		MSGTIBL	19	Use TIBL module? (0 = No) allows treatment of subgrid scale coastal areas	0	0
2		MREG	20	Regulatory default checks? (1 = Yes)	1	0
3	Species List	CSPECn		Names of species modeled (for MESOPUFF II must be SO2-SO4-NOX-HNO3-NO3)	User Defined	ALL 7
3		Specie Groups		Grouping of species if any	User Defined	NA

Table C-1. IWAQM Phase II Calpuff Default Options, Southern Gardens						
		Sorted by Calpuff.lst order				
Calpuff.lst Input Group Number	Description	Variable	Seq	Description	Default Value	Modeled Value
3		Specie Names		Manner species will be modeled	User Defined	DEPOS.
4	Grid Control	NX	1	Number of east-west grids of input meteorology	User Defined	2
4		NY	2	Number of north-south grids of input meteorology	User Defined	2
4		NZ	3	Number of vertical layers of input meteorology	User Defined	1
4		DGRIDKM	4	Meteorology grid spacing (km)	User Defined	178
4		ZFACE	5	Vertical cell face heights of input meteorology	User Defined	0;5000
4		XORIGKM	6	Southwest corner (east-west) of input User	Defined meteorology	-178
4		YORIGIM	7	Southwest corner (north-south) of input User	Defined meteorology	-178
4		IUTMZN	8	UTM zone	User Defined	0
4		XLAT	9	Latitude of center of meteorology domain	User Defined	26.7
4		XLONG	10	Longitude of center of meteorology domain	User Defined	81.1
4		XTZ	11	Base time zone of input meteorology	User Defined	5
4		IBCOMP	12	Southwest X-index of computational domain	User Defined	1
4		JBCOMP	13	Southwest Y-index of computational domain	User Defined	1
4		IECOMP	14	Northeast X-index of computational domain	User Defined	2
4		JECOMP	15	Northeast Y-index of computational domain	User Defined	2
4		LSAMP	16	Use gridded receptors? (T = Yes)	F	F
4		IBSAMP	17	Southwest X-index of receptor grid	User Defined	0
4		JBSAMP	18	Southwest Y-index of receptor grid	User Defined	0
4		IESAMP	19	Northeast X-index of receptor grid	User Defined	0
4		JESAMP	20	Northeast Y-index of receptor grid	User Defined	0
4		MESHDN	21	Gridded recpetor spacing = DGRIDKM/MESHDN	1	1
5	Output Options	ICON	1	Output concentrations? (1 = Yes)	1	1
5		IDRY	2	Output dry deposition flux? (1 = Yes)	1	0
5		IWET	3	Output west deposition flux? (1 = Yes)	1	0
5		IVIS	4	Output RH for visibility calculations (1 = Yes)	1	1
5		LCOMPRS	5	Use compression option in output? (T = Yes)	T	T
5		ICPRT	6	Print concentrations? (0 = No)	0	0
5		IDPRT	7	Print dry deposition fluxes (0 = No)	0	0
5		IWPRT	8	Print wet deposition fluxes (0 = No)	0	0
5		ICFRQ	9	Concentration print interval (1 = hourly)	1	24
5		IDFRQ	10	Dry deposition flux print interval (1 = hourly)	1	1
5		IWFRQ	11	West deposition flux print interval (1 = hourly)	1	1
5		IPRTU	12	Print output units (1 = g/m**3; g/m**2/s; 3 = ug/m3, ug/m2/s)	1	3
5		IMESG	13	Status messages to screen? (1 = Yes)	1	1

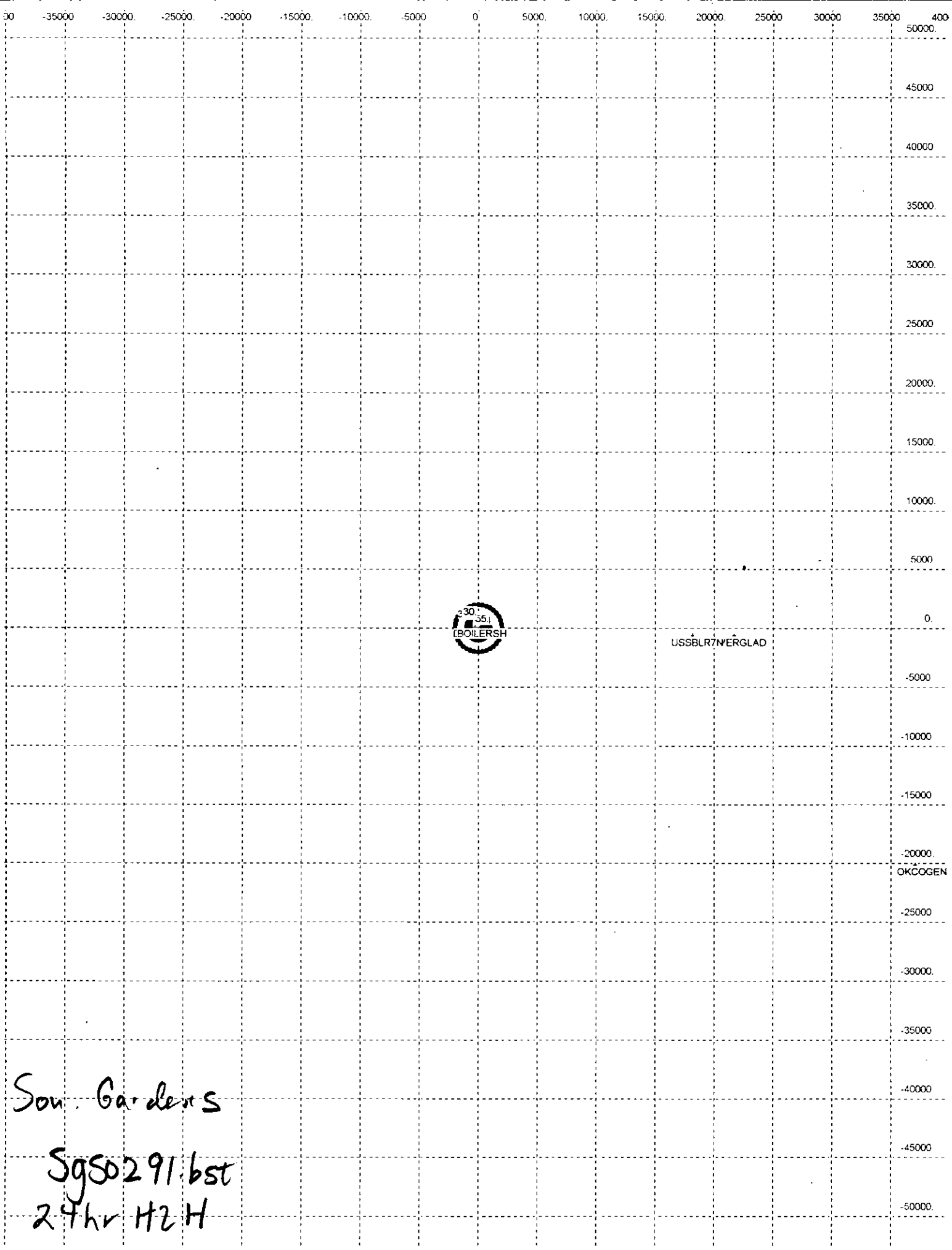
Table C-1. IWAQM Phase II Calpuff Default Options, Southern Gardens						
		Sorted by Calpuff.lst order				
Calpuff.lst Input Group Number	Description	Variable	Seq	Description	Default Value	Modeled Value
5		LDEBUG	14	Turn on debug tracking? (F = No)	F	F
5		NPFDEB	15	(Number of puffs to track)	(1)	1
5		NN1	16	(Met. Period to start output)	(1)	1
5		NN2	17	(Met. Period to end output)	(10)	10
7	Dry Dep Chem	Dry Gas Dep		Chemical parameters of gaseous deposition species	User Defined	DEFAULT
8	Dry Dep Size	Dry Part. Dep		Chemical parameters of particulate deposition species	User Defined	DEFAULT
9	Dry Dep Misc	RCUTR	1	Reference cuticle resistance (s/cm)	30	30
9		RGR	2	Reference ground resistance (s/cm)	10	10
9		REACTR	3	Reference reactivity	8	8
9		NINT	4	Number of particle-size intervals	9	9
9		IVEG	5	Vegetative state (1 = active and unstressed)	1	1
10	Wet Dep	Wet Dep		Wet deposition parameters	User Defined	
11	Chemistry	MOZ	1	Ozone background? (0 = constant background value; 1 = read from ozone.dat)	1	0
11		BCKO3	2	Ozone default (ppb) (Use only for missing data)	80	80
11		BCKNH3	3	Ammonia background (ppb)	10	10
11		RNITE1	4	Nighttime SO2 loss rate (%/hr)	0.2	0.2
11		RNITE2	5	Nighttime NOx loss rate (%/hr)	2	2
11		RNITE3	6	Nighttime HNO3 loss rate (%/hr)	2	2
12	Dispersion	SYTDEP	1	Horizontal size (m) to switch to time dependence	550	550
12		MHFTSZ	2	Use Heffter for vertical dispersion? (0 = No)	0	0
12		JSUP	3	PG Stability class above mixed layer	5	5
12		CONK1	4	Stable dispersion constant (Eq 2.7-3)	0.01	0.01
12		CONK2	5	Neutral dispersion constant (Eq 2.7-4)	0.1	0.1
12		TBD	6	Transition for downwash algorithms (0.5 = ISC)	0.5	0.5
12		IURB1	7	Beginning urban landuse type	10	10
12		IURB2	8	Ending urban landuse type	19	19
12		ILANDUIN	9	Land use type (20 = Unirrigated agricultural land)	(20)	20
12		ZOIN	10	Roughness length (m)	(0.25)	0.25
12		XLAIIN	11	Leaf area index	(3)	3
12		ELEVIN	12	Met. Station elevation (m above MSL)	(0)	0
12		XLATIN	13	Met. Station North latitude (degrees)	(-999)	-999

Table C-1. IWAQM Phase II Calpuff Default Options, Southern Gardens						
		Sorted by Calpuff.lst order				
Calpuff.lst Input Group Number	Description	Variable	Seq	Description	Default Value	Modeled Value
12		XLONIN	14	Met. Station West longitude (degrees)	(-999)	-999
12		ANEMHT	15	Anemometer height of ISC meteorological data (m)	(10)	10.1
12		ISIGMAV	16	Lateral turbulence (Not used with ISC meteorology)	(1)	NA
12		IMIXCTDM	17	Mixing heights (Not used with ISC meteorology)	(1)	NA
12		XMXLEN	18	Maximum slug length in units of DGRIDKM	1	1
12		XSAMLEN	19	Maximum puff travel distance per sampling step (units of DGRIDKM)	1	1
12		MXNEW	20	Maximum number of puffs per hour	99	99
12		MXSAM	21	Maximum sampling steps per hour	99	99
12		NCOUNT	22	Iterations when computing Transport Wind (Calmet & Profile Winds)	(2)	2
12		SYMIN	23	Minimum lateral dispersion of new puff (m)	1	1
12		SZMIN	24	Minimum vertical dispersion of new puff (m)	1	1
12		SVMIN	25	Array of minimum lateral turbulence (m/s)	6 * 0.50	6*0.50
12		SWMIN	26	Array of minimum vertical turbulence (m/s)	0.20,0.12,0.08,0.06,0.03,0.016	SAME
12		CDIV (1), (2)	27	Divergence criterion for dw/dz (1/s)	0.01 (0.0,0.0)	0.0,0.0
12		WSCALM	28	Minimum non-calm wind speed (m/s)	0.5	0.5
12		XMAXZI	29	Maximum mixing height (m)	3000	3000
12		XMINZI	30	Minimum mixing height (m)	50	50
12		WSCAT	31	Upper bounds 1st 5 wind speed classes (m/s)	1.54,3.09,5.14,8. 23,10.8	SAME
12		PLX0	32	Wind speed power-law exponents	0.07,0.07,0.10,0.15,0.35,0.55	SAME
12		PTGO	33	Potential temperature gradients PG E and F (deg/km)	0.020,0.035	SAME
12		PPC	34	Plume path coefficients (only if MCTADJ = 3)	0.5,0.5,0.5,0.5,0.35,0.35	SAME
12		SL2PF	35	Maximum Sy/puff length	10	10
12		NSPLIT	36	Number of puffs when puffs split	3	3
12		IRESPLIT	37	Hours when puff are eligible to split	User Defined	HR 17=1
12		ZISPLIT	38	Previous hour's mixing height(minimum)(m)	100	100
12		ROLDMAX	39	Previous Max mix ht/current mix ht ratio must be less then this value for puff to split	0.25	0.25
12		EPSSLUG	40	Convergence criterion for slug sampling integration	1.00E-04	1.0E-04
12		EPSAREA	41	Convergence criterion for area source integration	1.00E-06	1.0E-06
13	Point Source	NPT1	1	Number of point sources	User Defined	3
13		IPTU	2	Units of emission rates (1 = g/s)	1	1
13		NSPT1	3	Number of point source-species combinations	0	0
13		NPT2	4	Number of point sources with fully variable emission rates	0	0
13		Point Sources		Point sources characteristics	User Defined	VAR
14	Area Source	Area Sources		Area sources characteristics	User Defined	NA

Table C-1. IWAQM Phase II Calpuff Default Options, Southern Gardens						
		Sorted by Calpuff.lst order				
Calpuff.lst						
Input Group						Modeled
Number	Description	Variable	Seq	Description	Default Value	Value
15	Volume Source	Volume		Volume sources characteristics	User Defined Sources	NA
16	Line Source	Line Sources		Buoyant lines source characteristics	User Defined	NA
17	Receptors	NREC		Number of user defined receptors	User Defined	360
17		Receptor Data		Location and elevation (MSL) of receptors	User Defined	VAR
Legend						
	DEPOS.	With Deposition				
	DEFAULT	Uses defaults				
	VAR	Variable Input				
	NA	Not Applicable				
	SAME	Same as recommended				



S. Gardens
Sg so 291. bst
24 hr H 24
scale 1" = 500m

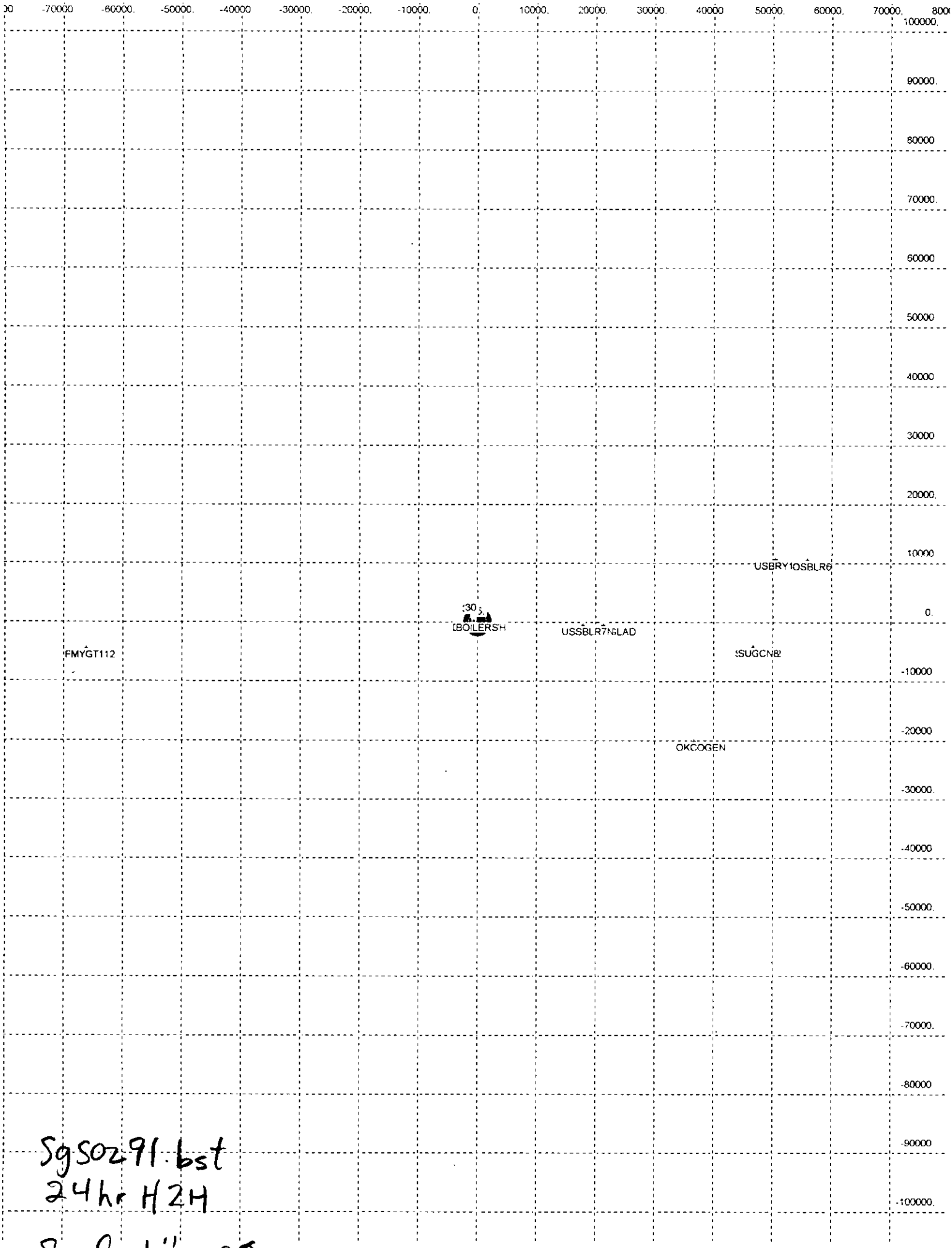


Son. Gardens

Sgs0291.bst

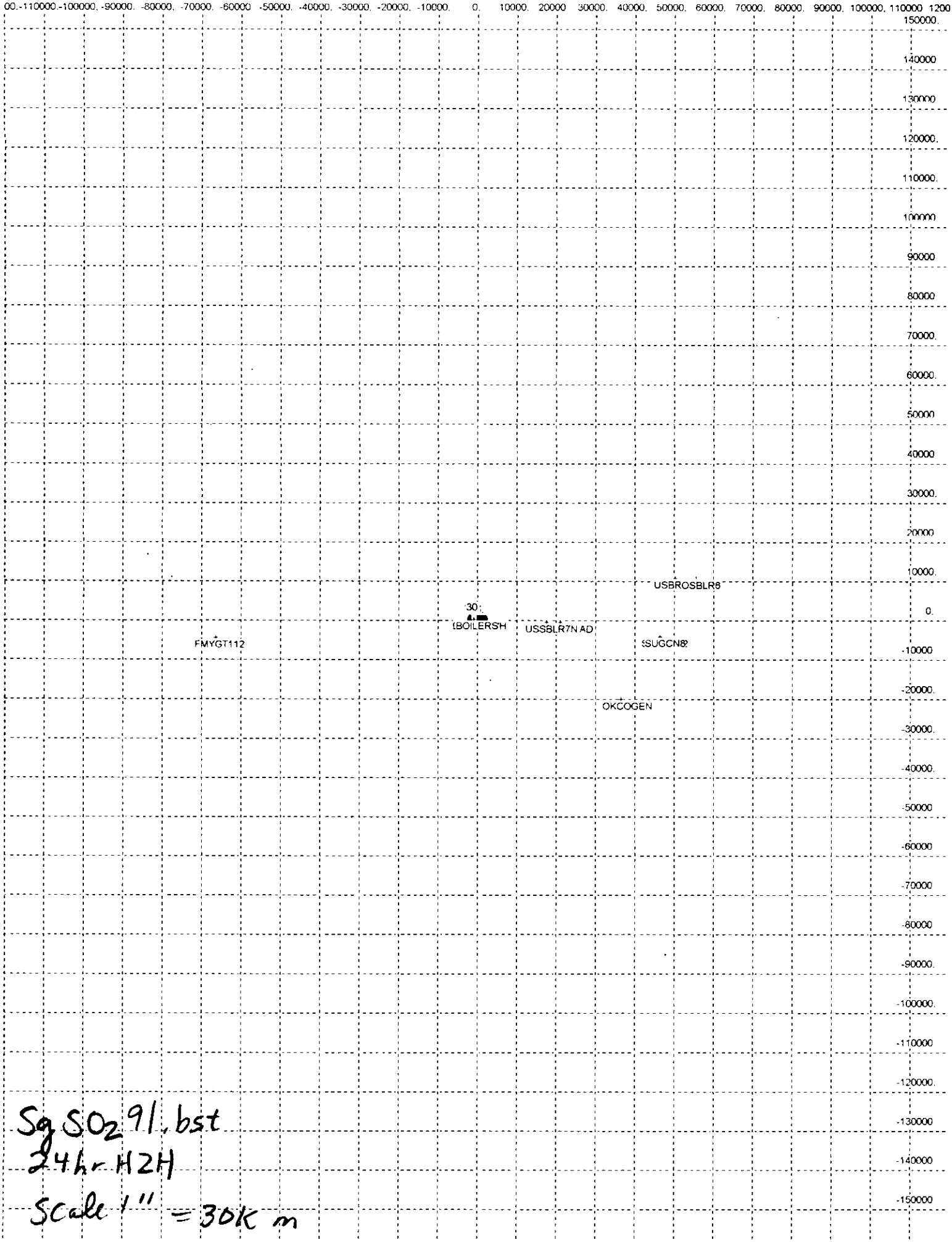
24hr H2H

Scale 1" = 10,000 m

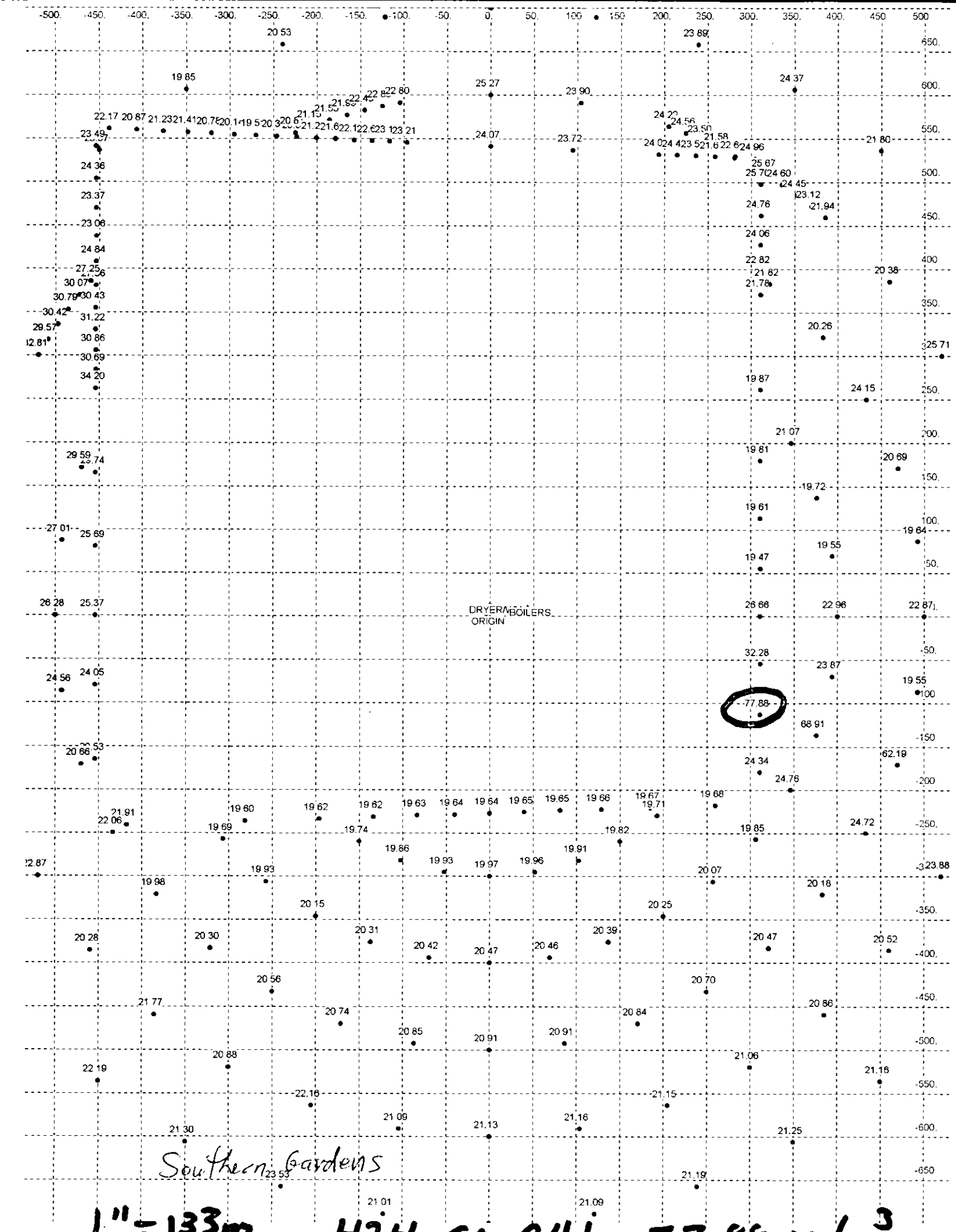


Sgs0291.bst
24hr H2H

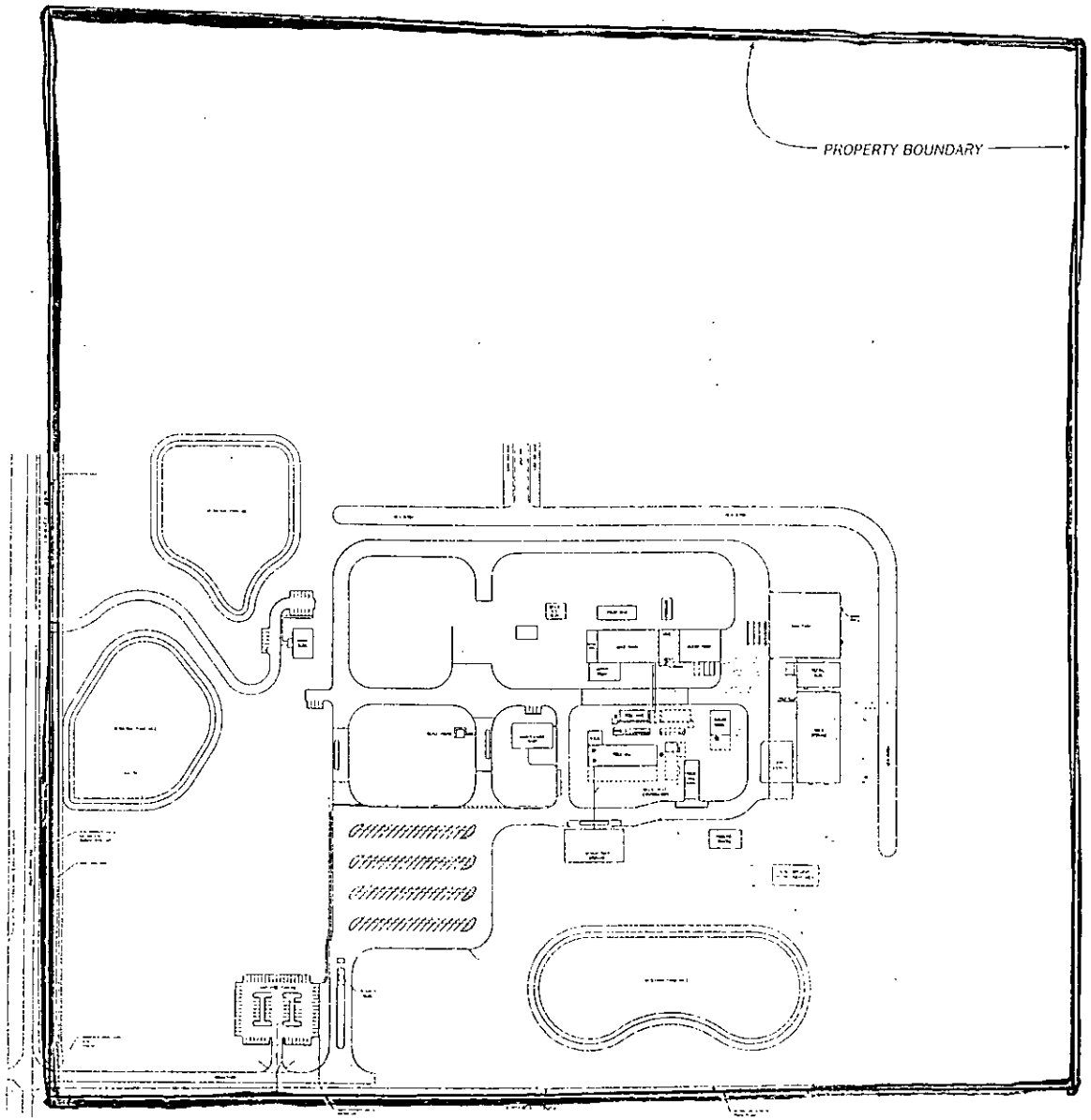
Scale 1" = 25,000m



Sq SO_2 91. bst
24hr-H2H
Scale 1" = 30K m


DRYER/BOILERS
ORIGIN
77.88
Southern Gardens
1" = 133m
H2H SO2 24 hr = 77.88 ug/m3

PROPERTY BOUNDARY IS ENTIRELY FENCED



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To Stan Krivo		From Cleve Holladay	
Co./Dept. EPA Region IV		Co. FDEP	
Phone # 404-562-9123		Phone # 850-921-5986	
Fax # 404-562-9095		Fax # 850-922-6976	

Figure 3
Plant Layout Diagram

Southern Gardens Citrus

1" = 133 m

N

0 200 400 Feet

0 50 100 Meters

Golder Associates

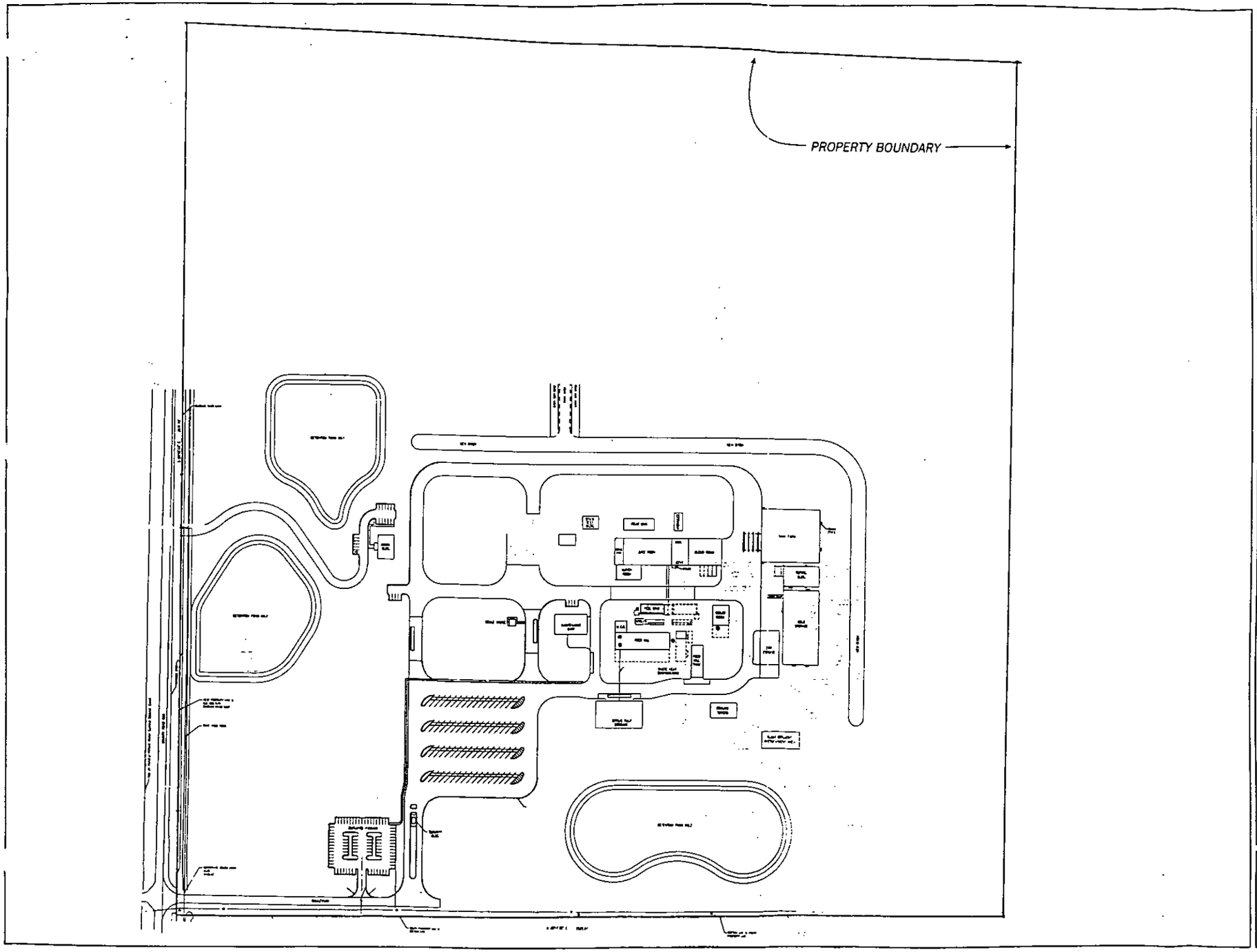
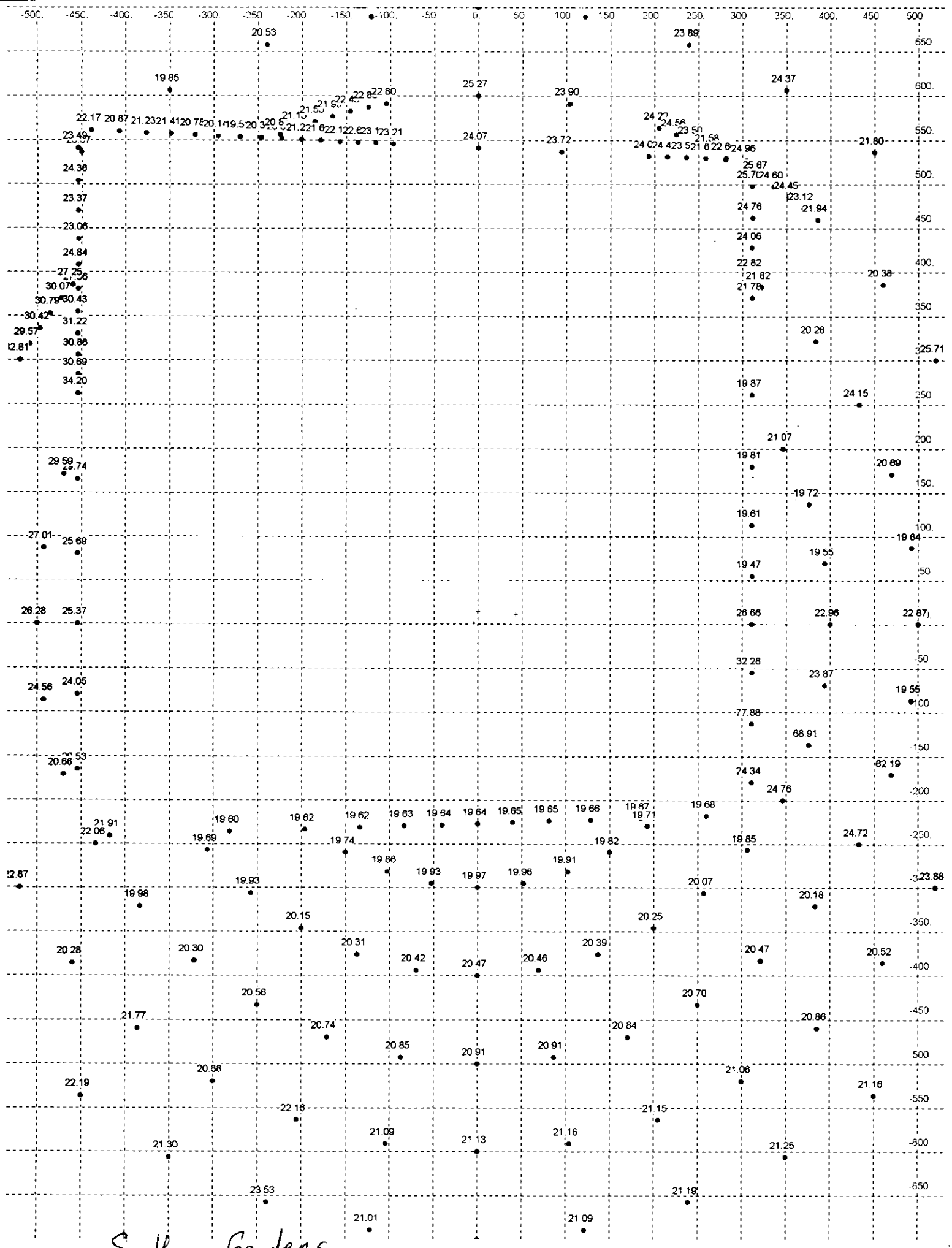


Figure 3
Plant Layout Diagram

Southern Gardens Citrus

Golder Associates


Southern Gardens

not revised

Table 7-2. Maximum Pollutant Concentrations Predicted for the Proposed Project at the ENP PSD Class I Area as Compared to Proposed EPA Class I Significant Impact Levels

Pollutant	Averaging Time	Concentrations (ug/m^3)	Proposed EPA Class I Significant Impact Levels (ug/m^3)
SO_2	Annual	0.0055	0.1
	24-Hour	0.066	0.2
	3-Hour	0.32	1.0
PM_{10}	Annual	0.0078	0.2
	24-Hour	0.087	0.3
NO_2	Annual	0.0270	0.1

Note: Maximum Impacts predicted with CALPUFF Model and Fort Myers/Tampa meteorological data for the ISCST3 model, 1987-91, enhanced for CALPUFF.

Everything is based on ST deltas — because of regional haze

Table 6-2

ST diff fut - current

November 30, 2000

Mr. Cleveland Holladay
Bureau of Air Quality Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Revised Modeling Analysis for Southern Gardens Citrus

Dear Cleve:

This purpose of this letter is to address the air modeling issues for this facility that were mentioned in the second part of Environmental Protection Agency's letter to A.A. Linero dated November 15, 2000, of which Golder received a copy.

Response to Questions 1 and 2.
The permit application emission rate tables are the same as those provided in Section 2 of the PSD report. The maximum emission rates used in the air modeling analysis are will match the emission rates provided in the Section 2 tables. Table 6-2 has some incorrect PM10 and CO emission rates for both the peel dryer/WHE and the pellet coolers. For the dryer, the future maximum PM10 emission rate should be 4.04 g/s, which matches Table 2-4. The CO emission rate should be 191.81 g/s, also matching the CO emission rate in Table 2-4. For the pellet coolers, the PM10 emission rate should be 0.63 g/s, matching Table 2-5. The air modeling analysis used the correct emission rates. Though not used in the air modeling analysis, some of the annual (TPY) emission rates were also corrected to match the values presented in Section 2 and the permit application.

2c. The dryer and pellet coolers future operation was extended from seven to nine months in all the air modeling analyses to account for up to 6,000 hours of operation for those units. This affected all of the air modeling files and as a results, all of these files were rerun. As a result of this change, the results in Tables 7-1, 7-3, 7-4, and 7-5 were also revised and are attached. The revised air modeling files have been electronically transferred separately to the Department. It should be noted that Table 7-2 did not require updating because the CALPUFF modeling analysis assumed full year operation for all modeled sources.

3. A figure of the fenced property line is attached. The property is entirely fenced with a guard house at the entrance.

4. All refined maximum predicted impacts presented in the report were resolved to less then 100 m receptor spacing along the fence line and to 100 m or less resolution beyond the fence line.

5. Please see the response to Question 2c.

6a. Please see the response to Question 1.

6b. The emission rates used in the visibility modeling analysis are correct. The visibility results presented in Section 8.3.8 of the PSD report are not. The first sentence of the results section should read as follows: " The maximum predicted change in visibility of 1.04 percent (0.104 deciview) is well below the criteria of 5.0 percent (0.5 deciviews)".

Please feel free to contact me if you have additional questions or if I can be of further assistance.

Sincerely,

GOLDER ASSOCIATES, INC

Steven R. Marks, CCM
Senior Meteorologist

cc: David Buff, Golder

Table 6-2. Short-term and Annual Emissions used in Modeling of SGCPC

	Short-term Emissions					Long Term Emissions [a]				
	Current		Future			Current		Future		
	lb/hr	g/s	lb/hr	g/s		TPY	g/s	TPY	g/s	
	Boilers					**Boilers**				
PM_{10}	0.79	0.10	0.79 [b]	0.10	PM_{10}	0.71 [e]	0.02	2.04 [b]	0.06	
SO_2	54.64	6.88	54.64 [b]	6.88	SO_2	20.79 [e]	0.60	140.69 [b]	4.04	
NO_X	15.81	1.99	15.81 [b]	1.99	NO_X	14.28 [e]	0.41	40.78 [b]	1.17	
CO	3.95	0.50	3.95 [b]	0.50	CO	3.57 [e]	0.10	10.20 [b]	0.29	
	Peel Dryer/WHE					**Peel Dryer/WHE**				
PM_{10}	11.30 [f]	1.42	32.05 [c]	4.04	PM_{10}	13.73 [e]	0.39 .58	96.2	2.77	4.04
SO_2	19.62 [f]	2.47	42.00 [c]	5.29	SO_2	20.49 [e]	0.59 .86	126.0	3.62	5.29
NO_X	10.40 [f]	1.31	27.70 [c]	3.49	NO_X	10.87	0.31 .46	61.5	1.77	2.58
CO	339.00 [f]	42.71	1522.30 [c]	191.81	CO	625.8	17.99 26.28	2882	82.84	121.04
	Pellet Coolers					**Pellet Coolers**				
PM_{10}	0.19 [f]	0.02	5.00 [d]	0.63	PM_{10}	0.36	0.01	15.00	0.43	

[a] From Table 2-2 Summary of Emissions, .
[b] Table 2-6. Future Potential Emissions for Boiler Nos .1, 2, 3, and 4.
[c] Table 2-3. Future Potential Emissions for Citrus Feed Mill
[d] Table 2-4. Future Potential Emissions for Citrus Pellet Mill
[e] Actual emissions are an average of the 1998-1999 AOR emissions.
[f] Data from 4/18/2000 stack test.

Assume 8760

61.5

No NG

$\frac{10.87 \text{ TPY} \times 2000 \text{ lbs/T}}{6000 \text{ hrs}} \times (.126) =$

Excluded July, Aug, Sep
No operation

Table 7-1. Maximum Predicted Pollutant Impacts for the Project Only at SGCPC

Averaging Time	Concentration[a] (ug/m3)		Receptor Location[b] Direction (degree)	Distance (m)	Time Period (YYMMDDHH)	EPA Significant Impact Level (ug/m^3)
SO_2						
Annual	0.4		190	1000	87123124	
	0.4		240	1000	88123124	
	0.3		250	700	89123124	1
	0.6	c	244	900	90123124	
	0.5	c	244	1000	91123124	
HIGH 24-Hour	5.9		180	1000	87100824	
	5.7		190	1000	88020624	
	7.4	c	320	1100	89101124	5
	6.6		230	500	90051124	
	5.1		290	600	91052824	
HIGH 3-Hour	19.7		180	400	87032112	
	18.5		230	500	88102612	
	20.3		290	500	89061815	25
	19.2		302	535	90050212	
	20.2		210	500	91101015	
PM_{10}						
Annual	1.7		180	227	87123124	
	1.7		120	359	88123124	
	1.6		120	359	89123124	1
	1.5		240	482	90123124	
	1.4		240	482	91123124	
HIGH 24-Hour	25.8		170	229	87100824	
	21.5		180	227	88020624	
	22.5		120	359	89103024	5
	20.8		100	316	90011224	
	24.8		120	359	91122924	
NO_X						
Annual	0.4		190	1000	87123124	
	0.4		240	1000	88123124	
	0.4		304	600	89123124	1
	0.6	c	242	800	90123124	
	0.5		240	1000	91123124	
CO						
HIGH 8-Hour	964.1		190	600	87100616	
	956.8		240	600	88102816	
	963.6		320	1000	89101116	500
	863.7		230	500	90051116	
	1151.9		200	500	91101016	
HIGH 1-Hour	1791.1		240	482	87102013	
	1879.5		70	700	88102314	
	1907.7		312	610	89100614	2,000
	1934.5		306	600	90101414	
	1895.6		300	524	91100414	

[a] Based on 5-year meteorological record, Fort Myers/Ruskin, 1987-91

[b] Relative to Southeast corner of Feed Mill building

[c] Refined values

Note: YYMMDDHH = Year, Month, Day, Hour Ending
High = Highest Concentration in 5 years.

Table 7-5. Maximum Predicted Pollutant Impacts Due to All Future Modeled Sources
PSD Class II Screening Analysis. SGCPC

Averaging Time	Concentration [a] (ug/m^3)	Receptor Location [b]		Time Period (YYMMDDHH)
		Direction (degree)	Distance (m)	
SO_2				
Annual	1.8	110	331	87123124
	2.6	110	331	88123124
	2.1	110	331	89123124
	2	240	700	90123124
	1.3	240	1000	91123124
HSH 24-Hour	49.2	110	331	87010124
	49.3	110	331	88050624
	43.2	110	331	89050224
Run this one	34.5	110	331	90102524
	77.2	110	331	91030424
HSH 3-Hour	143.3	110	331	87031012
	169.1	110	331	88040815
	151.2	100	316	89051118
	156.5	100	316	90011215
	167.7	110	331	91030415
PM_{10}				
Annual	1.7	180	227	87123124
	1.6	120	359	88123124
	1.4	120	359	89123124
	1.6	240	482	90123124
	1.5	240	482	91123124
HSH 24-Hour	24.4	170	229	87100324
	22.0	120	359	88050624
	18.7	120	359	89052524
	21.0	90	311	90061924
	21.3	120	359	91021124

[a] Based on 5-year meteorological record, Fort Myers/Ruskin, 1987-91

[b] Relative to Southeast corner of Feed Mill building

Note: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 7-4. Maximum Refined Impacts as Compared to AAQS, SGCPC

Averaging Time/ Pollutant	Concentration (ug/m^3) Total	Contributed from Modeled	Contributed from Background	Receptor Location Direction (degrees)	Receptor Location Distance (m)	Period Ending (YYMMDDHH)	Florida AAQS (ug/m^3)
SO_2							
Annual	11.0	6.0	5	242	800	90123124	60
HSH 24-hour	90.9	77.9	13	110	331	91030424	260
HSH 3-hour	215	168	47	110	331	91030415	1,300
PM_{10}							
Annual	25.6	2.6	23	240	482	90123124	50
HSH 24-hour	62.4	24.4	38	170	229	87100324	150
CO							
H2H 8-Hour	4,362	1,029	3,333	210	500	91101116	10,000
H2H 1-Hour	7,670	2,115	5,555	120	359	91063012	40,000

WILL BE LOW

WILL BE LOW

Table 7-3. Maximum Predicted Pollutant Impacts Due to All Future Modeled Sources
AAQS Screening Analysis, SGCPC

Averaging Time	Concentration[a] (ug/m^3)	Receptor Location [b]		Time Period (YYMMDDHH)
		Direction (degree)	Distance (m)	
SO_2				
Annual	4.4	110	331	87123124
	5.5	110	331	88123124
	4.9	110	331	89123124
	5.9 ✓	240	700	90123124
	5.4 ✓	240	700	91123124
HSH 24-Hour	50.4	110	331	87010124
	49.3	110	331	88050624
	43.7	110	331	89050224
	34.5 ✓	110	331	90102524
	77.9 ✓	110	331	91030424
HSH 3-Hour	143.3	110	331	87031012
	159.4	110	331	88070115
	151.2	100	316	89051118
	156.5	100	316	90011215
	167.7 ✓	110	331	91030415
PM_{10}				
Annual	2.3	180	227	87123124
	2.4	120	359	88123124
	2.3	120	359	89123124
	2.6	240	482	90123124
	2.4	240	482	91123124
HSH 24-Hour	24.4	170	229	87030424
	22	120	359	88050624
	18.7	120	359	89050624
	21.3	90	311	90010924
	21.3	120	359	91021124
CO				
H2H 8-Hour	786.1	180	500	87022316
	719.2	240	700	88032816
	753.5	190	500	89052716
	840.9	250	500	90032416
	1029.2	210	500	91101116
H2H 1-Hour	1971.4	360	2000	87120205
	2051.3	230	400	88052011
	2067.1	190	400	89061111
	1998.7	160	300	90061714
	2114.8	120	359	91063012

[a] Based on 5-year meteorological record, Fort Myers/Ruskin, 1987-91

[b] Relative to Southeast corner of Feed Mill building

Note: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 7-6. Maximum Refined Impacts as Compared to PSD Class II Increments, SGCPC

Averaging Time/ Pollutant	Concentration (ug/m^3)	Receptor Location		Period Ending (YYMMDDHH)	Allowable PSD Class II Increment (ug/m^3)
		Direction (degrees)	Distance (m)		
SO_2					
Annual	2.6	110	331	88123124	20
24-hour	77.2	110	331	91030424	91
3-hour	169	110	331	88040815	512
PM_{10}					
Annual	1.7	180	227	87123124	17
24-hour	24.4	170	229	87100324	30