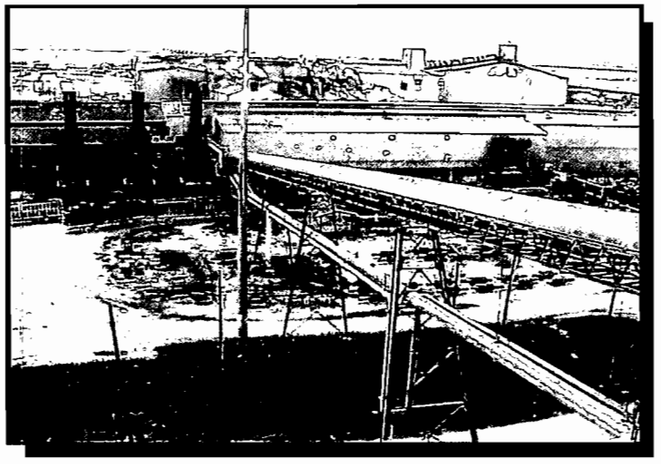
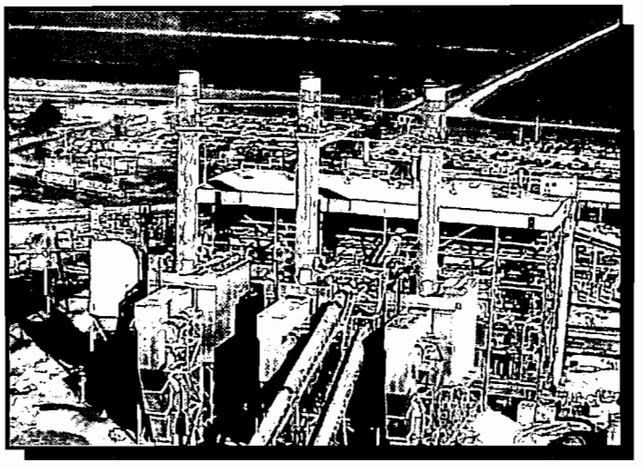
APPLICATION TO RENEW TITLE V AIR OPERATION PERMIT OKEELANTA CORPORATION SOUTH BAY, FLORIDA





Submitted by:

OKEELANTA CORPORATION

21250 U.S. Highway 27 South
South Bay, FL 33493

Prepared by:

GOLDER ASSOCIATES

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653

April 2005
0537537

APPLICATION TO RENEW
TITLE V AIR OPERATION PERMIT
OKEELANTA CORPORATION
AND
NEW HOPE POWER PARTNERSHIP
SOUTH BAY, FLORIDA

Prepared For:
Okeelanta Corporation
21250 U.S. Highway 27 South
South Bay, Florida 33493

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

April 2005

0537537

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4 Copies – FDEP
2 Copies – Okeelanta Corporation
1 Copy – Golder Associates Inc.

APPLICATION FOR AIR PERMIT – LONG FORM

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Okeelanta Corporation**	
2. Site Name: **Okeelanta Sugar Mill & New Hope Power Partnership Facilities**	
3. Facility Identification Number: **0990005 and 0990332**	
4. Facility Location...: Street Address or Other Locator: **21250 U.S. Highway 27 South** City: **South Bay** County: **Palm Beach** Zip Code: **33493**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Matt Capone, Director of Environmental Programs**
2. Application Contact Mailing Address... Organization/Firm: **Okeelanta Corporation** Street Address: **21250 U.S. Highway 27** City: **South Bay** State: **FL** Zip Code: **33493**
3. Application Contact Telephone Numbers... Telephone: **(561) 993-1658** ext. Fax: **(561) 992-7326**
4. Application Contact Email Address:

Application Processing Information (DEP Use)

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

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☐ Air construction permit.

Air Operation Permit

☐ Initial Title V air operation permit.
☐ Title V air operation permit revision.
☐ Title V air operation permit renewal.
☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.
☒ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☒ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

Application to renew Title V Permit No. 0990005-012-AV.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
014	Okeelanta Mill Boiler No. 16		
018-020, 026-028, 045-047	Okeelanta Sugar Trans-shipment Facility		
021-025, 034, 035	Okeelanta Sugar Refinery		
048	Okeelanta Paint Booth		
001	New Hope Power Cogen Boiler A		
002	New Hope Power Cogen Boiler B		
003	New Hope Power Cogen Boiler C		
004	New Hope Power Materials Handling and Storage Operations		
	Facility-wide Unregulated Emissions		

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement: *I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. 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 and all other requirements identified in this application to which the facility is subject. 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 the facility or any permitted emissions unit.* _____ _____ Signature Date

APPLICATION INFORMATION

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**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext.**545** Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. 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.

(3) If the purpose of this application is to obtain a Title V 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 plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, 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.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal 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

4/21/05 — Date

(seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:
   Ricardo A. Lima, Vice President and General Manager

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - [x] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - [ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - [ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - [ ] The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **Okeelanta Corporation**
   Street Address: **21250 U.S. Highway 27 South**
   City: **South Bay** State: **FL** Zip Code: **33493**

4. Application Responsible Official Telephone Numbers...
   Telephone: **(561) 993-1600** ext. Fax: **(561) 992-7326**

5. Application Responsible Official Email Address:

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. 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 and all other applicable requirements identified in this application to which the Title V source is subject. 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 the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   Matth Capon for R. A. Lima 4/20/2005
   Signature Date

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **524.90** North (km) **2940.10**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **26°35'00"** Longitude (DD/MM/SS) **80°45'00"**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **20, 49**	6. Facility SIC(s): **2061, 2062, 4911**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Matt Capone, Director of Environmental Programs**
2. Facility Contact Mailing Address... Organization/Firm: **Okeelanta Corporation** Street Address: **21250 U.S. Highway 27 South** City: **South Bay** State: **FL** Zip Code: **33493**
3. Facility Contact Telephone Numbers: Telephone: **(561) 993-1658** ext. Fax: **(561) 992-7326**
4. Facility Contact Email Address:

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter Total - PM	A	N
Particulate Matter - PM_{10}	A	N
Sulfur Dioxide - SO_2	A	N
Nitrogen Oxides - NO_x	A	N
Carbon Monoxide - CO	A	N
Volatile Organic Compounds - VOC	A	N
Lead - Pb	B	N
Hydrogen Chloride - H106	A	N
Mercury Compounds - H114	B	N
Total Hazardous Air Pollutants - HAPs	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID Nos. Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: OC-FI-C1 ☐ Previously Submitted, Date:_____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: OC-FI-C2 ☐ Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: OC-FI-C3 ☐ Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: ☐ Attached, Document ID:_____ ☐ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: ☐ Attached, Document ID:_____
3. Rule Applicability Analysis: ☐ Attached, Document ID:_____
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:____ ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☒ Attached, Document ID:**OC-FI-CV1** ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☒ Attached, Document ID:**OC-FI-CV2**
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☒ Attached, Document ID:**OC-FI-CV3**
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable

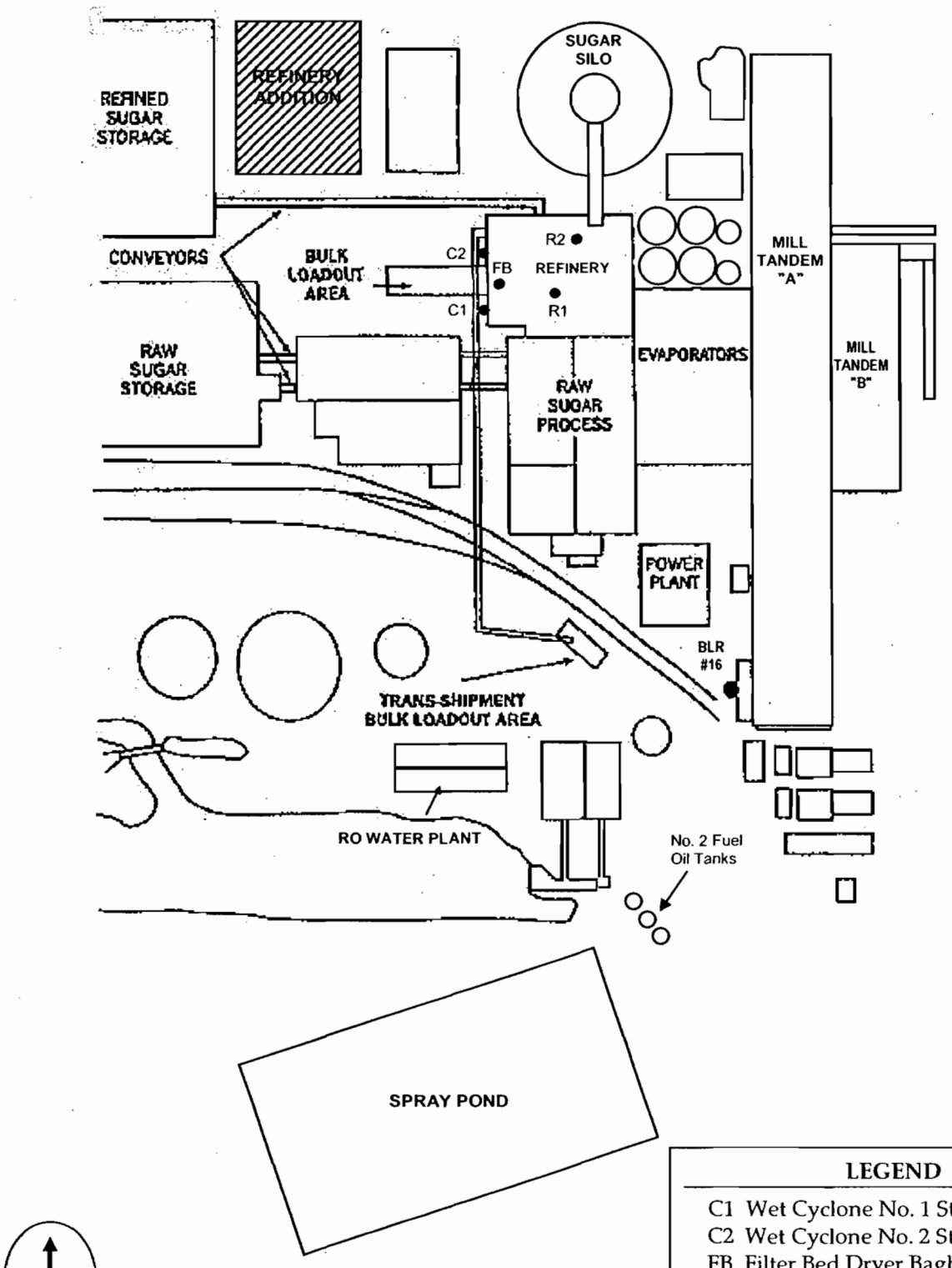
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:____ ☒ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☒ Attached, Document ID:**OC-FI-CV6** ☐ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-FI-C1

FACILITY PLOT PLAN



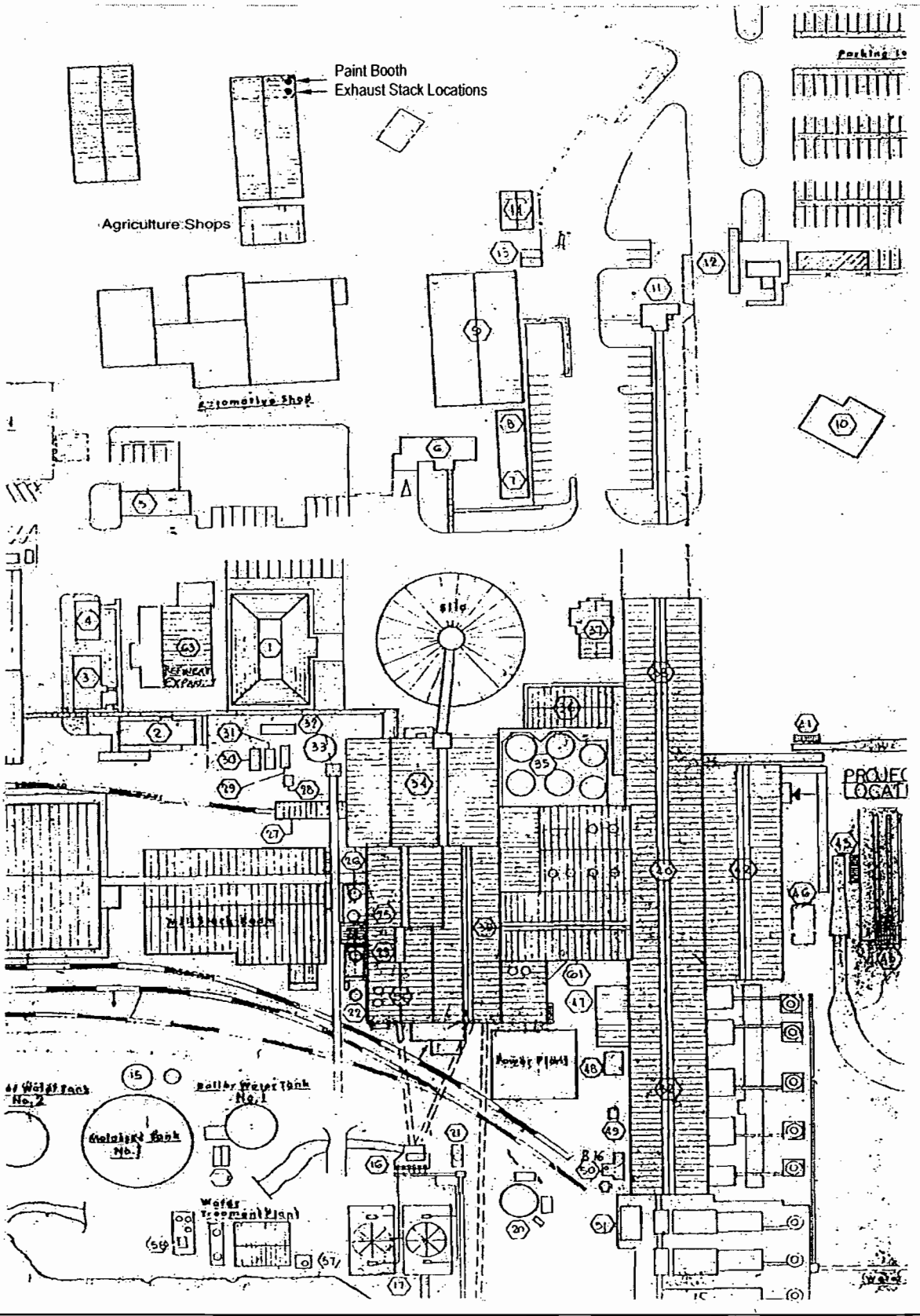
LEGEND

C1 Wet Cyclone No. 1 Stack Location
C2 Wet Cyclone No. 2 Stack Location
FB Filter Bed Dryer Baghouse Stack
R1 Wet Rotoclone No. 1 Stack
R2 Wet Rotoclone No. 2 Stack

Attachment OC-FI-C1a
Facility Plot Plan of Okeelanta Sugar Mill and Refinery

Note: Plot Plan is a general arrangement for informational purposes only. Plot plan is not to scale

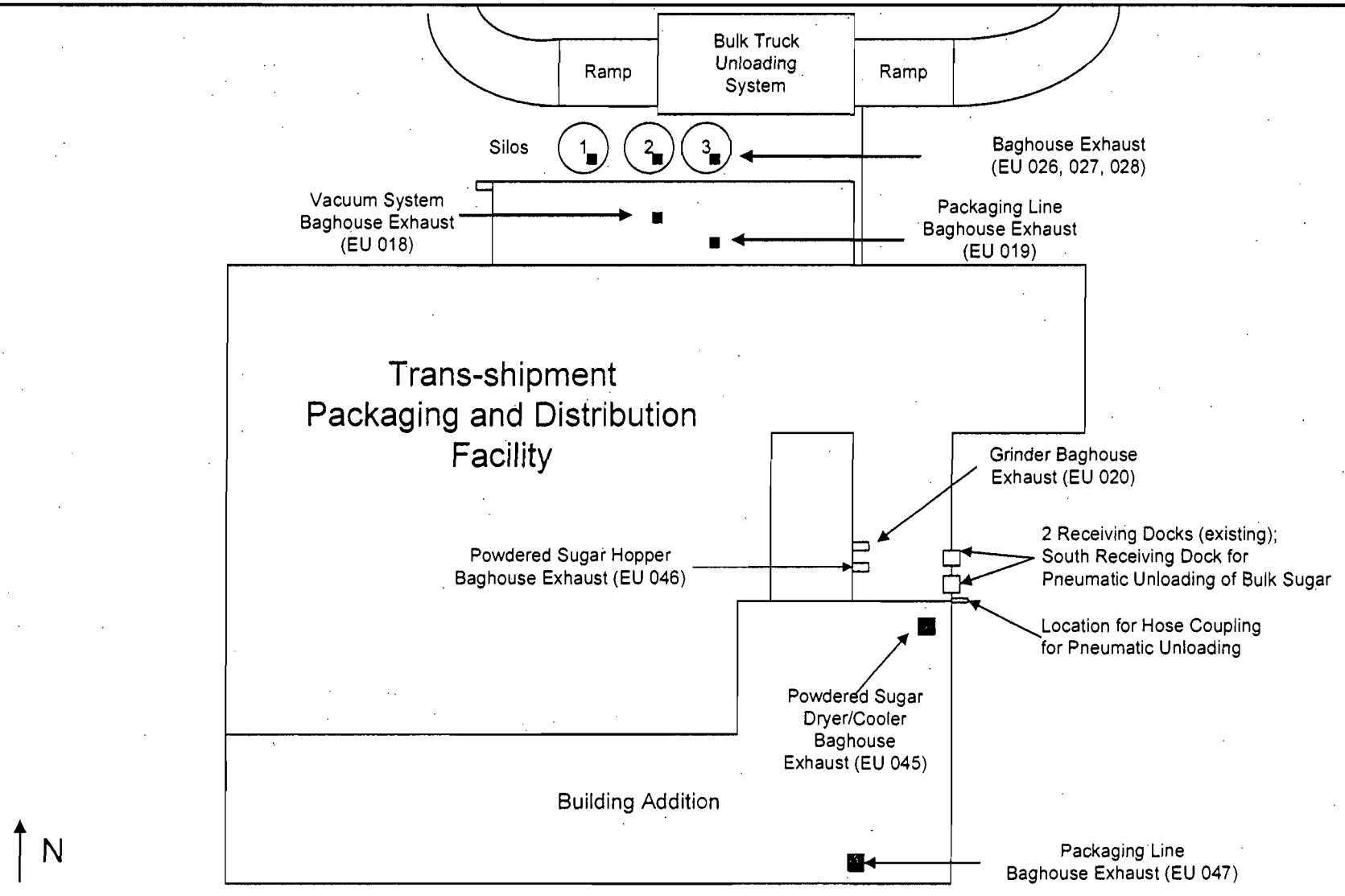
Golder Associates



Attachment OC-FI-C1b
Facility Plot Plan, including Paint Booth

Source: Golder, 2005.

Golder Associates



Plot plan is a general arrangement for informational purposes only. Locations are approximate. Plot plan is not to scale.

Attachment OC-FI-C1c
Trans-shipment Packaging and Distribution
Facility Plot Plan
Okeelanta Corporation

Golder Associates

090005-17-AV

(1)

E19982.36
N11077.88

N11173.11

E21666.97
N11181.25

N11182.61

P.O.C.
NE CORNER OF SECTION 16,
T 45 S, R 36 E

S0°51'19"E
793.03'

S89°10'38"W
50.00'

P.O.B.

N89°36'38"E
1130.00'

N89°36'38"E 406.00'

N89°36'38"E
402.64'

S89°36'38""W
402.64'

N89°36'38"E

CAS CAS CAS CAS CAS CAS CAS CAS CAS CAS CAS

2028.43'

2022.43'

28.37'

E20376.60
N11004.64

STORM WATER DETENTION BASIN NO. 1

P.O.B.
248.00'
S89°36'38""W

93.92'
145.00'
N89°36'38""E

S0°56'16"E
148.00'

N0°56'16"W
148.00'

124.29'

248.00'
N89°36'38"E

E20379.00
N10857.58

1

E22490.99
N11186.85

CONVEY
INE
NT

Boilers
A, B, and C
Building

Stack Stack Stack
A B C

BIOMASS PILE

E19991.98
N10573.03

E19991.98
N10491.94

E20093.08
N10425.13

E19995.53
N10274.47

E20156.08
N10425.56

E20158.53
N10275.98

STORM WATER DETENTION
BASIN NO. 2

BAGASSE PILE

ORIGINAL PARCEL LINE

S89°36'38"W
808.51'

SW CORNER OF PREVIOUS PARCEL

E738689.90
N814820.76
(FLORIDA STATE GRID REF)
E20000.00
N10000.00
(PLANT GRID REF)

S89°36'38"W 1700.00'

S0°51'19"E

EAST LINE OF SECTION 16
TOWNSHIP 45 SOUTH, RANGE 36 EAST

1700.00'

E22507.70
N10067.05

E22508.45
N10017.05

E22513.18
N9699.98

THIS SITE PLAN WAS FURNISHED BY NEW HOPE POWER PARTNERSHIP

N

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

PAG SURVEYORS, INC. L.B. 3411
1016 SOUTHEAST 4TH STREET
BELLE GLADE, FL 33430-4330 PHONE (561) 996-6615

SEAL

DATE	8-18-03
SCALE	1"=100'
DRAWN	SB
FB No.	
CHECKED	PAG

NO.	REVISIONS	BY	DATE

ATTACHMENT OC-FI-C1d. Facility Plot Plan

NEW HOPE POWER PARTNERSHIP
P.O. BOX 9
SOUTH BAY, FL 33493

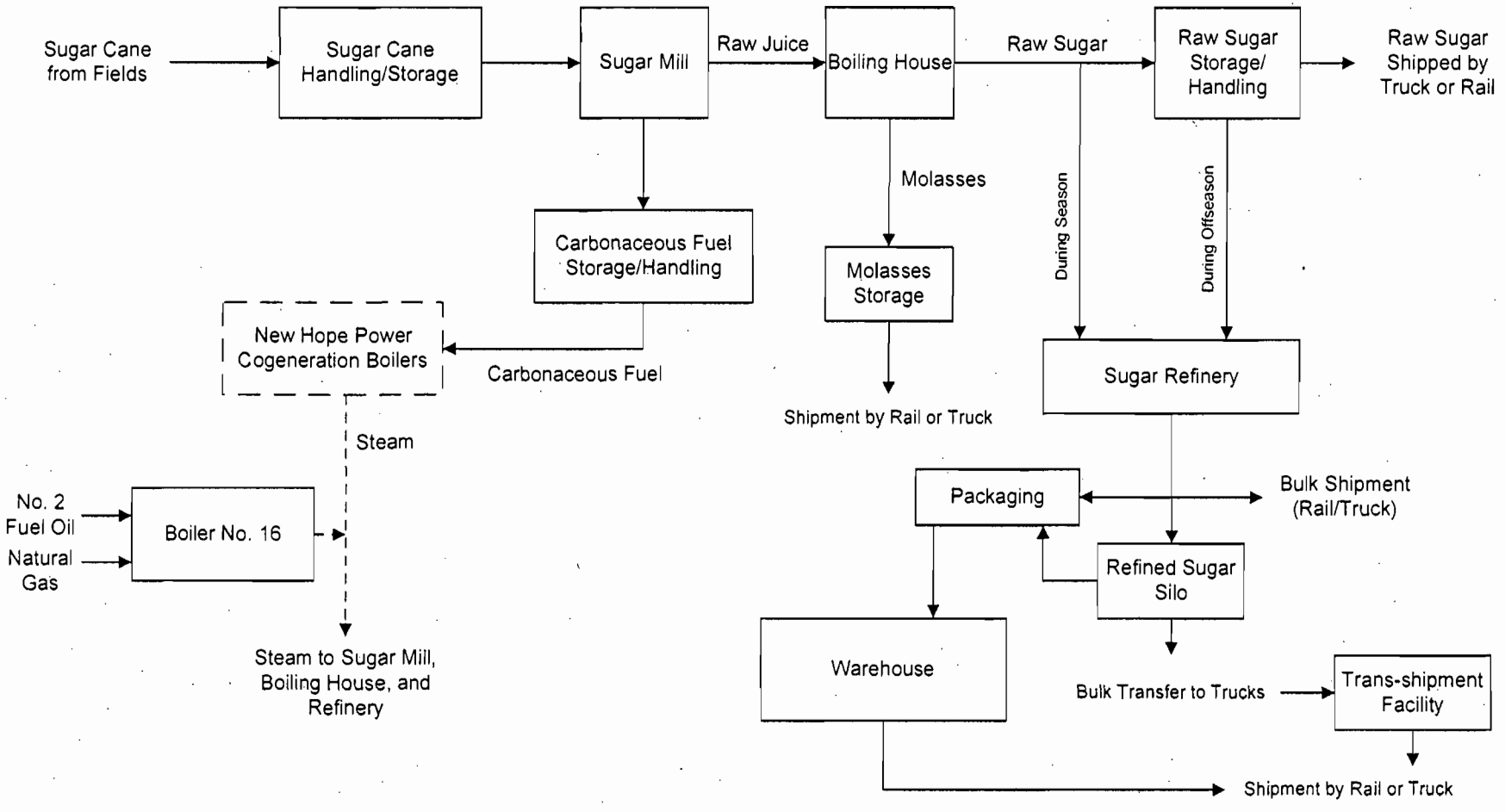
PALM BEACH COUNTY, FLORIDA

SHEET NO. 1 OF 1
WORK ORDER NO. 03-3-182

0537537/4/4.4/OC-FI-C1d.dwg

ATTACHMENT OC-FI-C2

PROCESS FLOW DIAGRAM

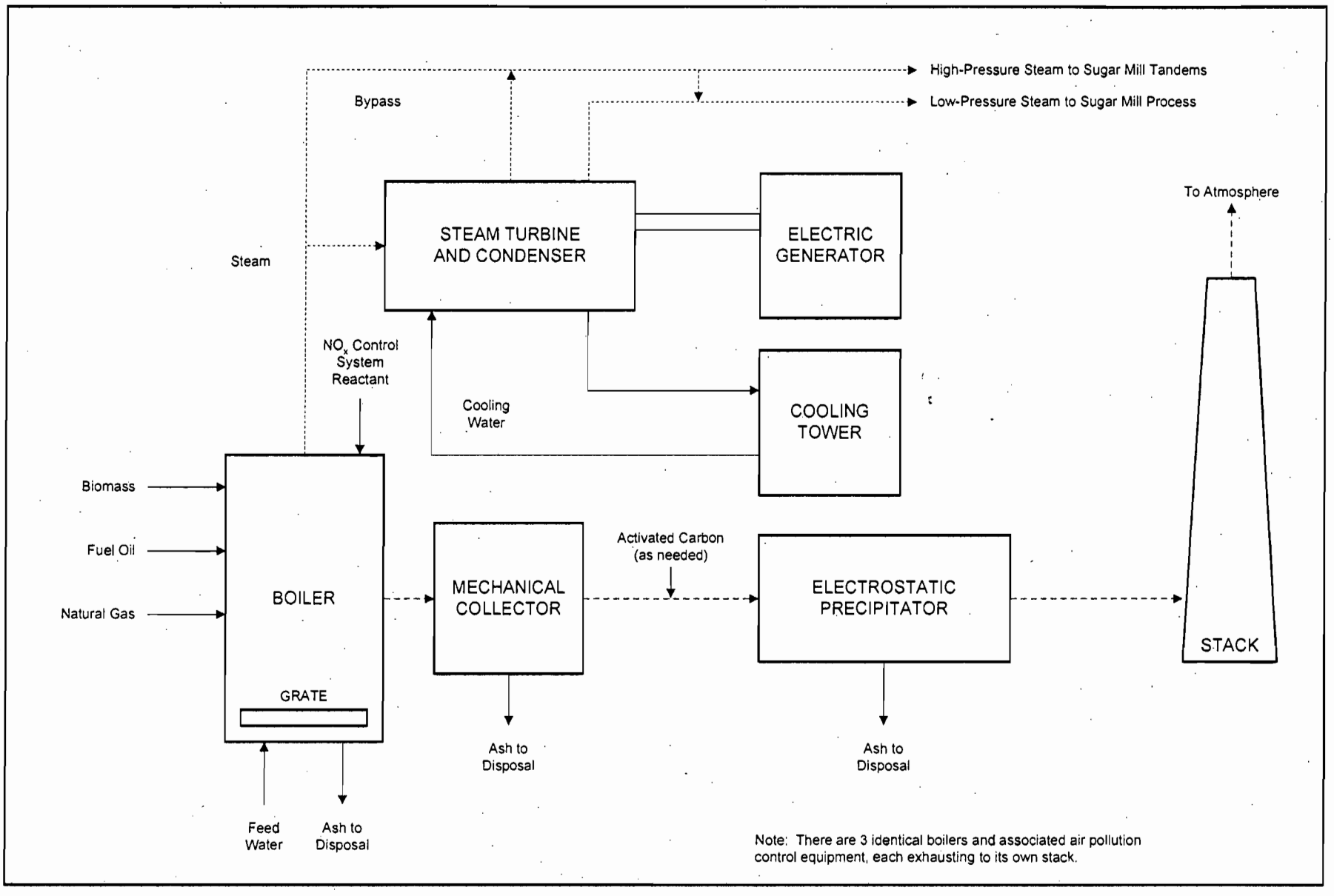


Attachment OC-FI-C2a
Sugar Manufacturing
Process Flow Diagram
Okeelanta Corporation
South Bay, FL

Overall Sugar Mill - Facility Flow Diagram

Process Flow Legend
Solid/Liquid
Steam
Gas

Golder Associates



Attachment OC-FI-C2b
Simplified Flow Diagram
New Hope Power Partnership Cogeneration Facility
South Bay, FL

Process Flow Legend
Solid/Liquid
Steam
Gas

Golder Associates

ATTACHMENT OC-FI-C3

PRECAUTIONS TO PREVENT UNCONFINED PARTICULATE MATTER

ATTACHMENT OC-FI-C3

PRECAUTIONS TO PREVENT UNCONFINED PARTICULATE MATTER

Okeelanta Corporation takes reasonable precautions to prevent emissions of unconfined particulate matter at the Okeelanta sugar mill, refinery, and trans-shipment facility. Reasonable precautions may include, but shall not be limited to:

- Removal of particulate matter from roads and other paved areas under the control of the permittee and from buildings or work areas to prevent particulates from becoming airborne;
- Landscaping or planting of vegetation;
- Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter; and
- Confining abrasive blasting and sanding where possible (Rule 62-296.320, F.A.C.).

The New Hope Power Partnership (NHPP) takes reasonable precautions to prevent emissions of unconfined particulate matter at the cogeneration facility. These consist of the following:

- Enclosing conveyors and conveyor transfer points to preclude particulate emissions (except those directly associated with the stack/reclaimers, for which enclosure is operationally infeasible);
- Application of water sprays or chemical wetting agents and stabilizers to storage piles, handling equipment, unenclosed transfer points, etc., during dry periods as necessary to all facilities to maintain an opacity in compliance with the permit requirements;
- Enclosing the fly ash handling system including the transfer points and storage bin. The ash is wetted in the ash conditioner to minimize fugitive dust prior to it being discharged into the disposal bin; and
- The mercury control system reactant storage silos are maintained at a negative pressure while operating with the exhaust vented to a filter control system.

ATTACHMENT OC-FI-CV1

LIST OF INSIGNIFICANT ACTIVITIES

ATTACHMENT OC-FI-CV1

LIST OF INSIGNIFICANT AND UNREGULATED EMISSION UNITS AND/OR ACTIVITIES

Insignificant Emission Units and/or Activities

The emission units and/or activities at the Okeelanta sugar mill, refinery, and trans-shipment facility, and at the New Hope Power Partnership cogeneration facility listed below are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

- Hi-Vac industrial vacuum system

Unregulated Emission Units and/or Activities

The emission units and/or activities at the Okeelanta Corporation sugar cane processing and New Hope Power Partnership power generation facilities listed below have been identified by the permittee as unregulated emission units. These are emission units which emit no "emissions-limited pollutant" and which are subject to no unit-specific work practice standard, though they may be subject to regulations applied on a facility-wide basis.

EU ID No.	EU Description	Activities/Equipment
036	Shop Activities	• Surface Coating Operations (non-RACT Vehicle Painting) • Diesel Engine – Portable Air Compressor • Vehicle Repair (Body Shop) • Crawlers Repair Shop • Hydraulic Oil, Mineral Spirits, and Waste/Used Oil Storage Tanks • Mechanics' Trucks with Portable Air Compressors (Gasoline Engines) • Portable Pressure Cleaners (Gasoline Engines) • Steam Clean Station • Truck, Trailer, Service Vehicles, Wheel Tractor Repair Shops • Cold Cleaning Devices (parts washer) • Containers for Oil/Grease/Used Oil • Oil/Water Separator/Skimmer Equipment • Portable Welders • Pressurized LPG Tanks • Stationary IC Engines • Vacuum Cleaning Systems • Vehicle Generated Dust • Woodworking and Metal Working Operations
037	Sugar Mill Boiler House	• Boiler Ash Disposal, Handling, and Storage • Boiler Blowdown Pipes & Vents • Boiler Water chemical Prep Tanks • Boiler Water Dearator and Tank
038	Sugar Mill Cane Dumping Area	• Cane Dumping, Handling, and Storage Cane Knives, Shredding, and Conveying • Steam Clean Station • Oil/Water Separator/Skimmer

EU ID No.	EU Description	Activities/Equipment
039	Sugar Cane Processing Facility	• Bagicillo Cyclone and Handling Systems • Batch Mixers (<30 cu. ft) • Carbonaceous Fuel Handling, Storage Piles and Hogger • Cold Cleaning Devices (non-Halogenated Solvent) • Containers for Oils/Wax/Grease • Cooling Water Towers, Spray Ponds, and Canals • Covered Conveyors/Drop Points • Diesel, Gasoline, Fuel Oil, Kerosene, Lube Oil, Waste and Used Oil Storage Tanks (non-NSPS) • Electric Ovens for Drying • Emergency Generators • Gear Boxes, Reducer Vents • Groundwater Remediation Stripping Tower • Handling of Raw Sugar • Industrial Wastewater Tanks (non-MACT) • Molasses Storage Tanks • Mud Ponds • Oil/Water Separator/Skimmer Equipment • Painting Operations • Portable Diesel Air Compressors • Portable Electric Generators • Portable Welders • Pressurized LPG Tanks • Process Water Filtration Intake Screens • Process Wide Flanges and Valves • Pump Operations • Scrubber Water Ponds and Troughs • Stationary Internal Combustion Engines (General) • Vacuum Cleaning Systems • Vehicle Generated Dust • Vents from Hydraulic/Lube Oil Reservoirs • Woodworking and Metal Working Operations • Centrifuges with Mixers • Crystallizers/Receivers • Evaporator Cleaning Operations • Evaporators (with non-Condensable Gas Vent) • Juice Heaters • Mud Filter Condensers Vacuum Pumps • Non-NSPS Process Tanks (Batch, Clarified Juice, Coagulant Mix, Flash, Liming, Mingler, Mixer, Mud Mixing, Pan Feed, Magma, Mud Waste, Muriatic, Sugar Receiver, and Syrup Storage) • Isopropyl Alcohol Stored in Drums • Isopropyl Alcohol Usage in Vacuum Pans • Rotary Vacuum Filters • Vacuum Pans with NCG Vents, Condensers, and Pumps • Lime Storage Silo and Distribution Systems • Lime Silo Baghouse (5% Opacity) • Diesel Engines for Operation of IWW Pumps • Phosphoric Acid and Sodium Hydroxide Storage and Distribution Systems • Mill Crown Wheel Removal Operations • Verical Molasses Crystalice • Cane Mills • Cush-cush Screens/Conveyors and DSM Screens • Hydrochloric Acid Tanks

EU ID No.	EU Description	Activities/Equipment
039 (cont'd)	Sugar Cane Processing Facility	• Mill Turbines with Vents • Carbon Slurry Tank • Condensate Tank
040	Sugar Mill Fuel Farm	• Diesel, Gasoline, and Oil Tanks • Diesel and Gasoline Pumps and Loading Arms • Groundwater Remediation Stripping Tower • Oil/Water Separator/Skimmer Equipment
041	Sugar Mill Potable Water System	• Hydrogen Sulfide Degasifiers • Process Water Discharge Canal • Sulfuric Acid Storage and Distribution System • Disinfection System
042	Sugar Mill Sewer Plant	• Sewage Treatment Plant
043	Sugar Refinery	• Bagging Machines • Bulk Curing, Wet Sugar, and Portable Sugar Overflow Bins • Centrifugals • De-sweeteners • Evaporators with Condensers • Large and Small Heaters • Primary and Secondary Filters • Refined Sugar Handling, Storage Silo, and Sugar/Syrup Mixer • Rotex Screens • Silo Scale • Sugar Refinery Process Tanks Including: Blackwater, Clarifier, Liquor, Melted Sugar Storage, Melter, Mixer, Reactor, Scums, Secondary Treatment, Sweetwater, and Syrup Storage Tanks, as well as Phosphoric Acid Storage and Distribution System • Vacuum Pans with Condenser and non-Condensable Gas Vent • Isopropyl Alcohol Usage in Vacuum Pans • Isopropyl Alcohol Stored in Drums • Powdered Carbon Mixing Room • Refined Sugar Dust Collectors (Vented Inside Building)
045	Sugar Trans-shipment Facility	• Containers for Oil/Grease/Ink • Diesel Fire Pump Engine • Diesel Fuel Storage Tank • Vehicle Generated Dust • Refined Sugar Dust Collectors (Vented Inside Building) • Portable Vacuum Cleaners
004, 005	Cogeneration Facility	• Boiler Drum Blowdown Tank • Cooling Towers • Diesel Fire Pump Diesel Engine and Diesel Fuel Storage Tank • Propane Tank • Hydrogen Sulfide Degasifier • No. 2 Distillate Fuel Oil Storage Tank • Oil/Water Separators • Sodium Hydroxide Tank • Wastewater Neutralization Tank • Cold Cleaning Devices (Parts Washers) • Sulfuric Acid Storage and Distribution Systems

ATTACHMENT OC-FI-CV2

TITLE V CORE LIST

ATTACHMENT OC-FI-CV2

TITLE V CORE LIST

(Effective 03/01/02)

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for 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.]

Federal:	***(description)***
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 06-01-01	
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.	Modifications 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

State:	*(description)*
62-4.210, F.A.C.	Construction Permits
62-4.220, F.A.C.	Operation Permit for New Sources

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES – GENERAL REQUIREMENTS, effective 06-21-01

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(5), F.A.C.	Notification of Startup
62-210.300(6), F.A.C.	Emissions Unit Reclassification
62-210.300(7), F.A.C.	Transfer of Air Permits
62-210.350, F.A.C.	Public Notice and Comment
62-210.350(1), F.A.C.	Public Notice of Proposed Agency Action
62-210.350(2), F.A.C.	Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review
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
62-210.400, F.A.C.	Emission Estimates
62-210.650, F.A.C.	Circumvention
62-210.700, F.A.C.	Excess Emissions
62-210.900, F.A.C.	Forms and Instructions
62-210.900(1), F.A.C.	Application for Air Permit – Title V Source, Form and Instructions
62-210.900(5), F.A.C.	Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions
62-210.900(7), F.A.C.	Application for Transfer of Air Permit – Title V and non-Title V Source

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES – PRECONSTRUCTION REVIEW, effective 08-17-00

State:	*(description)*
CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01	
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
62-213.415, F.A.C.	Trading of Emissions within a Source
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
62-213.450, F.A.C.	Permit Review by EPA and Affected States
62-213.460, F.A.C.	Permit Shield
62-213.900, F.A.C.	Forms and Instructions
62-213.900(1), F.A.C.	Major Air Pollution Source Annual Emissions Fee Form
62-213.(7), F.A.C.	Statement of Compliance Form
CHAPTER 62-296, F.A.C.: STATIONARY SOURCES – EMISSION STANDARDS, effective 03-02-99	
62-296.320(4), F.A.C.	Unconfined Emissions of Particulate Matter
62-263.320(2), F.A.C.	Objectionable Odor Prohibited
CHAPTER 62-297, F.A.C.: STATIONARY SOURCES – EMISSIONS MONITORING, effective 03-02-99	
62-297.310, F.A.C.	General Test Requirements
62-297.330, F.A.C.	Applicable Test Procedures
62-297.340, F.A.C.	Frequency of Compliance Tests
62-297.345, F.A.C.	Stack Sampling Facilities Provided by the Owner of an Emissions Unit
62-297.350, F.A.C.	Determination of Process Variables
62-297.570, F.A.C.	Test Report
62-297.620, F.A.C.	Exceptions and Approval of Alternate Procedures and Requirements

Miscellaneous:	
CHAPTER 28-106, F.A.C.	Decisions Determining Substantial Interests
CHAPTER 62-110, F.A.C.	Exception to the Uniform Rules of Procedure, effective 07-01-98
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 02-09-99
CHAPTER 62-281, F.A.C.	Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96

ATTACHMENT OC-FI-CV3

COMPLIANCE REPORT AND PLAN

ATTACHMENT OC-FI-CV3

COMPLIANCE REPORT AND PLAN

Okeelanta Corporation certifies that the Okeelanta sugar mill, refinery, and trans-shipment facilities, and the New Hope Power Partnership cogeneration facility, as of the date of this application, is in compliance with each applicable requirement addressed in this Title V air permit application except for the items presented in the Compliance Report and Plans in Attachments OC-FI-CV3a and OC-FI-CV3b.

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Compliance statements for this facility will be submitted on an annual basis to FDEP, before March 1st of each year.

Matthew Capone for R.A. LIMA — 4/20/2005

Signature, Responsible Official — Date

ATTACHMENT OC-FI-CV3a

COMPLIANCE REPORT AND PLAN FOR
OKEELANTA CORPORATION

The Compliance Report and Plan for Okeelanta Corporation (Okeelanta) was originally included in the Title V permit modification request submitted to the Florida Department of Environmental Protection (FDEP) in November 2002. Originally, there were seven items to the plan. The following six items present the original plan revised to reflect its current status. The seventh item of the original plan, addressing the paint booth, has been deleted since the changes requested by Okeelanta to address the deviations from applicable requirements specified in the original plan were incorporated into the Title V permit during 2004.

1. Mill Boiler No. 16 (EU 014)

A. INITIAL CO EMISSIONS TESTING

Deviations from Applicable Requirements

A construction permit was issued on October 30, 2001 that authorized modification of the operation and burner system of Boiler No. 16 to allow firing of either natural gas or No. 2 fuel oil (Permit No. 0990005-009-AC). Specific Condition No. 12 of Permit No. 0990005-009-AC requires that initial CO emissions compliance testing be conducted while burning natural gas. Testing is required to be conducted within 60 days of achieving 90 percent of the maximum capacity of the boiler, but no later than 180 days after startup of the modified boiler. Prior to the CO emissions compliance testing, a relative accuracy test audit (RATA) for the NO_x continuous emission monitor (CEM) is required by Specific Condition No. 7 of the permit.

The NO_x RATA was conducted on March 19, 2002, which met the requirements of 40 CFR Part 60. However, the NO_x CEM did not complete the 7-day calibration drift test procedure in accordance with Performance Specification 2 in Appendix B of 40 CFR 60. CO emissions testing was conducted for natural gas firing immediately following completion of the RATA in order to test within 60 days of achieving 90 percent of maximum capacity. However, this was prior to certification of the monitor due to not completing an acceptable 7-day drift test.

Within 60 days of firing distillate fuel oil in the modified boiler, CO emissions testing on fuel oil is also required. Okeelanta has not fired fuel oil in the modified boiler to date, and has no immediate plans to fire fuel oil. Therefore, CO emission testing has not been conducted for fuel oil burning.

Compliance Plan

FDEP has agreed to accept the initial CO test data with the stipulation that NO_x 7-day drift test be completed and submitted as soon as possible. The annual CO compliance tests were successfully performed during 2003 and 2004. The status of the NO_x 7-day drift test is detailed below in Sub-section C.

In order to comply with the permit requirement for CO testing on fuel oil if and when Okeelanta burns fuel oil, Okeelanta proposes to conduct initial CO emissions testing within 60 days of initially firing fuel oil.

B. FUEL OIL SAMPLING

Deviations from Applicable Requirements

Specific Condition No. 15 of permit No. 0990005-009-AC requires that an initial fuel oil sample be taken from the fuel oil storage tanks serving Boiler No. 16. The sample is to be analyzed for fuel sulfur, and reported with the initial emissions compliance test report. Okeelanta has not performed the required sampling and analysis because there have been no fuel oil deliveries of No. 2 oil since the construction permit was issued on October 30, 2001, allowing use of natural gas, and no fuel oil has been fired in the boiler since that time.

Compliance Plan

In order to comply with the permit requirement for testing of the fuel oil, Okeelanta will perform the required sampling prior to burning any fuel oil in Boiler No. 16. The analysis results will be submitted to the Department no later than 30 days after commencing operation of Boiler No. 16 on oil.

C. CONTINUOUS NO_x, OPACITY, AND OXYGEN MONITORS

Deviations from Applicable Requirements

For the NO_x CEMS, a calibration drift test procedure, in accordance with performance specification 2 in Appendix B of 40 CFR 60 CEMS, was not successfully completed during 2002, 2003, 2004, or 2005 to date. This has been previously reported on each of the quarterly reports submitted during 2003 and 2004. Specific Condition No. 7 of the air construction permit required the installation of a dual span NO_x CEMS. The conversion of the CEMS from single-span (0 to 250 ppm NO_x) to dual-span NO_x (adding 0 to 100 ppm NO_x channel) took place between February 11 and 15, 2002. Since the conversion of the CEMS according to the construction permit, the operation of the boiler has been limited. Part of the difficulty in completing a successful calibration drift test has been meeting the requirement that the checks must be made while the boiler is operating at more than 50 percent of normal load for seven consecutive days according to Performance Specification 2. The boiler did not operate during the second and third quarters of 2002, 2003, and 2004. During the fourth quarter of 2002, the boiler operated 47 non-consecutive days (1,078 hours). During the first quarter of 2003, the boiler operated 53 days (1,185 hours), but the NO_x analyzer failed for 14 days (336 hours) during the middle of the period of operation. During the last quarter of 2003, the boiler only operated for 59 hours. During the first quarter of 2004, the boiler operated for only 20 hours for the sole purpose of completing the annual compliance test and NO_x relative accuracy test audit (RATA). Each annual NO_x RATA test performed has been successful.

Compliance Plan

The 7-day drift test will be performed by Okeelanta at such time that the boiler operates for greater than 50 percent load for seven consecutive days in accordance with Performance Specification 2 in Appendix B of 40 CFR 60.

2. Volatile Organic Liquid Storage Tanks (EUs 015, 016, and 017)

Deviations from Applicable Requirements

The Title V permit, Specific Condition III.B.6.(b), Operating Parameters: Volatile Organic Liquid Types, states "...shall monitor and record the types (name and true vapor pressure at 80°F)." This requirement is for the three storage tanks of fuel oil

for Boiler No. 16. While Okeelanta is maintaining records to demonstrate that No. 2 fuel oil stored is very low sulfur, they have no record of the True Vapor Pressure at 80°F, nor have they collected samples to monitor for this parameter. This condition was reported previously on March 1, 2002, 2003, 2004, and 2005.

Compliance Plan

Okeelanta Corporation had requested that this condition be modified in the application to revise the Title V permit submitted on November 1, 2002. Okeelanta Corporation made the request to delete the reference to monitoring true vapor pressure again on October 24, 2003, when comments on the draft revised Title V permit were submitted to FDEP. Through this Title V renewal application, Okeelanta is requesting this condition be deleted, since the NSPS Subpart Kb is no longer applicable (see Attachment OC-FI-CV6).

3. **Trans-shipment Facility – Central Vacuum System (EU 018)**

Deviations from Applicable Requirements

Specific Condition III.F.9 of the Title V permit requires that a formal compliance test be conducted annually for visible emissions (VE) from the baghouse serving the Central Vacuum System (EU 018). This source was last tested for VEs in April 2001. VE testing was attempted on September 11, 2002 and September 27, 2002, but the system was malfunctioning and is in need of repairs including an overhaul or replacement of intake ductwork throughout the facility.

Compliance Plan

The system is still not operable. No schedule has been set to perform the repairs to the system. The system will not be operated until the repairs are made. Okeelanta proposes to conduct a VE compliance test within 30 days of restarting operation of the Central Vacuum System. FDEP will be notified at least 60 days prior to the intended restart date in accordance with U Permit Condition 19 of Appendix TV-3.

4. Trans-shipment Facility – Powdered Sugar Dryer and Cooler (Former Main Sugar Receiver) (EU 045)

Deviations from Applicable Requirements

Specific Condition 11 of permit No. 0990005-008-AC, issued May 10, 2001, requires that a formal compliance test be conducted for visible emissions from the three new baghouses (EUs 045, 046, and 047) within 30 days of initial operation. Startup trials for the powdered sugar dryer and cooler system have not been completed, and the system has not yet begun operating.

Compliance Plan

Because this system is for a specialty product that is not produced at this facility, and the business no longer intends to produce the product line at this facility, Okeelanta does not plan to operate this unit at the present time. Should business conditions lead to the utilization of the powdered sugar dryer and cooler (EU 045), Okeelanta proposes to conduct an initial VE compliance test within 30 days of the start of the production operation.

5. Trans-shipment Facility – Three Sugar Silos (EUs 026, 027, and 028)

Deviations from Applicable Requirements

In the current Title V operating permit, Specific Condition No. C.11(d), Operating Parameters, states ". . . shall monitor and record the date, silo loaded, and the amount transferred." For Emissions Units 026, 027, and 028, Okeelanta does not have records of the silos loaded individually. Unloading of bulk sugar into the three silos is performed and controlled by a single automated system. Refined sugar is transferred to the silos by a common series of conveyors and bucket elevators that automatically switch from one silo to the next based on the usage rates from the silos and their current sugar levels. Okeelanta maintains records of the total amount loaded into the three silos on a 24-hour basis. This condition was reported previously on March 1 of 2001, 2002, 2003, 2004, and 2005.

Compliance Plan

Okeelanta requests that the Title V permit Specific Condition No. C.11 be revised to allow recording of the total amount of sugar transferred to the three silos on a 24-hour basis. There is no corresponding condition in the underlying construction

permit (Permit No. 0990005-008-AC) that would require recording sugar transferred to each individual silo.

6. Sugar Refinery (EUs 021, 022, 023, 024, 025, 034, and 035)

A. DESIGN SPECIFICATIONS REQUIREMENTS (EUs 023 AND 024)

Deviations from Applicable Requirements

In the current Title V operating permit, Specific Condition No. D.1., Design Specifications, contain control equipment specifications as applicable requirements. These include baghouse specifications for flow rate, filter area, and air-to-cloth ratio. The cyclonic control devices include specifications for water injection rate and pressure drop. The specifications are identical to those identified in the permit application Attachment OC-EU18-L3a. However, as the permit application attachment notes, the cyclonic control device values were either estimates or based on standard cyclone design calculations.

Compliance Plan

Since these specifications are not actual measured values, Okeelanta cannot certify that there has not been any deviation from the listed values. The inclusion of this provision in the Title V permit provides no regulatory benefit or protection of the environment. Attachment OC-EU3-J3a of the November 2002 permit application indicated the control equipment parameters of water injection rate and pressure drop measured during compliance testing. The last revision to the permit (March 2004) did not update the minimum values for these parameters to be consistent with the attachment submitted with the application. As discussed in a conference call with FDEP on January 29, 2003, it was Okeelanta's understanding that the pressure drop parameters would be deleted from the permit. Okeelanta requests that this item be addressed with the renewal of the Title V permit.

B. PERMITTED CAPACITIES

Deviations from Applicable Requirements

The Title V permit, Specific Condition D.2., Permitted Capacities, states "...shall not allow, cause, suffer, or permit the operation of a unit in excess of the following capacities...." Restrictions on the hourly and annual process rates (refined sugar output) of each source associated with the EUs 021, 022, 023, 024, 025, 034, and

035 are imposed by this condition. The production limits were revised by air construction permit No. 0990005-005-AC. Okeelanta Corporation does not monitor and record the process rates of the refinery processes on an hourly basis. The exception to this is during compliance tests to demonstrate compliance with the visible emissions limit. Each of the hourly process rate limits listed in Condition III.D.2. are believed to have been exceeded during the hours that 30-minute compliance tests were performed on September 21 or 22, 2004, for EUs 021, 022, 025, 034, and 035. Therefore, continuous compliance cannot be certified. The inconsistency concerning process rate limits in Condition III.G.2. of the original Title V permit was reported previously on March 1, 2001, 2002, 2003, 2004, and 2005. Okeelanta had requested that this condition be modified in the application to revise the Title V permit submitted on November 1, 2002. Process rates are recorded on a 24-hour basis, which is consistent with the air construction permit, and the annual limits needed to be updated to be consistent with air construction permit No. 0990005-005-AC.

Refined sugar production during 2004 was within the annual limits specified in air construction permit No. 0990005-005-AC. However, Condition III.D.2. lists the annual process rate limit for EU 025 as 260,000 tons per year. Okeelanta objected to this baseless limit when comments on the draft revised Title V permit were provided to FDEP on October 24, 2003. The annual process rate for EU 025 during 2004 was 264,798 tons.

Compliance Plan

It is requested that the Title V permit be revised to be consistent with permit No. 0990005-005-AC.

C. FLUIDIZED BED DRYER/COOLER METHODS OF OPERATION

Deviations from Applicable Requirements

The Title V permit Specific Condition III.D.6.(d), Methods of Operation: Fluidized Bed Dryer/Cooler, states "...may operate the fluidized bed dryer/cooler at a maximum feed rate of 36.25 TPH." EU 025 exceeded a feed rate of 36.25 TPH on September 21, 2004, during compliance testing. Okeelanta Corporation monitors and records production rates on a 24-hour basis and does not record process rates on

an hourly basis. Therefore, it is not known precisely when other deviations from this restriction have occurred. Process rates are recorded on a 24-hour basis, which is consistent with the air construction permit. Additionally, the limit of 36.25 TPH is inconsistent with the process rate information in the application for the revised air construction permit. Okeelanta pointed out this inconsistency when comments on the draft revised Title V permit were provided to FDEP on October 24, 2003.

Compliance Plan

It is requested that the Title V permit be revised to be consistent with permit No. 0990005-005-AC.

D. FLUIDIZED BED DRYER/COOLER PM LIMITS

Deviations from Applicable Requirements

The Title V permit Specific Condition III.D.9, Particulate Matter (PM and PM_{10}), states "...shall not allow particulate matter emissions from each unit greater than the following... EU 025 Allowable Emissions (TPY) for PM = 6.91 and for PM_{10} = 0.25 TPY." The allowable emissions limits listed in this permit condition are not consistent with the application for air construction permit No. 0990005-005-AC. The Fluidized Bed Dryer/Cooler limits should be 11.70 TPY for PM and 0.468 TPY for PM_{10}. Okeelanta objected to this condition and requested correction of the emissions limits when comments on the draft revised Title V permit were provided to FDEP on October 24, 2003. Actual calendar year emissions for EU 025 were 7.94 tons PM and 0.32 tons PM_{10}.

Compliance Plan

It is requested that the Title V permit be revised to be consistent with the application to obtain permit No. 0990005-005-AC.

E. REFINERY OPERATING HOURS

Deviations from Applicable Requirements

The Title V permit Specific Condition III.D.7 states "The permittee is authorized to operate...a maximum of 7,200 hours per year." In 2003, refinery EUs 021, 022, and 025 had operating hours of 7,704 hours. The FDEP issued a warning letter on October 22, 2004. However, permit No. 0990005-005-AC, issued January 19, 2001,

did not limit hours of operation of the refinery. The application submitted in March 2000 to obtain permit No. 0990005-005-AC specifically requested up to 8,760 hours per year of operation.

Compliance Plan

It is requested that the Title V permit be revised to be consistent with the application to obtain permit No. 0990005-005-AC.

ATTACHMENT OC-FI-CV3b

COMPLIANCE REPORT AND PLAN FOR NEW HOPE POWER PARTNERSHIP

Material Handling and Storage Operations (EU 004)

Deviations from Applicable Requirements

Specific Condition No. F.18 of the current Title V permit and Emission Unit Specific Condition No. 17 of construction Permit No. 0990332-017-AC/PSD-FL-196(P) requires that annual visible emission (VE) tests on the mercury control system reactant storage silos, for each silo that was loaded with carbon during the federal fiscal year.

Due to changes in the ash handling system at NHPP, the fly ash silo was taken out of service prior to October 1, 2001, and has not operated since. The mercury control system reactant storage silos were taken out of service in February 2002. As a result, a VE test has not been conducted on these sources since.

Compliance Plan

There are no plans at this time to reactivate the fly ash silo or the mercury control system reactant storage silos. Specific Condition No. 16 of construction Permit No. 0990332-017-AC/PSD-FL-196(P) requires that the mercury control system be reactivated if two or more cogeneration boilers exceed their annual mercury emissions limit. NHPP will conduct visible emission compliance tests on the fly ash silo and on the mercury control system reactant storage silos within 60 days of restarting each source. The Florida Department of Environmental Protection will be provided with notice at least 15 days prior to testing.

ATTACHMENT OC-FI-CV6

REQUESTED CHANGES TO CURRENT TITLE V AIR OPERATION PERMIT

ATTACHMENT OC-FI-CV6

REQUESTED CHANGES TO CURRENT TITLE V OPERATION PERMIT

The current Title V Permit No. 0990005-012-AV for Okeelanta Corporation was issued on March 18, 2004, by the Florida Department of Environmental Protection (FDEP). The permit covers the Okeelanta Corporation (Okeelanta) facilities, including the Okeelanta sugar mill, refinery, and trans-shipment facilities, and the New Hope Power Partnership (NHPP) cogeneration facility. After a draft of the permit was issued on September 12, 2003, Mr. Ricardo Lima of Okeelanta Corporation requested some minor changes/clarification to the permit in a letter to FDEP, dated October 24, 2003. However, a number of these changes were not incorporated into the final permit.

The same changes were also requested in the Title V permit revision application which was submitted to FDEP in April, 2004 for a revision to Boilers A, B, and C, and the material handling and storage operation of the NHPP cogeneration facility. Since a revised Title V permit has not yet been issued since April 2004, this renewal application for the Title V permit for Okeelanta Corporation also requests the same minor changes and clarifications, which have been revised to reflect the most recent changes to the facility. The following major changes are reflected in this Title V renewal application:

- Revision of the NHPP cogeneration boilers' heat input rates.
- Revision of NSPS storage tanks from regulated to unregulated emissions units, since they are no longer subject to Subpart Kb. Subpart Kb was revised on October 15, 2003. The tanks are between 75 and 151 cubic meters (m^3) in size and store volatile organic liquid with a vapor pressure less than 15.0 kiloPascals (kPa).
- Reduction of mercury test frequency for the NHPP cogeneration boilers.
- Incorporate modifications to the paint spray booth requested in the air permit application to FDEP, dated February 2005, and reflected in the paint booth emissions unit section. It is requested that the revisions to the construction permit, an application for which was submitted in February 2005, are also reflected in the renewed Title V permit.

Also included is a revised "Wood, Bagasse, and Ash Inspection and Testing Plan" (Attachment OC-EU5-I5) and an operating procedure (Attachment OC-EU5-ARC) that addresses inclement weather operations for the NHPP cogeneration facility.

The minor change/clarifications to the existing Title V Permit No. 0990005-012-AV, originally requested in a letter from Mr. Ricardo Lima, Okeelanta Corporation, dated October 24, 2003, are presented below:

Referenced attachments made a part of this permit:

Page 2 Comment. Add Appendix CP-1, Compliance Plan in accordance with Facility-Wide Condition 12.

SECTION I. Facility Information

Subsection B.

EU ID Nos. & Brief Description

Page 4. Comment I.B(4). In a letter submitted to FDEP on March 28, 2003, Okeelanta requested that the permit be revised to change the three sugar silos [Emissions Units (EUs) 026, 027, and 028] to a single emissions unit with three exhaust points. Since the silos were designed and have always operated as a single automated system, revising the permit in this manner is a more accurate description of the source. It is suggested that the brief description list be revised as follows:

EU ID No.	Status	Brief Description
026	Regulated	Sugar Silos (S1101, S1102, and S1103)
027	N/A	Re-designated as part of EU 026
028	N/A	Re-designated as part of EU 026

Page 4. Comment I.B.(2). EU ID No. 045 Brief Description:
Replace "Main Sugar Receiver" with "Powdered Sugar Dryer/Cooler Baghouse".

Page 4. Comment I.B.(3). EU ID Nos. 045, 046, and 047 should be listed as "Regulated".

Subsection C. Relevant Documents

Page 6. Comment I.C. Re-state EU 045 as "Powdered Sugar Dryer/Cooler Baghouse (EU 045)" for listing permit document "0990005-013-AC, Construction Permit".

SECTION II. Facility-wide Conditions

Page 7. Comment II.4. Re-insert wording "when applicable" at the end of paragraph 4(a).

SECTION III. Emissions Units and Conditions

Subsection A. Mill Boiler No. 16

Continuous Monitoring Requirements

Page 16. Comment III.A.10. In paragraph "d", reference to Condition No. 11 should be changed to Condition No. A.7.

Page 17. Comment III.A.12. In the second sentence, replace "in Appendix XS" with "by Condition A.15."

Recordkeeping and Reporting Requirements

Page 18. Comment III.A.15. In the third sentence replace "Appendix XS of this permit" with "40 CFR 60.7 and Figure 1 attached to this permit".

Subsection B. NSPS Storage Tanks

Pages 19-20. Okeelanta requests that this emissions unit be deleted and the storage tanks listed as unregulated emissions units. The tanks are between 75 and 151 m^3 in size and store volatile organic liquids with a vapor pressure less than 15.0 kPa, which makes them exempt from Subpart Kb recently revised on October 15, 2003.

Emissions Unit Details

Page 19. Comment III.B.(2). Change two references to EU ID No. 033 to 005.

Compliance Demonstrations and Periodic Monitoring

Page 20. Comment III.B.5. Change reference to Condition E.4. to Condition B.4.

Page 20. Comment III.B.6. Change paragraph (b) to delete reference to monitoring and recording of true vapor pressure. This is consistent with Section 2 of the Compliance Plan (Appendix CP-1) made part of this permit by Condition II.12.

Subsection C. Trans-shipment Facility

Page 21. Comment III.C.(1). Okeelanta requests that EU 026 be described as "Sugar Silos (S1101, S1102, and S1103)", and that references to EUs 027 and 028 be deleted. Since the sugar-receiving silos were designed and operate as a single system, revising the permit to one emissions

unit including the silos and their three emission points is a more accurate description of the source.

Page 21. Comment III.C.(2). EUs 045, 046, and 047 should be added to this subsection.

Emissions Unit Details

Page 21. Comment III.C.(3). For clarification, it is suggested that the last sentence of the first paragraph be separated from the paragraph and re-worded as follows:

"The facility also includes original packaging lines and sugar grinder baghouses, refined sugar-receiving silos, a new powdered sugar dryer/cooler with baghouse, a new sugar grinder with baghouse, and new packaging lines with baghouse."

Page 21. Comment III.C(4). The last sentence of the second paragraph should be deleted since the new packaging lines (EU 047) have no connection to the existing packaging lines (EU 019).

Page 21. Comment III.C(5). The last sentence of the third paragraph should be deleted since the new powdered sugar dryer/cooler with baghouse (EU 045) has no connection to the existing sugar grinder and hopper (EU 020).

Page 21. Comment III.C(6). Designate silos S1101, S1102, and S1103 as EU 026, and delete reference to EUs 027 and 028. Add descriptions for EUs 045, 046, and 047.

Construction Restrictions

Page 22. Comment III.C.1. Change both EUs 027 and 028 to 026 in the table. Add descriptions for EUs 045, 046, and 047.

Essential Potential to Emit (PTE) Parameters

Page 23. Comment III.C.2. Change EUs 027 and 028 to 026. Add EU 047 with process capacity of 865 tons/day. Add third note at the bottom of the table to indicate that the daily process capacity of 865 tons/day for EUs 019 and 047 is the combined capacity for all packaging lines. Change note (1) for EU 019 to "Maximum Loading to packaging lines 1 through 10."

Page 23. Comment III.C.3(b). Change to authorize 10 original packaging lines and in addition four new packaging lines to operate simultaneously up to the maximum process rate (865 tons/day) specified in Condition C.2.

Page 23. Comment III.C.3(c). Change to authorize operation of new powdered sugar dryer/cooler (EU 045) and new powdered sugar hopper (EU 046) in addition to original grinder and hopper (EU 020).

Page 23. Comment III.C.4. Add references to EUs 045, 046, and 047 in authorization to operate continuously.

Emission Limitations and Standards

Page 24. Comment III.C.5. Delete reference to EUs 027 and 028, and add EUs 045, 046, and 047.

Page 24. Comment III.C.6. Change EU 019 limit to 3.754 TPY. Change EU 020 limit to 0.060 TPY. Add EU 045 (3.379 TPY), EU 046 (0.676 TPY), and EU 047 (2.253 TPY). (See Attachment OC-EU2-F1.8 submitted with Okeelanta's renewal application to revise the permit for calculations of potential annual emissions from each unit.)

Compliance Demonstration and Periodic Monitoring

Page 25. Comment III.C.11. Okeelanta requests that the words "silo loaded" be deleted from paragraph (d). Okeelanta requests that the Title V permit be revised to allow recording of the total amount of sugar transferred to the three silos on a 24-hour basis. There is no corresponding condition in the underlying construction permit (Permit No. 0990005-008-AC) that would require recording sugar transferred to each individual silo. This is consistent with the Compliance Plan (Appendix CP-1) made part of this permit by Condition II.12.

Subsection D. Sugar Refinery

Emissions Unit Details

Page 27. Comment III.D. The last paragraph describing EU 035 states incorrectly that the transfer bulk load-out operation is fed from the other bulk load-out operation (EU 034). The description should state that the four enclosed conveyors in series feed sugar from the refinery (curing bins or refined sugar storage silo).

Construction Restrictions

Page 27. Comment III.D.1(b). The cyclonic control devices include specifications for water injection rate and pressure drop. The specifications are identical to those identified in the permit application Attachment OC-EU18-L3a. However, as the permit application attachment notes, the cyclonic control device values were either estimates or based on standard cyclonic design calculations. Furthermore, measuring the pressure drop continually in these control devices has proven to be impractical due to fouling in the instrument sample lines. Okeelanta has requested that the pressure drop column be deleted and that only the water injection rate be included in the construction restrictions conditions. The minimum water injection rates should be changed to 2 gpm for EUs 021 and 022, and 24 gpm for EUs 023 and 024. This request is consistent with Section 6 of the Compliance Plan (Appendix CP-1) in the Title V permit and the January 2003 conference call with FDEP and Okeelanta.

Essential Potential to Emit (PTE) Parameters

Page 28. Comment III.D.2. The process rate capacity table is incorrect. There is no basis in the underlying construction permits to impose an hourly process rate restriction to the refinery sources. Therefore, the table should be modified as follows:

EU ID No.	Process Rates			
	RD – TPD	**FBD – TPD**	**Total TPY***	**Regulation/Permit**
021	1,200	1,200	390,000	0990005-005-AC
022	1,200	1,200	390,000	0990005-005-AC
023	1,200	NA	130,000	0990005-005-AC
024	1,200	NA	130,000	0990005-005-AC
025	NA	1,200	390,000	0990005-005-AC
034	600	600	117,000	0990005-005-AC
035	1,200	1,200	273,000	0990005-005-AC

RD – Rotary Dryer FBD – Fluidized Bed Dryer

TPD – Tons per Day TPY – Tons per Year

* Federally Enforceable

Page 29. Comment III.D.6(d). The maximum feed rate authorized for the fluidized bed dryer/cooler should be changed to 1,200 TPD as specified in the permit application. Construction Permit No. 0990005-005-AC, dated January 19, 2001, should be referenced.

Page 29. Comment III.D.7. The previous limitation on hours of operation is obsolete since Permit No. 0990005-005-AC became effective. The operation is limited instead by the new maximum process rates. All refinery equipment should be authorized to operate continuously within the established production limitations.

Emission Limitations and Standards

Page 30. Comment III.D.9. Particulate matter emission limitation should be changed to reflect permit No. 0990005-005-AC and the corresponding permit application. The allowable emission table should be changed as follows:

EU ID No.	Allowable Emission (TPY)		
	PM	PM_{10}	Regulation/Permit
021	4.13	1.65	0990005-005-AC
022	0.18	0.073	0990005-005-AC
023	10.01	5.59	0990005-005-AC
024	10.01	5.59	0990005-005-AC
025	11.70	0.47	0990005-005-AC
034	3.06	0.12	0990005-005-AC
035	1.43	0.06	0990005-005-AC
Total	36.80*	13.39*	0990005-005-AC

*Note: Total is less than individual maximums due to operational limitations.

Subsection E. Material Handling (Cogeneration Facility)

Pages 32-36. Comment E. Various references to coal storage and handling should be deleted.

Subsection F. Compliance Methods and Reporting

Page 48. Comment F.20.b. Mercury emissions are tested annually based on the permit condition. Based on the actual test data presented in the following table, the mercury emissions from the cogeneration boiler range between 2.66E-07 to 3.68E-06 lb/MMBtu, well below the mercury emission limit of $5.4x10^{-6}$ lb/MMBtu. Based on the consistency of actual emissions, which are well below the allowable emissions, it is requested that mercury be removed from the annual testing requirement. Based on Condition F.20, mercury emissions will be tested every 5 years upon permit renewal. In addition, it should only be required to test one of the three boilers, since all boilers are identical and are burning the same fuel from a common fuel supply.

Pollutant	Stack Testing: 02/12/02 - 02/14/02 Post-Mechanical Dust Collectors			Stack Testing: 01/21/03 - 01/23/03 Post-Mechanical Dust Collectors			Stack Testing: 02/11/04 - 02/16/04 Post-Mechanical Dust Collectors			Stack Testing: 02/22/05 - 02/24/05 Post-Mechanical Dust Collectors		
	Unit A Biomass (lb/MMBtu)	Unit B Biomass (lb/MMBtu)	Unit C Biomass (lb/MMBtu)	Unit A Biomass (lb/MMBtu)	Unit B Biomass (lb/MMBtu)	Unit C Biomass (lb/MMBtu)	Unit A Biomass (lb/MMBtu)	Unit B Biomass (lb/MMBtu)	Unit C Biomass (lb/MMBtu)	Unit A Biomass (lb/MMBtu)	Unit B Biomass (lb/MMBtu)	Unit C Biomass (lb/MMBtu)
Particulate (TSP)	0.008	0.010	0.011	0.0089	0.0079	0.0081	0.0068	0.0098	0.0123	0.0162	0.0145	0.0123
Particulate (PM_{10})	0.008	0.010	0.011	--	--	--	--	--	--	--	--	--
VOCs	0.007	0.036	0.020	0.0027	0.0057	0.058	0.0057	0.0067	0.0063	0.0013	0.0190	0.0063
Lead	2.08E-05	1.41E-05	2.09E-05	--	--	--	--	--	--	--	--	--
Mercury	1.65E-06	9.70E-07	3.68E-06	7.55E-07	8.51E-07	1.10E-06	6.24E-07	3.51E-07	6.14E-07	2.66E-07	1.32E-06	6.14E-07

Sources: Air Consulting Engineering, Inc., 2005; Golder, 2005

Note: Biomass firing consisted of approximately 50% wood and 50% bagasse.

Subsection G. Paint Booth

Page 52. Comment G.2. Delete third and fourth sentences of "Methods of Operation" paragraph to allow different manufacturers and models of the airless paint spray system as long as the airless application system is of equivalent or better efficiency.

Subsection H. Common Conditions

EU ID No., Status and Brief Description

Page 56. Comment H(1). The status and description of the retired mill boilers (EUs 003 through 013) should indicate "N/A" and "Shutdown", consistent with Section I.B. (Pages 4 and 5).

Page 56. Comment H(2). Okeelanta has requested that EUs 027 and 028 be re-designated as part of EU 026. Please refer to Comment I.B(1) above.

Page 56. Comment H(3). The Transfer Bulk load-out Operation EU ID No. should be corrected to 035. EUs 045, 046, 047, and 048 should be added to the list.

SECTION IV. ATTACHMENTS

Please include Appendix CP-1, Compliance Plan made part of the permit by Facility-wide Condition II.12.

Appendix RBL-001 Comment. This appendix should be updated to include the most recent BACT determinations for EU 014 on October 29, 2001.

Appendix U-1 Comment. The last two sections of unregulated emissions units and/or activities in this appendix (Cogeneration Facility and Trans-shipment Facility) should be assigned new ID numbers that are not assigned to other emissions units listed on Page 4 of the permit.

TABLE OF CONTENTS

Table of Contents Comment. Suggest referencing Section III.C. as "Trans-shipment facility" and Section III.D. as "Sugar Refinery". The page number column information needs to be updated. Please list Appendix CP-1, Compliance Plan.

EMISSION UNIT 1

MILL BOILER NO. 16

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ 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.

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).

   ☐ 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. Description of Emissions Unit Addressed in this Section:
   Mill Boiler No. 16

3. Emissions Unit Identification Number: **014**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**20**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: **Babcock and Wilcox** Model Number: **FM 120-97**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Package Boiler equipped with Low-NO_x burners for No. 2 distillate fuel oil and natural gas. This unit is designed for approximately 15-percent flue gas recirculation.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Low-NO_x Burners

Flue gas recirculation

2. Control Device or Method Code(s): **024, 026**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **150,000 lb/hr steam, 24-hour average**	
3. Maximum Heat Input Rate: **211** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

Maximum heat input rate represents natural gas burning. The maximum heat input rate for fuel oil is 202 MMBtu/hr.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **BLR 16**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **75** feet	7. Exit Diameter: **5.0** feet
8. Exit Temperature: **393** °F	9. Actual Volumetric Flow Rate: **118,600** acfm	10. Water Vapor: **9** %
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 Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Stack parameters are based on 2001 stack test data.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Industrial Boiler - Distillate Oil, Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **1-02-005-01**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **1.485**	5. Maximum Annual Rate: **10,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **136**
10. Segment Comment: **Based on 202 MMBtu/hr while firing No.2 fuel oil. Maximum Annual Rate based on cap of 10,000,000 gallons per year.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Industrial Boiler - natural gas greater than 100 MMBtu/hr**		
2. Source Classification Code (SCC): **1-02-006-01**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.207**	5. Maximum Annual Rate: **1812.12**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,020**
10. Segment Comment: **Based on 211 MMBtu/hr while firing natural gas.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			NS
PM_{10}			NS
SO_2			EL
NO_x	205	026	EL
CO			EL
VOC			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **12.12** lb/hour **41.02** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.06 lb/MMBtu** Reference: **Permit No. 0990005-009-AC**	7. Emissions Method Code: **3**
8. Calculation of Emissions: **See Attachment OC-EU1-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Maximum annual emissions based on firing natural gas with maximum No. 2 fuel oil. Limited No. 2 fuel oil usage to 10,000,000 gallons per year. Emission factor given is for fuel oil firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 percent S**	4. Equivalent Allowable Emissions: **12.12** lb/hour **40.81** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Limit is maximum sulfur content of No. 2 fuel oil.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **40.40** lb/hour **94.45** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.20 lb/MMBtu** Reference: **Permit No. 0990005-009-AC**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **See Attachment OC-EU1-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emission factor based on fuel oil firing on 24-hour basis. Annual emissions based on 30-day rolling average (0.12 lb/MMBtu).**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.20 lb/MMBtu**	4. Equivalent Allowable Emissions: **40.40** lb/hour **81.62** tons/year
5. Method of Compliance: **EPA Method 7, 7A, or 7E**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on Permit No. 0990005-009-AC for fuel oil firing. Requested Allowable Emissions is 24-hour average. Annual limit is based on 30-day rolling average (0.12 lb/MMBtu) and annual fuel oil limit.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.10 lb/MMBtu**	4. Equivalent Allowable Emissions: **21.1** lb/hour **55.45** tons/year
5. Method of Compliance: **EPA Method 7, 7A, or 7E**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on Permit No. 0990005-009-AC for natural gas firing. Requested Allowable Emissions is 24-hour average. Annual Emissions based on 30-day rolling average (0.06 lb/MMBtu).**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **22.22** lb/hour **96.2** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.11 lb/MMBtu** Reference: **CEM data**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **See Attachment OC-EU1-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emission factor based on fuel oil firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.11 lb/MMBtu**	4. Equivalent Allowable Emissions: **22.22** lb/hour **74.81** tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on Permit No. 0990005-009-AC for fuel oil firing and annual limit on fuel oil usage.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.10 lb/MMBtu**	4. Equivalent Allowable Emissions: **21.10** lb/hour **92.42** tons/year
5. Method of Compliance: **EPA Method 7, 7A, or 7E**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on Permit No. 0990005-009-AC for natural gas firing.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: **27** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0990005-009-AC. During startup, shutdown, or malfunction, opacity shall not exceed 20 percent, except for one 6-minute period per hour that does not exceed 27 percent.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **5**

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Rosemount** Model Number: **OPM2000**	Serial Number:
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60 Subpart Db 60.42b(a). No serial number provided because monitor is routinely replaced to ensure optimum performance.**	

Continuous Monitoring System: Continuous Monitor **2** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Rosemount** Model Number: **NGA2000**	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60 Subpart Db 60.48b(b). No serial number or installation date provided because monitor is routinely replaced to ensure optimum performance.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **3** of **5**

1. Parameter Code: **Steam Production**	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **Honeywell** Model Number: **DR4500 Truline**	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Existing permit condition requires monitoring of the steam production. No serial number or installation date provided because meter is routinely replaced to ensure optimum performance.**	

Continuous Monitoring System: Continuous Monitor **4** of **5**

1. Parameter Code: **TEMP**	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **Honeywell** Model Number: **DR4500 Truline**	Serial Number:
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Existing permit condition requires monitoring of the steam production. No serial number provided because meter is routinely replaced to ensure optimum performance.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **5** of **5**

1. Parameter Code: **Steam Pressure**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Honeywell** Model Number: **DR4500 Truline**	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Existing permit condition requires monitoring of the steam production. No serial number or installation date provided because meter is routinely replaced to ensure optimum performance.**	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU1-I1** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU1-I2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU1-I4** ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU1-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☐ Not Applicable
3. Alternative Methods of Operation
   ☒ Attached, Document ID: **OC-EU1-IV3** ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-EU1-F1.8

CALCULATION OF EMISSIONS

Attachment OC-EU1-F1.8. Maximum Emissions from Boiler No. 16, Okeelanta Corporation (Revised 10/8/02)

Regulated Pollutant	Natural Gas Combustion						No. 2 Fuel Oil Combustion						Annual Emissions With Maximum Fuel Oil Firing[d] (TPY)	Maximum Annual Emissions Due to Any Combination[e] (TPY)
	Emission Factor ($lb/10^6$ scf)	Emission Factor (lb/MMBtu)	Ref.	Activity Factor[a] (MMBtu/hr)	Hourly Emissions (lb/hr)	Annual Emissions[b] (TPY)	Emission Factor (lb/1000 gal)	Emission Factor (lb/MMBtu)	Ref.	Activity Factor[a] (MMBtu/hr)	Hourly Emissions (lb/hr)	Annual Emissions[c] (TPY)		
Particulate Matter (PM)	1.9	1.86E-03	1	211	0.39	1.72	--	0.03	4	202	6.06	20.40	20.80	20.80
Particulate Matter (PM_{10})	1.9	1.86E-03	1	211	0.39	1.72	--	0.03	4	202	6.06	20.40	20.80	20.80
Sulfur dioxide (SO_2)	--	1.00E-03	4	211	0.21	0.92	7.85	0.06	4	202	12.12	40.81	41.02	41.02
Nitrogen oxides (NO_x)--24-hour block	--	0.10	4	211	21.10	92.42	--	0.20	4	202	40.40	136.03	157.41	157.41
--30-day rolling	--	0.06	4	211	12.66	55.45	--	0.12	4	202	24.24	81.62	94.45	94.45
Carbon monoxide (CO)	--	0.10	4	211	21.10	92.42	--	0.11	4	202	22.22	74.81	96.20	96.20
VOC	--	0.03	2	211	6.33	27.73	--	0.03	2	202	6.06	20.40	26.82	27.73
Sulfuric acid mist (SAM)	--	6.13E-05	3	211	1.29E-02	0.06	--	0.0026	6	202	0.52	1.75	1.76	1.76
Lead (Pb)	5.E-04	4.90E-07	1	211	1.03E-04	4.53E-04	--	9.00E-06	5	202	1.82E-03	6.12E-03	6.23E-03	6.23E-03
Mercury (Hg)	2.6E-04	2.55E-07	1	211	5.38E-05	2.36E-04	--	3.00E-06	5	202	6.06E-04	2.04E-03	2.09E-03	2.09E-03
Beryllium (Be)	1.2E-05	1.18E-08	1	211	2.49E-06	1.09E-05	--	3.00E-06	5	202	6.06E-04	2.04E-03	2.04E-03	2.04E-03
Fluorides (Fl)	--	--		--	--	--	--	--		--	--	--	--	--

References:

1. Factors for natural gas combustion from AP-42, Tables 1.4-1, 1.4-2 and 1.4-4 (7/98). Factors were converted to lb/MMBtu by dividing by 1,020 Btu/scf.
2. Proposed emission limits. Based on emission guarantees from vendor.
3. Based on similar derivation of sulfuric acid mist from AP-42 for fuel oil. 5% of SO_2 becomes SO_3 then take into account the ratio of sulfuric acid mist and gaseous sulfate molecular weights (98/80).
4. Based on permit no. 0990005-009-AC.
5. Factors for No. 2 fuel oil combustion, AP-42 Table 1.3-1, 1.3-3, and 1.3-10 (9/98). A heating value of 136,000 Btu/gal and a maximum sulfur content of 0.05% were used for the No. 2 fuel oil.
6. The emission factor for SO_3 emissions from a No. 2 fuel fired boiler with low NOx burners (5.7S $lb/10^3$ gal where S is the sulfur content) was multiplied by the ratio of sulfuric acid mist and gaseous sulfate molecular weights (98/80).

Footnotes:

[a] The proposed maximum permitted heat input rate is 211 MMBtu/hr for natural gas and 202 MMBtu/hr for fuel oil.

[b] Based on maximum proposed operation of 8,760 hours.

[c] Based on maximum proposed limit for 0.05% sulfur fuel oil of 10,000,000 gallons/yr, equivalent to 6,733 hours per year at 202 MMBtu/hr (1,360,000 MMBtu/yr).

[d] Based on emissions due to maximum fuel oil usage (10,000,000 gal/yr or 1,360,000 MMBtu/yr) and the remaining due to natural gas (435,830 MMBtu/yr).

[e] Maximum emissions predicted for either natural gas combustion only, No. 2 fuel oil combustion only, or a combination of No. 2 fuel oil and natural gas combustion.

Sample Calculations:

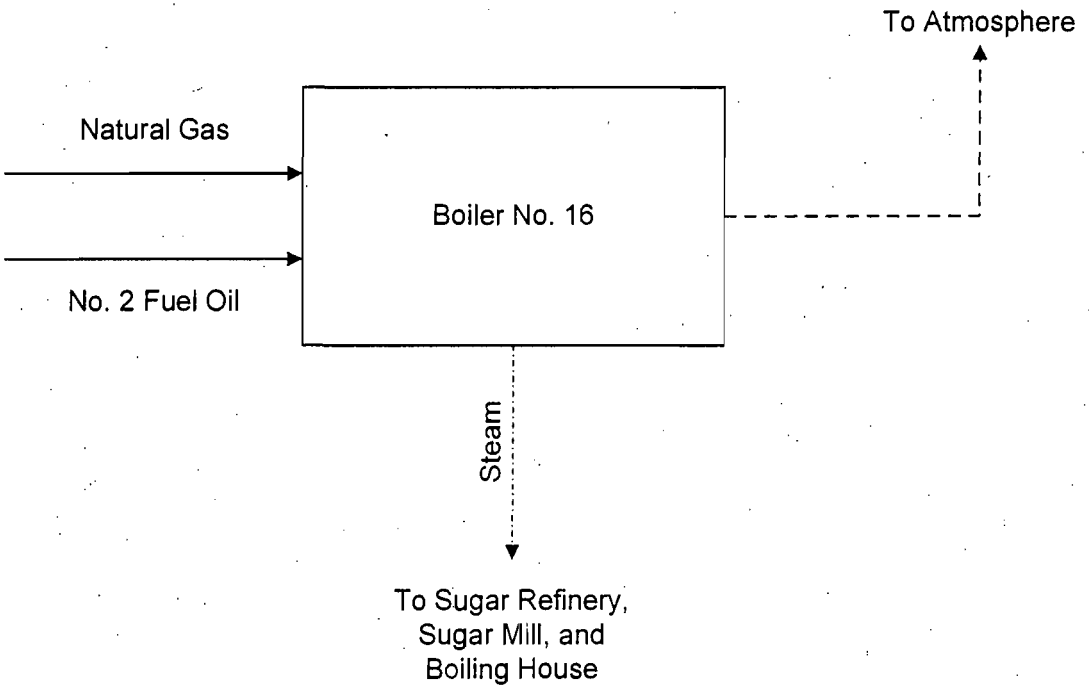
Hourly Emissions = Emission Factor x Activity Factor

Annual Emissions = Hourly Emissions x hours of operation (hrs/yr) / 2,000 (lb/ton)

Annual Emissions due to firing both fuels = Annual Emissions due to fuel oil + [(Hourly emissions due to natural gas x (8,760 hrs/yr - 6,733 hrs/yr)/ 2,000 (lb/ton)

ATTACHMENT OC-EU1-I1

PROCESS FLOW DIAGRAM



Attachment OC-EU1-I1
Boiler No. 16 - Process Flow Diagram

Okeelanta Corporation - South Bay, FL

Process Flow Legend
Solid/Liquid
Gas
Steam

Golder Associates

ATTACHMENT OC-EU1-I2

FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT OC-EU1-I2

DESIGN FUEL SPECIFICATIONS[a] FOR BOILER NO. 16

Parameter		No. 2 Fuel Oil	Natural Gas
Specific Gravity		0.865	–
Heating Value	(Btu/lb)	19,175	–
Heating Value	(Btu/gal)	136,000	–
Heating Value	(Btu/scf)		1,020
Ultimate Analysis (dry basis percentage):			
Carbon		87.01	82.96
Hydrogen		12.47	5.41
Nitrogen		0.02	1.58
Oxygen		0.00	5.72
Sulfur		0.05	0.67
Ash/Inorganic		0.00	3.66
Moisture		–	4.5

[a] Represents average fuel characteristics.

Sources: Okeelanta Corp., 2002.
Combustion Engineering, 1981.

ATTACHMENT OC-EU1-I4

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT OC-EU1-I4

PROCEDURES FOR STARTUP AND SHUTDOWN
NHPP COGENERATION BOILERS

During startup and shutdown of the boiler, excess emissions for more than 2 hours in a 24-hour period are possible. Pursuant to Rule 62-210.700(1), F.A.C., the following procedures and precautions are taken to minimize the magnitude and duration of excess emissions during startup and shutdown of Boiler No. 16.

Startup Procedures

1. Check to ensure all the boiler doors/registers are closed.
2. The CEM system is started, propane supply to the gun is opened and compressed air is admitted to atomizing system.
3. The start switch is turned on to activate the startup sequence. Once oil firing is established, minimum fire (10%) is maintained for 30 minutes on and 30 minutes off for approximately 2 hours.
4. Continuous firing is established and steam pressure increased to about 150 psig. Firing continues on low fire until operating pressure (350 psig) is available on the line (about 5 hours after initial firing). Atomization is changed to steam.
5. Once consistent steam flow to user(s), e.g., turboalternator, is established, boiler controls are placed in automatic.

Shutdown Procedures

1. Control is turned off and the fuel pump is shut off.
2. The atomizing steam valve is closed. The FD fan is shut off.
3. After about 3 hours, the drum level is set at maximum level.

ATTACHMENT OC-EU1-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT OC-EU1-IV1

EU ID 014 : Mill Boiler No. 16 Rule Applicability for Okeelanta Corporation

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	
APPLICABLE	60 Subpart A	40CFR60.7	Notification and Record Keeping	
APPLICABLE	60Subpart A	40CFR60.8	Performance Testing	
APPLICABLE	60 Subpart A	40CFR60.11	Compliance with standards and maintenance requirements.	
APPLICABLE	60 Subpart A	40CFR60.12	Circumvention.	
APPLICABLE	60 Subpart A	40CFR60.13	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(a)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(b)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(c)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(d)(1)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(d)(2)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(e)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(f)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(h)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(i)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.13(j)	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.19	General notification and reporting requirements	
NON-APPLICABLE	60 Subpart Da	40CFR60.40a	Subpart Da - NSPS for Electric Utility Units for which construction commenced after Sept. 18, 1978.	Boiler No. 16 is not an electric utility unit.
APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db - Applicability and delegation of authority	
APPLICABLE	60 Subpart Db	40CFR60.42b	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Db	40CFR60.42b(a)		
NON-APPLICABLE	60 Subpart Db	40CFR60.42b(c)		
NON-APPLICABLE	60 Subpart Db	40CFR60.42b(d)		
APPLICABLE	60 Subpart Db	40CFR60.42b(e)		
NON-APPLICABLE	60 Subpart Db	40CFR60.42b(f)		
APPLICABLE	60 Subpart Db	40CFR60.42b(g)		
APPLICABLE	60 Subpart Db	40CFR60.42b(j)		
APPLICABLE	60 Subpart Db	40CFR60.43b	Standard for particulate matter	
NON-APPLICABLE	60 Subpart Db	40CFR60.43b(b)		
APPLICABLE	60 Subpart Db	40CFR60.43b(f)		
APPLICABLE	60 Subpart Db	40CFR60.43b(g)		
APPLICABLE	60 Subpart Db	40CFR60.44b	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Db	40CFR60.44b(a)		
APPLICABLE	60 Subpart Db	40CFR60.44b(h)		
APPLICABLE	60 Subpart Db	40CFR60.44b(i)		
NON-APPLICABLE	60 Subpart Db	40CFR60.44b(j)		
NON-APPLICABLE	60 Subpart Db	40CFR60.44b(l)		
APPLICABLE	60 Subpart Db	40CFR60.45b		
APPLICABLE	60 Subpart Db	40CFR60.45b(a)		
APPLICABLE	60 Subpart Db	40CFR60.45b(j)		
APPLICABLE	60 Subpart Db	40CFR60.46b		
APPLICABLE	60 Subpart Db	40CFR60.46b(a)		
APPLICABLE	60 Subpart Db	40CFR60.46b(c)		
APPLICABLE	60 Subpart Db	40CFR60.46b9(d)		
APPLICABLE	60 Subpart Db	40CFR60.46b(d)(7)		
APPLICABLE	60 Subpart Db	40CFR60.46b(e)		
APPLICABLE	60 Subpart Db	40CFR60.46b(e)(1)		
NON-APPLICABLE	60 Subpart Db	40CFR60.46b(e)(3)		
APPLICABLE	60 Subpart Db	40CFR60.46b(e)(4)		
APPLICABLE	60 Subpart Db	40CFR60.47b	Emission monitoring for sulfur dioxide	
APPLICABLE	60 Subpart Db	40CFR60.47b(f)		
APPLICABLE	60 Subpart Db	40CFR60.48b	Emission monitoring for particulate matter and nitrogen oxides	
APPLICABLE	60 Subpart Db	40CFR60.48b(a)		
APPLICABLE	60 Subpart Db	40CFR60.48b(b)		
APPLICABLE	60 Subpart Db	40CFR60.48b(c)		
APPLICABLE	60 Subpart Db	40CFR60.48b(d)		
APPLICABLE	60 Subpart Db	40CFR60.48b(e)		
APPLICABLE	60 Subpart Db	40CFR60.48b(e)(2)		
APPLICABLE	60 Subpart Db	40CFR60.48b(e)(3)		
APPLICABLE	60 Subpart Db	40CFR60.48b(f)		
APPLICABLE	60 Subpart Db	40CFR60.48b(g)		
APPLICABLE	60 Subpart Db	40CFR60.48b(g)(1)		

EU ID 014 : Mill Boiler No. 16 Rule Applicability for Okeelanta Corporation

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
NON-APPLICABLE	60 Subpart Db	40CFR60.48b(g)(2)		
NON-APPLICABLE	60 Subpart Db	40CFR60.48b(i)		
APPLICABLE	60 Subpart Db	40CFR60.49b	Reporting and recordkeeping requirements	
APPLICABLE	60 Subpart Db	40CFR60.49b(a)		
APPLICABLE	60 Subpart Db	40CFR60.49b(b)		
NON-APPLICABLE	60 Subpart Db	40CFR60.49b(c)		
APPLICABLE	60 Subpart Db	40CFR60.49b(c)(1)		
APPLICABLE	60 Subpart Db	40CFR60.49b(d)		
APPLICABLE	60 Subpart Db	40CFR60.49b(f)		
APPLICABLE	60 Subpart Db	40CFR60.49b(g)		
APPLICABLE	60 Subpart Db	40CFR60.49b(h)		
APPLICABLE	60 Subpart Db	40CFR60.49b(i)		
APPLICABLE	60 Subpart Db	40CFR60.49b(j)		
NON-APPLICABLE	60 Subpart Db	40CFR60.49b(k)		
NON-APPLICABLE	60 Subpart Db	40CFR60.49b(l)		
APPLICABLE	60 Subpart Db	40CFR60.49b(o)		
APPLICABLE	60 Subpart Db	40CFR60.49b(r)		
APPLICABLE	60 Subpart Db	40CFR60.49b(s)		
APPLICABLE	60 Subpart Db	40CFR60.49b(v)		
APPLICABLE	63 Subpart DDDDD	40 CFR 63.7545	Subpart DDDDD - NESHAP for Industrial, Commercial, and Institutional Boiler and Process Heaters - Notification Requirements	
APPLICABLE	62-204	62-204.800(7)2.	NSPS Subpart Da adopted by reference.	
APPLICABLE	62-296 <	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
NON-APPLICABLE	62-296 <	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 16 has a heat input of <250 MMBtu/hr
APPLICABLE	62-296 <	62-296.406	Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Em	
NON-APPLICABLE	62-296 >	62-296.500	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	Boiler No. 16 was subject to PSD/BACT for Nox emissions.
NON-APPLICABLE	62-296 >	62-296.570	Reasonably Available Control Technology (RACT) - Requirements for Major VOC- and NOx-Emitting Facility	Boiler No. 16 was subject to PSD/BACT for Nox emissions.
NON-APPLICABLE	62-296 >	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	Okeelanta is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.702	Fossil Fuel Steam Generators.	Okeelanta is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	required number of test runs.	
APPLICABLE	62-297	62-297.310(2)	Operating rate during testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of emission rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable test procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of process variables.	
APPLICABLE	62-297	62-297.310(6)	Required stack sampling facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of compliance tests.	
APPLICABLE	62-297	62-297.310(8)	Test reports.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)(a)	EPA Method 1 - Sample and Velocity Traverses for Stationary sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(10)	EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	

EU ID 014 : Mill Boiler No. 16 Rule Applicability for Okeelanta Corporation

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CF	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(41)	EPA Method 201 - Determination of PM10 Emissions (Exhaust Gas Recycle Procedure) - 40 CFR 51 Appendix	
APPLICABLE	62-297	62-297.401(41)(a)	EPA Method 201 - Determination of PM10 Emissions (Exhaust Gas Recycle Procedure) - 40 CFR 51 Appendix	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)(a)	EPA Method 7A - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	
	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	

BOILER NO. 16 AIR PERMIT NO. 0990005-009-AC/PSD-FL-169A

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Okeelanta Corporation
21250 U.S. Highway 27
South Bay, FL 33493

Project No. 0990005-009-AC
Air Permit No. PSD-FL-169A
Okeelanta Boiler No. 16
Conversion to Natural Gas

Authorized Representative:
Mr. Ricardo Lima, Vice President and General Manager

Enclosed is Final Air Permit No. PSD-FL-169A, which authorizes modification of the burner system on existing Boiler No. 16 that will allow the firing of natural gas and very low sulfur distillate oil. As noted in the Final Determination (attached), only minor changes were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 10/30/01 to the person(s) listed:

Mr. Ricardo Lima, Okeelanta Corp.*
Mr. Matthew Capone, Okeelanta Corp.
Mr. James Meriwether, Okeelanta Power L.P.
Mr. David Buff, Golder Associates
Mr. James Stormer, PBCHD
Mr. Ron Blackburn, SED
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

Clerk Stamp

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

Victoria Gibson (Clerk) 10/30/01 (Date)

...RIES INC.
NOV - 1 2001
...VILLE

FINAL DETERMINATION

PERMITTEE

Okeelanta Corporation
21250 U.S. Highway 27
South Bay, FL 33493

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida, 32399-2400

PROJECT

Project No. 0990005-009-AC
Air Permit No. PSD-FL-169A

This permit authorizes the modification of existing mill Boiler No. 16 to fire natural gas and very low sulfur distillate oil. The project is associated with Okeelanta Corporation's existing sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062), which are located approximately six miles south of South Bay on U.S. Highway 27 in Palm Beach County, Florida.

NOTICE AND PUBLICATION

The Department distributed a revised "Intent to Issue Permit" package on September 25, 2001. The applicant published the "Public Notice of Intent to Issue" in The Palm Beach Post on September 29, 2001. The Department received the proof of publication on October 5, 2001. No requests for administrative hearings were filed.

COMMENTS

No comments on the Draft Permit were received from the public, EPA Region 4, the National Park Service, or the Department's South District Office. The following summarizes comments received from the applicant and the Palm Beach County Health Department as well as the Department's response.

Comments from the Applicant

Technical Evaluation, Section 1.7: The applicant points out that their calculation of the potential annual emissions increase for NOx is 94 TPY, and for SO_2 is 39.6 TPY. The Department estimated annual emissions to be 96 TPY of NOx and 35 TPY of SO_2. The Notice of Intent to Issue published by Okeelanta actually stated a potential SO_2 emission rate of 39.38 TPY and a potential NOx emission of 113.77 TPY based on the calculations in the application.

Response: The difference between the Department's and applicant's potential annual emissions estimates is due to the distillate oil fuel consumption limit, the fuel oil heating value, and the fuel oil density as well as the fuel sulfur content of pipeline quality natural gas. The differences with the published NOx and SO_2 emissions rates are small and do not change the outcome for the project.

Technical Evaluation, Section 2.2: The applicant points out that the reference to "NSPS Subpart Db" relates to "Industrial, Commercial and Institutional Steam Generating Units" and not "stationary gas turbines".

Response: The Department agrees and revised the text.

Technical Evaluation, Section 3.6: The applicant notes that NSPS Subpart Db does not allow the exclusion of CEMS data for periods of startup, shutdown and malfunction in determining compliance with the 30-day NOx standard [see 40 CFR 60.44b(h), 60.44b(i), and 60.46b(a)]. The applicant requests clarification of the permit condition to state that such data may be excluded for 24-hour block average.

Response: The Department's intent was to allow up to two hours of CEMS data to be excluded from both the 24-hour block and 30-day rolling BACT standards. The technical evaluation and permit will be revised to add the 30-day rolling NSPS emission standard, which does not allow this data to be excluded.

Draft Permit, Condition III.4: The applicant notes that the steam production limit is based on a 24-hour block average, but the heat input limitation is based on a 1-hour average. The applicant requests that either both limitations reflect a 24-hour average or that the heat input rate be indicated as a design specification.

Response: The Department revised the condition to, "The maximum design heat input rates to the boiler are 211 mmBTU per hour when firing natural gas and 202 mmBTU per hour when firing very low sulfur distillate oil. The maximum steam production rate shall not exceed 150,000 pounds per hour based on a 24-hour block average of the last 24 boiler operating hours."

Draft Permit, Condition III.11a: The applicant requests that a 6-minute "block average" be specified in the opacity limitation consistent with Condition III.6c.

Response: The Department agrees and inserted "block average".

Draft Permit, Condition III.11b: The applicant requests replacing the text "continuous NOx" in the second sentence with "24-hour block average" to clarify that NOx hourly averages may be excluded only from the 24-hour block average due to startups, shutdowns, and unavoidable malfunctions.

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard.

Appendix BD, Page BD-1: The applicant requests that footnote "b" be revised to, "Compliance is based on a 30-day rolling average and a 24-hour block average as determined ..."

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard.

Appendix Db, Page Db-2: The applicant notes that Section 60.44b(h) and 60.46b(a) indicate that the 30-day rolling NOx standard applies at all times, including periods of startup, shutdown and malfunction.

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard.

Appendix Db, Page Db-2: The applicant requests addition of a note after Section 60.44b(h) stating that this provision applies only to the 30-day rolling standard and that up to two hourly average NOx emission rate values may be excluded in any 24-hour period due to startup, shutdown, or unavoidable malfunctions for compliance determinations with the 24-hour block standard.

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard.

Appendix Db, Page Db-2: The applicant requests revising the note after Section 60.44b(i) to clarify that the 24-hour average is a "block" average.

Response: The Department agrees and the note was revised.

Appendix Db, Page Db-2: The applicant requests deletion of the PM testing requirements of Section 60.46b(b) because the PM standard does not apply.

Response: As discussed in the note after Section 60.43b(b), the PM emission standards do not apply. Therefore, the testing requirements of Section 60.46b(b) were deleted.

Appendix Db, Page Db-4: The applicant requests that the note after Section 60.48b(f) be revised to clarify that the 24-hour average is a "block average".

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard.

Appendix Db, Page Db-5: The applicant requests that the note after Section 60.49b(g) be revised to clarify that the 24-hour average is a "block average".

Response: The Department agrees and revised the note to, "The permit also specifies NOx BACT standards based on a 24-hour block average and a 30-day rolling average."

Comments from the Palm Beach County Health Department (PBCHD)

Technical Evaluation, Section 1.7, Note b: The PBCHD indicates that applicant's assumption regarding the baseline emissions is incorrect. Baseline emissions were set to zero because the project reflects a relaxation of the federally enforceable permit conditions (restriction on hours of operation).

Response: The Department acknowledges the comment.

Technical Evaluation, Section 2.2: The PBCHD notes that the reference to NSPS Db should be for a boiler and not a gas turbine.

Response: The Department agrees and revised the description.

Technical Evaluation, Section 3.2 Note d: The PBCHD suggests establishing the base case on the existing federally enforceable emission limitation and not actual emissions.

Response: On a case-by-case basis, modifications to existing units have been allowed to estimate baseline emissions on "actual" emissions to reflect realistic reductions. The Department notes that "actual NOx emissions" were based on CEMS data for the existing boiler.

Technical Evaluation, Section 3.3: The PBCHD notes that both the technical evaluation and the Public Notice indicate that PSD does not apply to the unit's CO emissions because potential emissions are below 100 tons per year. If possible, the PBCHD requests that the permit be conditioned upon the initial performance test to require a lower limit that would reduce potentials to levels below 80% of the PSD significant emission rate. Otherwise, the PBCHD believes that either parametric monitoring or a CEMS should be specified.

Response: The Department agrees that potential CO emissions (96 TPY) are just below the PSD significant emission rate of 100 TPY. However, the Department notes that the boiler is intended as a backup unit to support the sugar mill and refinery, which operate only a portion of the year. In addition, while the maximum CO mass emission rate is likely to occur at 100% load, it is very unlikely that the unit will operate at this mass emission rate for the full 8760 hours per year. Based on the initial emissions performance test, the Title V permitting authority (South District Office) could require either parametric monitoring or a CEMS for purposes of "periodic monitoring" requirements. No changes were made.

Technical Evaluation, Section 3.4: The PBCHD notes that the SO_2 BACT sulfur limit on natural gas is questionable given that the state tariff on natural gas is 5 times higher. This causes some concern with the use of the lower value and questions regarding reasonable assurances when no test method or sampling procedures are specified.

Response: The Department notes that firing pipeline-quality natural gas whether it contains 10 grains per

100 SCF or 0.5 grains per 100 SCF is BACT for this size boiler (either PSD BACT or small boiler BACT). In addition, the permittee has little control over the sulfur content for the gas being supplied. The permit was revised to require only that "pipeline-quality" natural gas or very low sulfur distillate oil be fired.

Technical Evaluation, Section 3.5: The PBCHD notes that the VOC levels are less than 80% of the significant rate, not subject to PSD/BACT, nor any other emission standards at this time. The PBCHD recommends that the technical evaluation address potential VOC emissions in terms of expected rates and annual emissions and determine that VOC emissions are unregulated.

Response: The permit notes that VOC emissions are limited by the efficient combustion of clean fuels and does not specify a VOC limit.

Technical Evaluation, Section 3.6: The PBCHD suggests clarifying that excess emissions associated with startup, shutdown, and malfunctions may be excluded from the short-term limits, but must be included with the long-term limits.

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard.

Permit Condition III.3: The PBCHD requests a test method and sampling frequency to demonstrate compliance with the fuel sulfur specification, which is below the state tariff for natural gas.

Response: As previously mentioned, "pipeline-quality natural gas is the only fuel specification.

Permit Condition III.6: The PBCHD recommends annual emission caps on NOx and CO because of allowed excess emissions.

Response: As previously mentioned, the technical evaluation and permit were revised to allow data exclusion to show compliance with the 24-hour block and 30-day rolling BACT standards, but no exclusion is allowed for showing compliance with the 30-day rolling NSPS emission standard. No emissions caps were required because there is no information available regarding startup and shutdown emissions for this existing unit that will be modified.

Other Changes

- The permit expiration date was revised to November 1, 2003.
- The "initial" NOx limit in Condition No. 6 was removed because the emissions standards are based on long term CEMS data.
- Condition 7d was revised to clarify that data could only be excluded in accordance with Condition 11.
- Consistent with 40 CFR 60, the monitor availability was revised to 95% in Condition 9.
- As previously mentioned, Condition 11b was revised to, "NOx emissions data shall be recorded by the CEMS during all episodes of startup, shutdown and malfunction. When determining compliance with the 24-hour block and 30-day rolling NOx BACT standards, up to two 1-hour averages due to startups, shutdowns, or unavoidable malfunctions may be excluded from each 24-hour period. The 30-day rolling NOx NSPS standard applies at all times and data may not be excluded."

CONCLUSION

The Department made the above-referenced revisions as well as the correction of typographical errors. The final action of the Department is to issue the permit with the changes described above.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:

Okeelanta Corporation
21250 U.S. Highway 27
South Bay, FL 33493

Authorized Representative:
Mr. Ricardo Lima
Vice President and General Manager

Okeelanta Sugar Mill and Refinery
Facility ID No. 0990005
Emissions Unit No. 014 (Boiler No. 16)

Project No. 0990005-009-AC
Air Permit No. PSD-FL-169A
Expires: November 1, 2003

PROJECT AND LOCATION

The project is associated with Okeelanta Corporation's existing sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062) located approximately six miles south of South Bay on U.S. Highway 27 in Palm Beach County, Florida. The UTM coordinates are Zone 17, 524.9 km East, and 2940.1 km North. This permit authorizes modification of the burner system on existing Boiler No. 16 that will allow the firing of natural gas and very low sulfur distillate oil.

STATEMENT OF BASIS

This PSD air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 52, Section 21 of the Code of Federal Regulations. Specifically, this permit is issued pursuant to the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality, Rule 62-212.400, F.A.C. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

CONTENTS

Section I. General Information
Section II. Administrative Requirements
Section III. Emissions Units Specific Conditions
Section IV. Appendices

Howard L. Rhodes, Director
Division of Air Resources Management

10/29/01
(Date)

FACILITY DESCRIPTION

The facility consists of two adjacent plants. Okeelanta Corporation operates a sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062) including packaging and transshipment activities. Okeelanta Power L.P. operates a cogeneration plant that provides process steam for the sugar mill and refinery and generates electricity for sale to the power grid (SIC 4911).

NEW EMISSIONS UNITS

This permit authorizes modification of the following existing emissions unit.

ID	Emission Unit Description
014	Mill Boiler No. 16 is a 211/202 mmBTU per hour package boiler fired with natural gas/distillate oil.

REGULATORY CLASSIFICATION

Title III: The facility may have emissions of individual hazardous air pollutants (HAPs) at levels greater than 10 tons per year and emissions of total HAPs greater than 25 tons per year.

Title IV: The facility is not subject to the acid rain provisions of the Clean Air Act.

Title V: Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PSD: The facility is located in an area designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality.

NSPS: The facility operates emissions units subject to the New Source Performance Standards of 40 CFR 60, including Subparts Da and Db (boilers) and Subpart Kb (fuel storage tanks).

PERMITTING AUTHORITY

All documents related to applications for permits to construct or modify an emissions unit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Air Resources Section at the South District Office of the Florida Department of Environmental Protection (DEP) at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549.

COMPLIANCE AUTHORITIES

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resources Section at the South District Office of the Florida Department of Environmental Protection (DEP) at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549. Copies of all such documents shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29, West Palm Beach, Florida 33402-0029.

APPENDICES

The following Appendices are attached in Section IV as part of this permit.

Appendix BD. Final BACT Determinations and Emissions Standards

Appendix CF. Citation Format

Appendix Db. NSPS Subpart Db Requirements for Boilers

Appendix GC. General Conditions

Appendix SC. Standard Conditions

Appendix XS. Continuous Monitor Systems Quarterly Report

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application received on 03/23/01 and all related correspondence to make complete.
- Initial draft permit package issued on June 4, 2001.
- Revised draft permit package issued on September 25, 2001.

CITATION FORMAT

Appendix CF of this permit describes the format used to cite applicable rules and regulations as well as previous permitting actions.

1. General Conditions: The permittee is subject to, and shall operate under, the attached General Conditions listed in Appendix GC of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

2. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, and 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

3. PSD Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

4. Permit Expiration: For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]

5. BACT Determination: In conjunction with an extension of the 18-month period to commence or continue construction, phasing of the project, or an extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for the source. [Rule 62-212.400(6)(b), F.A.C. and 40 CFR 51.166(j)(4)]

6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

8. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation, and copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This section of the permit addresses the following modified emissions unit.

Emissions Unit 014: Mill Boiler No. 16
Description: This unit is Babcock and Wilcox Model No. FM 120-97 package boiler with a maximum steam production rate of 150,000 pounds per hour (24-houraverage). The design heat release rate for this unit is greater than 70,000 BTU/hour-ft^3.
Fuels: This unit is fired with pipeline-quality natural gas or very low sulfur distillate oil.
Capacity: The heat input rate is 211 mmBTU per hour when firing natural gas, which is approximately 0.207 million cubic feet of gas per hour based on a heat content of 1020 mmBTU per million SCF. The heat input rate is 202 mmBTU per hour when firing very low sulfur distillate oil, which is approximately 1433 gallons per hour based on a heat content of 141 mmBTU per thousand gallons.
Controls: The efficient combustion of clean fuels minimizes emissions of CO, PM/PM10, SO2, and VOC. Emissions of NOx are reduced with low NOx burners and flue gas recirculation (approximately 15%).
Stack Parameters: Exhaust gases exit a 75 feet tall stack that is 5.0 feet in diameter with a volumetric flow rate of approximately 88,200 acfm at 410° F.

APPLICABLE STANDARDS AND REGULATIONS

1. BACT: The emissions standards specified for this unit represent determinations of the Best Available Control Technology (BACT) for nitrogen oxides (NOx), particulate matter (PM/PM10), and sulfur dioxide (SO2). Appendix BD of this permit lists the final BACT determinations for this project. [Rules 62-212.400(BACT) and 62-296.406 (BACT for small boilers), F.A.C.]

CONTROL EQUIPMENT

2. Low NOx Burners: The permittee is authorized to install, tune, maintain and operate a modified burner system to include Coen low-NOx burners (or equivalent) with flue gas recirculation capable of achieving the emissions standards specified in this permit. The system shall be capable of firing pipeline-quality natural gas and very low sulfur distillate oil. [Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE RESTRICTIONS

3. Authorized Fuel: The boiler shall fire only pipeline-quality natural gas or very low sulfur No. 2 distillate oil with a maximum sulfur content of 0.05% sulfur by weight. [Applicant Request; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

4. Permitted Capacity: The maximum design heat input rates to the boiler are 211 mmBTU per hour when firing natural gas and 202 mmBTU per hour when firing very low sulfur distillate oil. The maximum steam production rate shall not exceed 150,000 pounds per hour based on a 24-hour block average of the last 24 boiler operating hours. The boiler shall be equipped with integrating fuel flow meters to monitor the consumption of natural gas and distillate oil. The boiler shall be equipped with instruments to continuously monitor the steam production rate (pounds per hour), steam temperature (° F), and steam pressure (psig). [Rule 62-210.200(PTE), F.A.C.]

5. Restricted Operation: The hours of operation are not limited (8760 hours per year). The boiler shall fire no more than 10,000,000 gallons of very low sulfur distillate oil during any consecutive 12 months. [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

(Permitting Note: Appendix BD lists the BACT determinations for this project.)

6. Emissions Standards: Emissions from the boiler shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM/PM10), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Natural Gas Firing		Distillate Oil Firing		Rule Citation (F.A.C.)
	lb/mmBTU	lb/hour[g]	lb/mmBTU	lb/hour[g]	
CO[a]	0.10	21.1	0.11	22.2	Avoid Rule 62-212.400 (BACT)
NOx[b]		12.7		24.2	
24-hour block	0.10	NA	0.20	NA	Rule 62-212.400 (BACT)
30-day rolling	0.06	NA	0.12	NA	Rule 62-212.400 (BACT)
30-day rolling	0.20	NA	0.20	NA	NSPS Subpart Db
Opacity[c]	10% opacity, except for one 6-minute period per hour that does not exceed 27%opacity				Rule 62-212.400 (BACT)
PM/PM10[d]	Efficient combustion of natural gas		Firing of very low sulfur distillate oil		Rule 62-212.400 (BACT), and Rule 62-296.406 (BACT)
SO_2[e]	Firing of natural gas		Firing of very low sulfur distillate oil		Rule 62-296.406 (BACT)
VOC[f]	Efficient combustion of natural gas		Efficient combustion of very low sulfur distillate oil		Avoid Rule 62-212.400 (BACT)

a. Compliance with the CO standards shall be based on the average of three test runs conducted at permitted capacity as determined by EPA Method 10.

b. As determined by the certified NOx CEMS, compliance with the 24-hour NOx standards shall be based on the block average of the last 24 boiler operating hours. The 30-day average NOx emissions shall be calculated at the end of each steam generating unit operating day from the measured hourly NOx emission rates for the preceding 30 steam generating unit operating days.

c. The opacity standard is based on a 6-minute block average, as determined by the certified continuous opacity monitoring system (COMS). EPA Method 9 may also be used to determine compliance with the opacity standard.

d. When firing natural gas, the expected maximum PM emissions are 0.002 lb/mmBTU (0.4 lb/hour). When firing very low sulfur distillate oil, the maximum expected PM emissions are 0.03 lb/mmBTU (6.1 lb/hour). Compliance with the CO and opacity standards shall serve as indicators of good combustion. No testing is required.

e. The fuel specifications of this permit effectively limit the potential SO_2 emissions. No testing is required. When firing natural gas, the expected maximum SO_2 emissions are 0.001 lb/mmBTU (0.2 lb/hour). When firing very low sulfur distillate oil, the expected maximum SO_2 emissions are 0.06 lb/mmBTU (12.1 lb/hour).

f. When firing natural gas, the expected maximum VOC emissions are 0.03 lb/mmBTU (6.3 lb/hour). When low sulfur distillate oil, the expected maximum VOC emissions are 0.03 lb/mmBTU (6.1

lb/hour). Compliance with the CO and opacity standards shall serve as indicators of good combustion. No testing is required.

g. Maximum hourly emissions are based on the emissions standards and the maximum allowable heat input from each fuel.

CONTINUOUS MONITORING REQUIREMENTS

7. NOx CEMS: The permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the emissions of NOx from the boiler in a manner sufficient to demonstrate continuous compliance with the emission standards of this permit. The emission rate (pounds per mmBTU) shall be calculated by the CEMS using F-factors that are appropriate for each fuel fired. For purposes of determining compliance with the emission standards of this permit, missing or excluded data shall not be substituted. The monitoring system shall be installed, calibrated, and properly functioning prior to the initial emissions compliance tests and shall be used to demonstrate continuous compliance with the specified NOx emissions standards. [Rule 62-212.400(BACT), F.A.C.]

   a. *Monitor Certification.* The NOx CEMS shall: be certified in accordance with Performance Specification 2 in Appendix B of 40 CFR 60; comply with the monitoring requirements of 40 CFR 60.13; have dual span capability with a "low" span no greater than "0.18 pounds per mmBTU" (or equivalent) and a "high" span no greater than 0.60 pounds per mmBTU" (or equivalent); and comply with the quality assurance procedures in Appendix F of 40 CFR 60. The required RATA test shall be performed prior to the initial emissions compliance tests using EPA Method 7E of Appendix A in 40 CFR 60.

   b. *Data Collection.* The NOx CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour. Each hourly value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly averages.

   c. *Emission Rate*: Compliance with the 24-hour NOx standards shall be based on the average of the CEMS data collected during each block of 24 boiler operating hours. Data for each 24-hour block shall be exclusive from data in other 24-hour blocks. A "boiler operating hour" means a 1-hour block of time during which the boiler combusted any fuel. It is not necessary for fuel to have been combusted continuously for the entire hour. Compliance with the 30-day NOx standards shall be based on the average of the CEMS data collected during the last 30 boiler operating days, rolled for each new boiler operating day in accordance with 40 CFR 60.49a. A "boiler operating day" means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the boiler. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

   d. *Data Exclusion.* NOx emissions data shall be recorded by the CEMS during all episodes of startup, shutdown, and malfunction. Individual NOx hourly average emission rate values may be excluded only in accordance with Condition No. 11. The permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction events shall not be excluded if the startup, shutdown or malfunction episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown and malfunction.

{Permitting Note: Compliance with these requirements will ensure compliance with other applicable CEMS requirements, such as: Rule 62-297.520, F.A.C.; 40 CFR Part 51, Appendix P; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR 60.48b; 40 CFR 60.49b; 40 CFR 60, Appendix B; and 40 CFR 60, Appendix F.} [40 CFR 60.48b; Rule 62-212.400(BACT), F.A.C.]

8. Opacity COMS: The permittee shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) to measure and record the opacity from the boiler in a manner sufficient to demonstrate continuous compliance with the emission standards of this permit. The COMS shall: be certified in accordance with Performance Specification 1 in Appendix B of 40 CFR 60; comply with the monitoring requirements of 40 CFR 60.13; and comply with the quality assurance procedures in Appendix F of 40 CFR 60. It shall be installed and functioning properly prior to the initial emissions compliance tests. The COMS shall be used to demonstrate continuous compliance with the corresponding opacity standards specified in this permit based on a 6-minute average. [40 CFR 60.48b; Rule 62-212.400(BACT), F.A.C.]

9. Monitor Availability: The availability of each required monitor shall not be less than 95% in any calendar quarter. The quarterly report required in Appendix XS shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall submit a report to each Compliance Authority that identifies the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. The Department may require additional testing for failure to maintain at least 95% monitor availability. [40 CFR 60.48b; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

EXCESS EMISSIONS

10. Excess Emissions - Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. All such emissions shall be included in the calculation of the continuous compliance averages for opacity and NOx emissions. [Rule 62-210.700(4), F.A.C.]

11. Startup, Shutdown and Malfunction Plan: In accordance with Rule 62-210.700(5), F.A.C., the following permit conditions define alternate opacity standards and allow the exclusion of NOx monitoring data during specified periods of startup, shutdown, and unavoidable malfunction. These conditions shall only apply if operators employ the best operational practices to minimize the amount and duration of emissions during these incidents.

    a. *Visible Emissions*: Opacity shall be recorded by the COMS during all episodes of startup, shutdown and malfunction. During startup and shutdown, visible emissions shall not exceed 20% opacity except for one 6-minute period per hour that does not exceed 27% opacity, based on 6-minute block averages.

    b. *CEM System Data Exclusion*: NOx emissions data shall be recorded by the CEMS during all episodes of startup, shutdown and malfunction. When determining compliance with the 24-hour block and 30-day rolling NOx BACT standards, up to two 1-hour averages due to startups, shutdowns, or unavoidable malfunctions may be excluded from each 24-hour period. The 30-day rolling NOx NSPS standard applies at all times and data may not be excluded.

    c. *Notification*: Within three days of recording emissions in excess of a standard, the permittee shall notify the Compliance Authority by telephone or facsimile.

    These conditions are established in place of the provisions specified in Rule 62-210.700(1), F.A.C.

    [Design; Rules 62-4.070(3), 62-4.130, 62-210.700(5), and 62-212.400 (BACT), F.A.C.]

EMISSIONS PERFORMANCE TESTING

12. Initial Compliance Tests: An initial performance test for CO emissions when firing natural gas shall be conducted within 60 days after achieving at least 90% of permitted capacity, but not later than 180 days after initial operation of the modified boiler. Within 60 days of firing distillate oil in the modified boiler, an initial performance test for CO emissions shall be conducted. The continuous opacity and NOx monitors shall be installed and functioning properly (satisfactory performance specification tests and initial RATA) prior to conducting any emissions performance tests. Data collected by the certified continuous opacity and NOx monitors shall be summarized for each CO test run and submitted as part of the test report to demonstrate compliance with the initial opacity and NOx standards. Separate initial performance tests for opacity and NOx emissions are not required. Emissions of CO and NOx shall be reported in terms of "pounds per mmBTU of heat input" and "pounds per hour" using the appropriate F-factors for each fuel. [Rules 62-212.400 (BACT) and 62-297.310(7)(a)1, F.A.C.; Applicant Request]

13. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the boiler shall be tested to demonstrate compliance with the CO emission standards for each authorized fuel that is fired for more than 400 hours. Data collected by the certified continuous opacity and NOx monitors shall be summarized for each CO test run and submitted as part of each test report. Compliance with the opacity and NOx standards are determined by data collected from the continuous monitors and separate annual performance tests for these pollutants are not required. Emissions of CO and NOx shall be reported in terms of "pounds per mmBTU of heat input" and "pounds per hour" using the appropriate F-factors for each fuel. The annual test report shall also indicate the date the annual NOx RATA was performed and summarize the results. If no fuel is fired for more than 400 hours, the permittee shall submit a summary of the opacity and NOx emissions data within 30 days of the end of the federal fiscal year. [Rules 62-212.400 (BACT) and 62-297.310(7)(a)4, F.A.C.]

14. Test Methods: As required, tests shall be performed in accordance with the following reference methods.

EPA Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources • The method shall be based on a continuous sampling train.

In addition, it may be necessary to perform EPA Methods 1 through 4 as part of the above test methods. These test methods are specified in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used to demonstrate compliance unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. Other applicable testing requirements are included in Appendix SC of the permit. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

RECORDS

15. Fuel Sulfur Records: Compliance with the distillate oil sulfur limit shall be demonstrated by taking an initial sample, analyzing the sample for fuel sulfur, and reporting the results with the initial emissions compliance test report. Sampling and analyzing the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM D129-91, ASTM D1552-90,

ASTM D2622-94, or ASTM D4294-90. More recent versions of these methods may be used. For each subsequent distillate oil delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content. [Rules 62-4.070(3), 62-4.160(15), and 62-297.310(7)(b), F.A.C.]

16. Monthly Operations Summary: By the seventh calendar day of each month, the permittee shall record the following information in a written or electronic log.

    - Hours and gallons of distillate oil firing for the previous month and the previous 12 months;
    - Hours and SCF of natural gas firing for the previous month and the previous 12 months; and
    - Maximum and average steam production (pounds per hour) for the previous month.

    Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request from the Department or a Compliance Authority. [Rules 62-4.160(15) and 62-4.070(3), F.A.C.]

REPORTS

17. Continuous Monitor System Quarterly Report: Within thirty (30) days following each calendar quarter, the permittee shall submit a report to each Compliance Authority summarizing emissions in excess of a permit standard, periods of data exclusion, and monitor availability for the previous calendar quarter. The report shall also identify and describe any malfunctions causing emissions in excess of a permit standard. The report shall be submitted for each required monitoring system and shall generally follow the NSPS format provided in Appendix XS of this permit. If necessary, the report shall include a corrective action plan to achieve at least 90% monitor availability. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C.; and 40 CFR 60.7]

OTHER REQUIREMENTS

18. Applicable Requirements: The boiler is also subject to the NSPS Subpart Db requirements for commercial boilers in Appendix Db and the standard conditions in Appendix SC. These appendices are found in Section IV of this permit.

CONTENTS

Appendix BD.	Final BACT Determinations and Emissions Standards
Appendix CF.	Citation Format
Appendix Db.	NSPS Subpart Db Requirements for Boilers
Appendix GC.	General Conditions
Appendix SC.	Standard Conditions
Appendix XS.	Continuous Monitor Systems Quarterly Report

FINAL BACT DETERMINATIONS AND EMISSIONS STANDARDS

The following table summarizes the final Best Available Control Technology determinations for this project as well as the emissions standards. [Rules 62-212.400 (BACT) and 62-296.406 (small boiler BACT), F.A.C.]

Pollutant	Natural Gas Firing		Distillate Oil Firing		Control Technology
	lb/mmBTU	lb/hour	lb/mmBTU	lb/hour	
CO[a]	0.10	21.1	0.11	22.2	The efficient combustion of clean fuels avoids a BACT determination for CO emissions.
NOx[b]	0.06, 30-day 0.10, 24-hr	12.7	0.12, 30-day 0.20, 24-hr	24.2	BACT is low NOx burners with flue gas recirculation and the firing of clean fuels.
Opacity[c]	10% opacity based on a 6-minute average, except for one 6-minute period per hour ≤ 27% opacity				BACT is the efficient combustion of clean fuels.
PM[d]	Efficient combustion of natural gas		Efficient combustion of very low sulfur distillate oil		BACT is the efficient combustion of clean fuels.
SO2[e]	Firing of pipeline-quality natural gas		Firing distillate oil with less than 0.05% sulfur by weight		BACT is the firing of very low sulfur fuels.
VOC[f]	Efficient combustion of natural gas		Efficient combustion of very low sulfur distillate oil		The efficient combustion of clean fuels avoids a BACT determination for VOC emissions.

a. Compliance is based on a 3-hour test average as determined by EPA Method 10.
b. Compliance is based on a 30-day rolling average and a 24-hour block average as determined by certified NOx CEMS.
c. Compliance is based on a 6-minute block average as determined by certified COMS and/or EPA Method 9.
d. Efficient combustion is demonstrated by compliance with the CO and opacity standards.
e. Compliance is based on a fuel sulfur analysis and fuel vendor receipts.
f. Efficient combustion is demonstrated by compliance with the CO and opacity standards.

FINAL BACT DETERMINATIONS

As summarized in this table, the Department determines that the standards specified in the permit represent the Best Available Control Technology (BACT) for emissions of nitrogen oxides (NOx), particulate matter (PM), and sulfur dioxide (SO2) from the modified boiler. The Department's rationale for the BACT determinations are presented in Technical Evaluation and Preliminary Determination issued concurrently with the draft permit and the Final Determination issued concurrently with the final permit.

Determination By:

Jeffrey J. Koerner 10-29-01

J. F. Koerner, P.E., Project Engineer (Date)
New Source Review Section

Recommended By:

10/29

for C. H. Fancy, Chief (Date)
Bureau of Air Regulation

Approved By:

Howard L. Rhodes 10/29/01

Howard L. Rhodes, Director (Date)
Division of Air Resources Management

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit
"AO" identifies the permit as an Air Operation Permit
"123456" identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located
"2222" represents the specific facility ID number
"001"identifies the specific permit project
"AC" identifies the permit as an air construction permit
"AF" identifies the permit as a minor federally enforceable state operation permit
"AO" identifies the permit as a minor source air operation permit
"AV" identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the Prevention of Significant Deterioration of Air Quality
"FL" means that the permit was issued by the State of Florida
"317" identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

The NSPS requirements of this section apply to the following emissions unit:

ID	Emission Unit Description
014	Mill Boiler No. 16 is a 211/202 mmBTU per hour package boiler fired with natural gas/distillate oil.

NSPS GENERAL PROVISIONS

The emissions unit is subject to the applicable General Provisions of the New Source Performance Standards including 40 CFR 60.7 (Notification and Record Keeping), 40 CFR 60.8 (Performance Tests), 40 CFR 60.11 (Compliance with Standards and Maintenance Requirements), 40 CFR 60.12 (Circumvention), 40 CFR 60.13 (Monitoring Requirements), and 40 CFR 60.19 (General Notification and Reporting Requirements). The General Provisions are not included in this permit, but can be obtained from the Department upon request.

NSPS SUBPART DB – STANDARDS OF PERFORMANCE FOR INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

The boiler shall comply with all applicable requirements of 40 CFR 60, Subpart Db adopted by reference in Rule 62-204.800(7)(b), F.A.C. Inapplicable provisions have been deleted in the following conditions, but the numbering of the original rules has been preserved for ease of reference. The term "Administrator" when used in 40 CFR 60 shall mean the Department's Secretary or the Secretary's designee. Department notes related to the Subpart Db requirements are shown in **bold** immediately following the section to which they refer.

60.40b Applicability and Delegation of Authority

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 million Btu/hour.

60.41b Definitions

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396-78, Standard Specifications for Fuel Oils (incorporated by reference -see Section 60.17).

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hour-ft^3).

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means an oil that contains no more than 0.5 weight percent sulfur or that, when combusted without sulfur dioxide emission control, has a sulfur dioxide emission rate equal to or less than 0.5 lb/million BTU heat input.

60.42b Standard for Sulfur Dioxide

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (2) maintaining fuel receipts as described in Section 60.49b(r).

{Note: The permit limits fuels to pipeline natural gas and distillate oil (≤ 0.05% sulfur by weight).}

60.43b Standard for Particulate Matter

(b) On and after the date on which the performance test is completed or required to be completed under Section 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce sulfur dioxide emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 0.10 lb/million Btu heat input.

{Note: Not applicable; the project does not include equipment to reduce sulfur dioxide emissions.}

(f) On and after the date on which the initial performance test is completed or is required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

{Note: The permit limits visible emissions below this level.}

(g) The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

60.44b Standard for Nitrogen Oxides

(a) Except as provided under paragraph (k) of this section, on and after the date on which the initial performance test is completed or is required to be completed under Section 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO_2) in excess of the following emission limits:

(1) Natural gas and distillate oil:

(ii) High heat release rate: 0.20 lb/million BTU of heat input (expressed as NO_2)

{Note: The permit limits NOx emissions below this level.}

(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section apply at all times including periods of startup, shutdown, or malfunction.

{Note: This applies only to the 30-day rolling NOx NSPS standard. The permit allows up to two hours of monitoring data in a 24-hour period to be excluded when determining compliance with the 24-hour block and 30-day rolling NOx standards.} BACT

(i) Compliance with the emission limits under this section is determined on a 30-day rolling average basis.

{Note: NOx standards in the permit are based on both 24-hour block and 30-day rolling compliance averages.}

60.45b Compliance and Performance Test Methods and Procedures for Sulfur Dioxide

(j) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in Section 60.49b(r).

{Note: The permit contains record keeping requirements for monitoring the fuel sulfur.}

60.46b Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides

(a) The opacity limits under Section 60.43b apply at all times except during periods of startup, shutdown, or malfunction. The nitrogen oxides emission standards under Section 60.44b apply at all times.

(c) Compliance with the nitrogen oxides emission standards under Section 60.44b shall be determined through performance testing under paragraph (e) of this section.

(d) To determine compliance with the opacity limits under Section 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under Section 60.8 using the following procedures and reference methods:

(7) Method 9 is used for determining the opacity of stack emissions.

{Note: The permit requires initial compliance with the opacity limits to be demonstrated with data collected from the continuous opacity monitoring system.}

(e) To determine compliance with the emission limits for nitrogen oxides required under Section 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under Section 60.8 using the continuous

system for monitoring nitrogen oxides under Section 60.48(b).

(1) For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under Section 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

{Note: The permit requires continuous NOx monitoring to demonstrate compliance.}

60.47b Emission Monitoring for Sulfur Dioxide

(f) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the emission monitoring requirements of this section if the owner or operator obtains fuel receipts as described in Section 60.49b(r).

{Note: The permit contains satisfactory record keeping requirements for monitoring the fuel sulfur.}

60.48b Emissions Monitoring for Particulate Matter and Nitrogen Oxides

(a) The owner or operator of an affected facility subject to the opacity standard under Section 60.43b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

{Note: The permit requires continuous opacity monitoring to demonstrate compliance.}

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under Section 60.44b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

{Note: The permit requires continuous NOx monitoring to demonstrate compliance.}

(c) The continuous monitoring systems required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section and required under Section 60.13(h) shall be expressed in lb/million Btu heat input and shall be used to calculate the average emission rates under Section 60.44b. The 1-hour averages shall be calculated using the data points required under Section 60.13(b). At least 2 data points must be used to calculate each 1-hour average.

(e) The procedures under Section 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for nitrogen oxides is determined as follows: 500 ppm nitrogen oxides for natural gas and oil firing.

{Note: The permit requires a lower maximum span consistent with the lower NOx emission limits.}

(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

{Note: NOx standards in the permit are based on both a 24-hour block average and a 30-day rolling average with a 95% monitor availability.}

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 million Btu/hour) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section, or

60.49b Reporting and Recordkeeping Requirements

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by Section 60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

{Note: The permit application satisfies this notification requirement.}

(b) The owner or operator of each affected facility subject to the sulfur dioxide, particulate matter, and/or nitrogen oxides emission limits under Secs. 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B.

{Note: The permit requires initial performance testing and continuous monitoring for opacity and NOx.}

(f) For facilities subject to the opacity standard under Section 60.43b, the owner or operator shall maintain records of opacity.

(g) The owner or operator of an affected facility subject to the nitrogen oxides standards under Section 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as lb NO2/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under Section 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

{Note: The permit specifies an additional NOx BACT standards based on a 24-hour block and 30-day rolling averages.}

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

(1) Any affected facility subject to the opacity standards under Section 60.43b(e) or to the operating parameter monitoring requirements under Section 60.13(i)(1).

(2) Any affected facility that is subject to the nitrogen oxides standard of Section 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under Section 60.48b(g)(1) or steam generating unit operating conditions under Section 60.48b(g)(2).

(3) For the purpose of Section 60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under Section 60.43b(f).

(4) For purposes of Section 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under Section 60.46b(e), which exceeds the applicable emission limits in Section 60.44b.

{Note: The permit requires submittal of a quarterly report whether or not there are any excess emissions.}

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under Section 60.48(b) shall submit a quarterly report containing the information recorded under paragraph (g) of this section. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

{Note: The permit requires submittal of a quarterly report whether or not there are any excess emissions.}

(r) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under Section 60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in Section 60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Quarterly reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the preceding quarter.

{Note: The permit contains satisfactory record keeping requirements for monitoring the fuel sulfur.}

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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 and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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 or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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

   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 Sections 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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (X);
    b. Determination of Prevention of Significant Deterioration (X); and
    c. Compliance with New Source Performance Standards (X).

14. The permittee shall comply with the following:

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

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

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

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.

{Permitting Note: The following conditions are generally applicable to all emissions units.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
4. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
5. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
6. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
7. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
8. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

9. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]
10. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
11. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.
    a. *Required Sampling Time.* Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

b. *Minimum Sample Volume.* Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

[Rule 62-297.310(4), F.A.C.]

12. Determination of Process Variables

a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

13. Sampling Facilities: The permittee shall provide stack testing facilities and sampling locations in accordance with Rule 62-297.310(6), F.A.C.

14. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]

15. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

RECORDS AND REPORTS

16. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

17. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

18. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to each Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

CONTINUOUS MONITOR SYSTEMS QUARTERLY REPORT

{Note: This format is based on 40 CFR 60.7, Subpart A, General Provisions.}

Pollutant *(Circle One)*: Nitrogen Oxides (NOx) Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer and Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [a]: _____

Emission data summary [a]		CMS performance summary [a]	
1. Duration of Excess Emissions In Reporting Period Due To:		1. CMS downtime in reporting period due to:	
a. Startup/Shutdown		a. Monitor Equipment Malfunctions	
b. Control Equipment Problems		b. Non-Monitor Equipment Malfunctions	
c. Process Problems		c. Quality Assurance Calibration	
d. Other Known Causes		d. Other Known Causes	
e. Unknown Causes		e. Unknown Causes	
2. Total Duration of Excess Emissions		2. Total CMS Downtime	
3. [Total Duration of Excess Emissions] x (100%) [Total Source Operating Time] [b]		3. [Total CMS Downtime] x (100%) [Total source operating time]	

[a] For opacity, record all times in minutes. For gases, record all times in hours.

[b] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes to the monitoring systems, processes or controls during last quarter.

I certify that the information contained in this report is true, accurate, and complete.

_____
Name

_____
Title

_____ _____
Signature *Date*

ATTACHMENT OC-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT OC-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

Okeelanta Mill Boiler No. 16 is a Babcock and Wilcox Model No. FM 120-97 package boiler with a maximum steam production rate of 150,000 pounds per hour (24-hour average). The unit is fired with pipeline-quality natural gas and very low sulfur distillate oil (0.05 percent sulfur, maximum). The heat input rate is 211 MMBtu per hour when firing natural gas and 202 MMBtu per hour when firing very low sulfur distillate oil.

The hours of operation are not limited (8,760 hours per year). Boiler No. 16 is permitted to fire no more than 10,000,000 gallons of very low sulfur distillate oil during any consecutive 12 months.

EMISSION UNIT 2

SUGAR TRANS-SHIPMENT FACILITY

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ 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.

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).

   ☐ 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. Description of Emissions Unit Addressed in this Section:
   Sugar Trans-shipment Facility

3. Emissions Unit Identification Number: **018, 019, 020, 026, 027, 028, 045, 046, 047**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**20**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    This emission unit consists of Multiple Emission Points: The Vacuum System Baghouse (EU 018), the Packaging Lines Baghouse (EU 019), the Grinder Baghouse (EU 020), the three Sugar Silo Baghouses (EU 026, 027, and 028), the Powdered Sugar Dryer/Cooler Baghouse (EU 045), the Powdered Sugar Hopper Baghouse (EU 046), and the new Packaging Lines Baghouse (EU 047).

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

1 baghouse (Vacuum System)

2 baghouses (Packaging Lines)

1 baghouse (Grinder & Hopper)

3 baghouses (One for each of 3 Storage Silos)

1 baghouse (Powdered Sugar dryer/cooler)

Cyclonic Separator (Inlet side of vacuum pump of Vacuum System)

1 baghouse (Powdered Sugar Hopper)

2. Control Device or Method Code(s): **018, 007**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **865 tons/day of sugar**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	
Maximum throughput relates to the maximum refined sugar production rate.	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Trans-shipment Facility**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Nine baghouses: Packaging Lines; Vacuum System; Grinder & Hopper; Sugar Silos (3); Powdered Sugar Dryer/Cooler; New Packaging Lines; and Powdered Sugar Hopper.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **27** feet	7. Exit Diameter: **1.50** feet
8. Exit Temperature: **75** °F	9. Actual Volumetric Flow Rate: **10,132** acfm	10. Water Vapor: **0.025** %
11. Maximum Dry Standard Flow Rate: **8,849** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Parameters shown are for the existing Packaging Lines Baghouse. See Attachment OC-EU2-C15 for stack/vent ifnormation on each separate emission point contained in this EU.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Food and Agriculture, Food and Agriculture-Sugar Cane Processing, General**		
2. Source Classification Code (SCC): **3-02-015-01**	3. SCC Units: **Tons Sugar Produced or Manufactured**	
4. Maximum Hourly Rate: **81.5**	5. Maximum Annual Rate: **315,725**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum annual rate based on permitted rate of 865 tons/day of refined sugar.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.591** lb/hour **11.352** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **See Attachment OC-EU2-F1.8.**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Attachment OC-EU2-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **11.352 TPY**	4. Equivalent Allowable Emissions: **2.591** lb/hour **11.352** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on permitted allowable emissions. See Attachment OC-EU2-F1.8 for listing of individual allowables for each baghouse.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Existing permit condition. Rule 62-297.620(4), F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be 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:	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU2-I1** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU2-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU2-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-EU2-C15

STACK PARAMETER SUMMARY

Attachment OC-EU2-C15. Stack Parameter Summary Table for the Transhipment Facility

Emission Source	Control Device	Point ID	Discharge Type	Stack Height (ft)	Exit Diameter (ft)	Exit Temperature (° F)	Actual Volumetric Flow Rate (acfm)	Percent Water Vapor (%) [a]	Maximum Dry Standard Flow Rate (dscfm)
Vacuum System	Baghouse	018	Horizontal	8	0.33	75	284	0.025	280
Packaging Lines 1-10	Baghouse	019	Vertical	27	1.5	75	10,132	0.025	10,000
Grinder	Baghouse	020	Horizontal	39	1.0 [b]	75	3,000	0.025	2,960
Silo No. 1	Baghouse	026	Horizontal	65	0.5	90	521	0.025	500
Silo No. 2	Baghouse	027	Horizontal	65	0.5	90	521	0.025	500
Silo No. 3	Baghouse	028	Horizontal	65	0.5	90	521	0.025	500
Powdered Sugar Dryer/Cooler	Baghouse	045	Vertical	48	2.0	90	9,000	0.025	8,638
Powdered Sugar Hopper	Baghouse	046	Horizontal	48	0.75	90	1,800	0.025	1,728
Packaging Lines 11-14	Baghouse	047	Vertical	48	1.75	90	6,000	0.025	5,759

Footnotes:

[a] Percent water vapor content represents typical content of "Kathbar" treated air.

[b] Equivalent exit diameter based on a rectangular exhaust duct (10 inches by 11 inches) cross sectional area of 0.7638 sq. ft.
Equivalent diameter = 0.9862 ft.

ATTACHMENT OC-EU2-F1.8

CALCULATION OF EMISSIONS

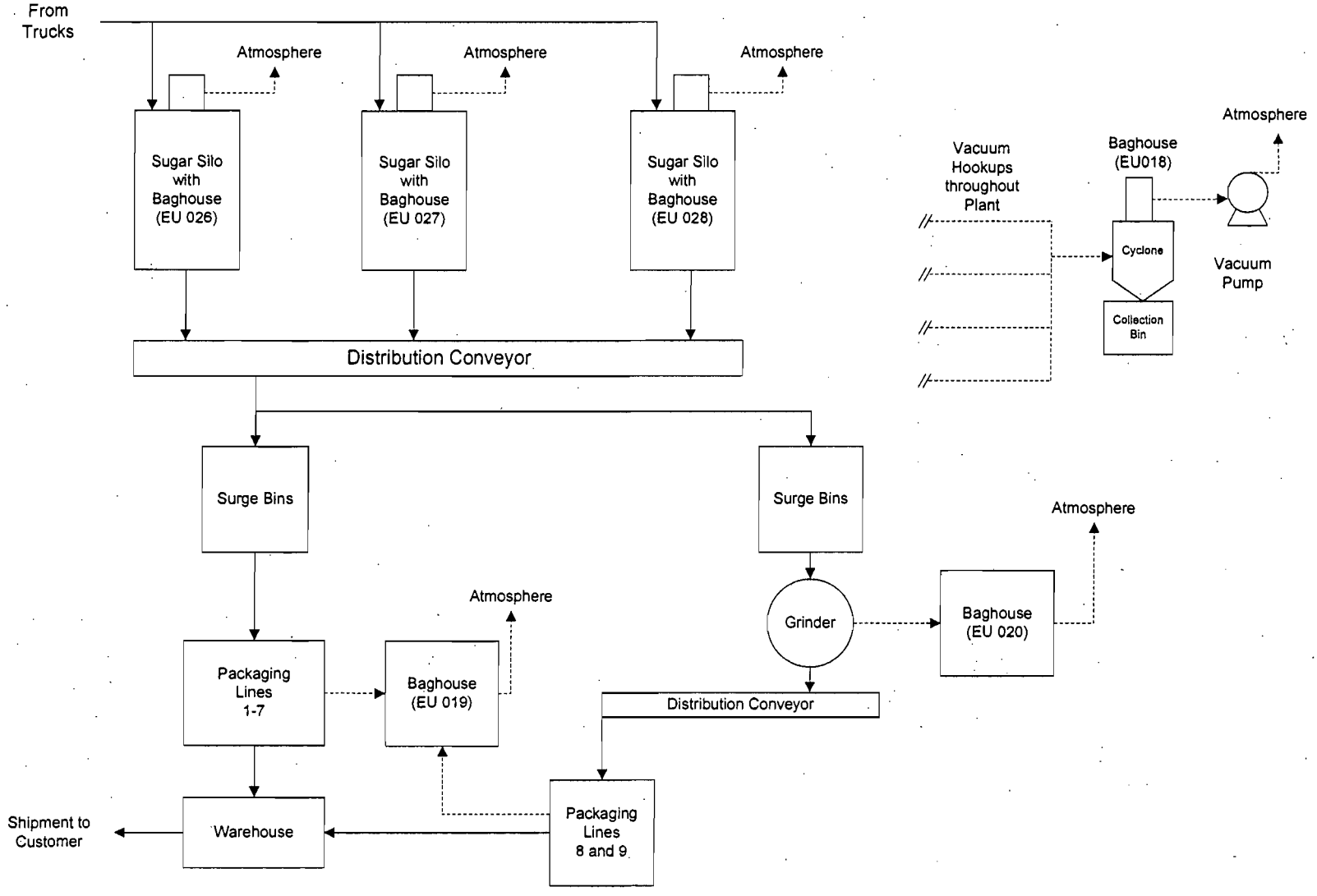
Attachment OC-EU2-F1.8. Summary of Particulate Emissions for the Transhipment Facility

Emission Segment Source	Point ID	Baghouse Guaranteed Manufacturer's Emission Rate	Baghouse Gas Flow Rate	Hourly Emissions (lb/hr)	Annual Emissions [a] (TPY)
Vacuum System 1	018	0.01 gr/scf	280 scfm	0.024	0.105
Packaging Lines 1-10	019	0.01 gr/acf	10,000 acfm	0.857	3.754
Grinder	020	0.0005 gr/scf	2,960 scfm	0.013	0.060
Silo No. 1	026	0.02 gr/scf	500 scfm	0.0857	0.375
Silo No. 2	027	0.02 gr/scf	500 scfm	0.0857	0.375
Silo No. 3	028	0.02 gr/scf	500 scfm	0.0857	0.375
Powdered Sugar Dryer/Cooler	045	0.01 gr/acf	9,000 acfm	0.771	3.379
Powdered Sugar Hopper	046	0.01 gr/acf	1,800 acfm	0.154	0.676
Packaging Lines 11-14	047	0.01 gr/acf	6,000 acfm	0.514	2.253
		Total Particulate Emissions All Sources		2.591 lb/hr	11.352 TPY

[a] Based on 8,760 hr/yr operation.

ATTACHMENT OC-EU2-I1

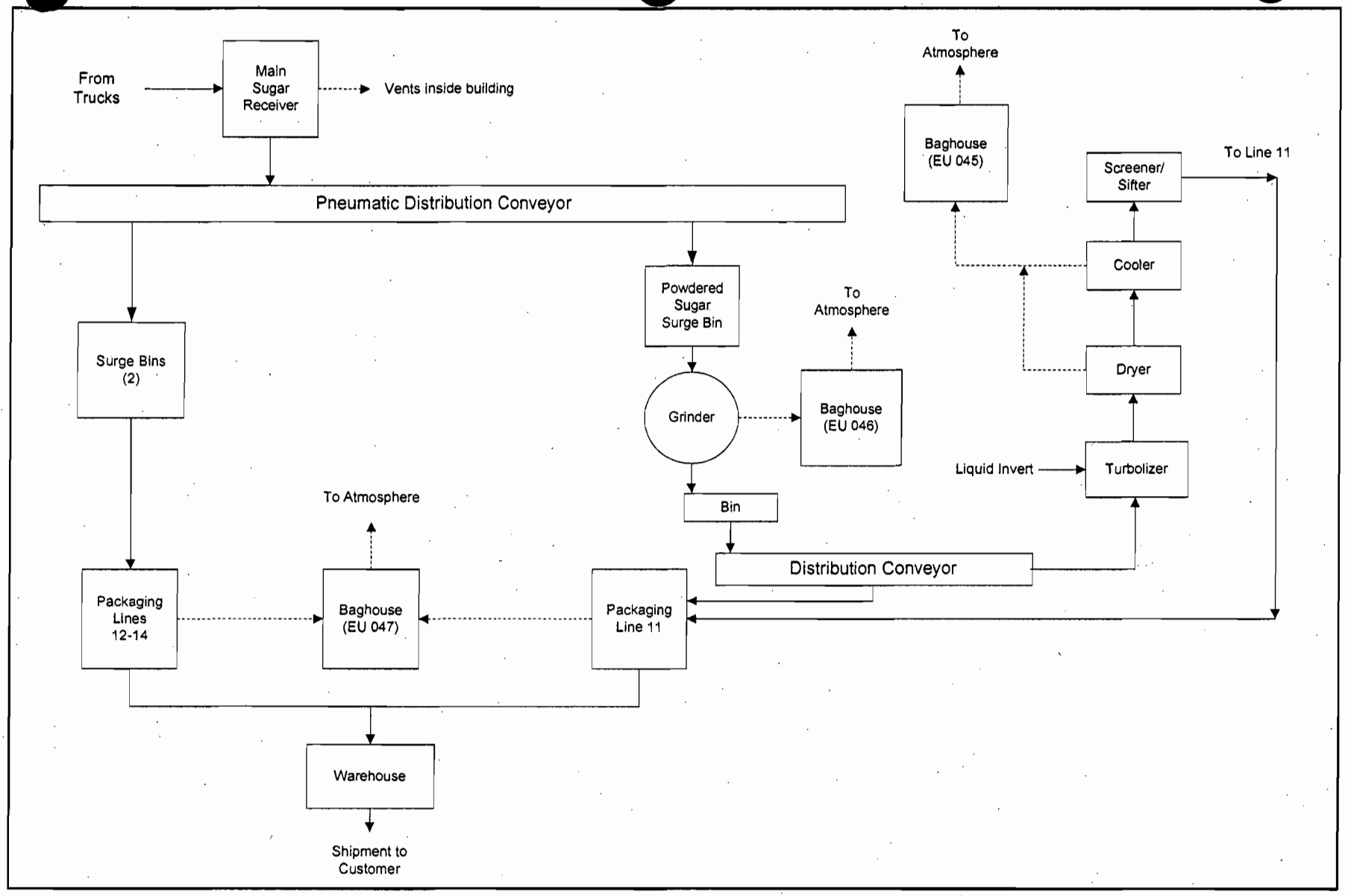
PROCESS FLOW DIAGRAMS



Attachment OC-EU2-I1a. Process Flow Diagram
Phase I - Transshipment Facility
Florida Crystals Refinery
South Bay, Florida

Process Flow Legend
Solid/Liquid ——→
Gas ·····→

Golder Associates



Attachment OC-EU2-I1b. Process Flow Diagram
Phase II - Expansion Transshipment Facility
Florida Crystals Refinery
South Bay, Florida

Process Flow Legend
Solid/Liquid ——→
Gas ·····→

Golder Associates

ATTACHMENT OC-EU2-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT OC-EU2-I3a

CONTROL EQUIPMENT PARAMETERS FOR THE VACUUM SYSTEM BAGHOUSE (EU 018) AT THE TRANS-SHIPMENT FACILITY

Vacuum System	
Manufacturer and Model No.	Ross Cook Model RC30HBFBX-PJ
Outlet Gas Temp (°F)	75
Outlet Gas Flow Rate (acfm)	284
Exhaust Gas Moisture Content (%)	0.025
Outlet Gas Flow Rate (scfm)	280
Cleaning Method	Pulse Jet cleaning (Timer Actuated)
Bag Material	Polyfelt
Total Area of Filter Media (sq. ft)	72
Air to Cloth Ratio	3.9
Manufacturer's Guaranteed Outlet Loading (grains/scf)	0.01

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.024

Note: Parameters based on manufacturers design specifications.
Exit temperature from construction permit application.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:

Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X
outlet loading rate (grains/dscf) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-I3b

CONTROL EQUIPMENT PARAMETERS FOR THE PACKAGING LINES 1-10 BAGHOUSE (EU 019) AT THE TRANS-SHIPMENT FACILITY

Packaging Lines 1-10		
Manufacturer and Model No.	MAC Environmental Model 55AVSC64 Style III	
Outlet Gas Temp (°F)		75
Outlet Gas Flow Rate (acfm)		10,000
Exhaust Gas Moisture Content (%)		0.025
Outlet Gas Flow Rate (dscfm)		9,868
Cleaning Method		Pulse Jet cleaning (Timer Actuated)
Bag Material		Polyester Pleated
Total Area of Filter Media (sq. ft)		3,520
Air to Cloth Ratio		2.84
Manufacturer's Guaranteed Outlet Loading (grains/acf)		0.01

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.857

Note: Parameters based on manufacturers design specifications.
Exit temperature from construction permit application.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:
Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X
outlet loading rate (grains/acfm) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-I3c

CONTROL EQUIPMENT PARAMETERS FOR THE GRINDER BAGHOUSE (EU 020) AT THE TRANS-SHIPMENT FACILITY

Grinder System	
Manufacturer and Model No.	Reimelt Corp. Model
Outlet Gas Temp (°F)	75
Outlet Gas Flow Rate (acfm)	3,000
Exhaust Gas Moisture Content (%)	0.025
Outlet Gas Flow Rate (scfm)	2,960
Cleaning Method	Pulse Jet cleaning (Timer Actuated)
Bag Material	Gor-Tex Polyester
Total Area of Filter Media (sq. ft)	800
Air to Cloth Ratio	3.75
Manufacturer's Guaranteed Outlet Loading (grains/scf)	0.0005

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.013

Note: Parameters based on manufacturers design specifications.
Exit temperature from construction permit application.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:

Outlet loading rate (lb/hr) = outlet gas flow rate (dscfm) X
outlet loading rate (grains/dscf) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-I3d

CONTROL EQUIPMENT PARAMETERS FOR THE SUGAR STORAGE SILOS BAGHOUSES (EU 026, 027, AND 028) AT THE TRANS-SHIPMENT FACILITY

Each Storage Silo	
Manufacturer and Model No.	Reimelt Corp. Model JF795-14P-7.5-5
Outlet Gas Temp (°F)	90
Outlet Gas Flow Rate (acfm)	521
Exhaust Gas Moisture Content (%)	0.025
Outlet Gas Flow Rate (scfm)	500
Cleaning Method	Pulse Jet cleaning (Timer Actuated)
Bag Material	Polyester
Total Area of Filter Media (sq. ft)	81
Air to Cloth Ratio	6.17
Manufacturer's Guaranteed Outlet Loading (grains/scf)	0.02

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.0857

Note: Parameters based on manufacturers design specifications.
Exit temperature from construction permit application.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:

Outlet loading rate (lb/hr) = outlet gas flow rate (dscfm) X
outlet loading rate (grains/dscf) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-I3e

CONTROL EQUIPMENT PARAMETERS FOR THE POWDERED SUGAR DRYER/COOLER (EU 045) AT THE TRANS-SHIPMENT FACILITY

Powdered Sugar Dryer/Cooler	
Manufacturer and Model No.	Reimelt Corp. Model SL3-18
Outlet Gas Temp (°F)	90
Outlet Gas Flow Rate (acfm)	9,000
Exhaust Gas Moisture Content (%)	0.025
Outlet Gas Flow Rate (scfm)	8,638
Cleaning Method	Pulse Jet cleaning (Timer Actuated)
Bag Material	Duratex II (pleated cartridges)
Total Area of Filter Media (sq. ft)	4,824
Air to Cloth Ratio	1.87
Manufacturer's Guaranteed Outlet Loading (grains/acf)	0.01

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.771

Note: Parameters based on manufacturers design specifications.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:
Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X
outlet loading rate (grains/acf) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-I3f

CONTROL EQUIPMENT PARAMETERS FOR THE POWDERED SUGAR HOPPER BAGHOUSE (EU 046) AT THE TRANS-SHIPMENT FACILITY

Powdered Sugar Hopper Baghouse	
Manufacturer and Model No.	Reimelt Corp. Model 24TB-FRIP-32:S6
Outlet Gas Temp (°F)	90
Outlet Gas Flow Rate (acfm)	1,800
Exhaust Gas Moisture Content (%)	0.025
Outlet Gas Flow Rate (scfm)	1,728
Cleaning Method	Pulse Jet cleaning (Timer Actuated)
Bag Material	Spun Bond Polyester (pleated elements)
Total Area of Filter Media (sq. ft)	325
Air to Cloth Ratio	5.54
Manufacturer's Guaranteed Outlet Loading (grains/acf)	0.01

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.154

Note: Parameters based on manufacturers design specifications.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:
Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X
outlet loading rate (grains/acf) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-I3g

CONTROL EQUIPMENT PARAMETERS FOR THE PACKAGING LINES 11-14 BAGHOUSE (EU 047) AT THE TRANS-SHIPMENT FACILITY

Packaging Lines 11-14		
Manufacturer and Model No.	MAC Equipment Inc. 55RTC52	
Outlet Gas Temp (°F)		90
Outlet Gas Flow Rate (acfm)		6,000
Exhaust Gas Moisture Content (%)		0.025
Outlet Gas Flow Rate (scfm)		5,759
Cleaning Method		Pulse Jet cleaning (Timer Actuated)
Bag Material		Polyester (pleated tubular cartridge)
Total Area of Filter Media (sq. ft)		2,662
Air to Cloth Ratio		2.25
Manufacturer's Guaranteed Outlet Loading (grains/acf)		0.01

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.514

Note: Parameters based on manufacturers design specifications.
Percent water vapor content represents typical content of "Kathbar" treated air.

Sample calculations:
Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X
outlet loading rate (grains/acf) ÷ 7000 grains/lb X 60 min/hr

ATTACHMENT OC-EU2-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT OC-EU2-IV1

EU ID 014 : Sugar Transshipment Facility Rule Applicability for Okeelanta Corporation

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.
APPLICABLE	62-297	62-297.310(1)	required number of test runs.
APPLICABLE	62-297	62-297.310(2)	Operating rate during testing.
APPLICABLE	62-297	62-297.310(2)b	
APPLICABLE	62-297	62-297.310(3)	Calculation of emission rate.
APPLICABLE	62-297	62-297.310(4)	Applicable test procedures.
APPLICABLE	62-297	62-297.310(5)	Determination of process variables.
APPLICABLE	62-297	62-297.310(6)	Required stack sampling facilities.
APPLICABLE	62-297	62-297.310(7)	Frequency of compliance tests.
APPLICABLE	62-297	62-297.310(7)(a)1	
APPLICABLE	62-297	62-297.310(7)(a)3	
APPLICABLE	62-297	62-297.310(7)(a)4.a	
APPLICABLE	62-297	62-297.310(7)(a)9	
APPLICABLE	62-297	62-297.310(7)(c)	
APPLICABLE	62-297	62-297.310(8)	Test reports.
APPLICABLE	62-297	62-297.401	Compliance Test Methods.
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources - 40 CFR 60, Appendix A
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards
APPLICABLE	62-296	62-296.320(4)(a)	General Particulate Emission Limiting Standards - Process weight table

TRANS-SHIPMENT FACILITY PERMIT NO. 0990005-008-AC

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

NOTICE OF PERMIT ISSUANCE

May 10, 2001

CERTIFIED MAIL 7000 0600 0024 1469 9439
RETURN RECEIPT REQUESTED

In the Matter of an Application
for Permit by:

Mr. Ricardo A. Lima
Vice President and General Manager
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

Re: Palm Beach County - AP
Okeelanta Corporation
Transhipment Facility
DEP File No. 0990005-008-AC
South Florida EMA

Enclosed is Permit Number 0990005-008-AC to install a new baghouse on the main sugar receiver, a new sugar grinder with baghouse and new packaging lines with baghouse. These changes will be made a the transhipment facility located about 0.5 mil south of the sugar refinery, west of U.S. Highway 27, south of South Bay Florida. This permit is issued under section(s) 403.087, of the Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit 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, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881
(941) 332-6975

"More Protection, Less Process"

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on May 10, 2001 to the listed persons.

Clerk Stamp

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

Lucie Kolfe 5/10/01
(Clerk) (Date)

RWC/DMK/jw

Enclosures

Copies furnished to:

Matthew Capone, Okeelanta Corporation
David A. Buff, P.E., Golder Associates, Inc.
Palm Beach County Health Department
Jeff Koerner, P.E., DEP, Tallahassee

01 MAY 14 AM 8:05

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

I.D. No.: 0990005
Permit/Certification
Number: 0990005-008-AC
Date of Issue: May 10, 2001
Expiration Date: May 10, 2006
County: Palm Beach
Latitude: 26° 34' 16" N
Longitude: 80° 44' 45" W
Section/Town/Range: 16/45S/36E
Project: New Sugar Grinder and Packaging Lines

This permit is issued under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) 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:

Install a new baghouse on the main sugar receiver, a new sugar grinder with baghouse and new packaging lines with baghouse. These changes will be made at the transhipment facility located about 0.5 mile south of the sugar refinery, west of U.S. Highway 27, south of South Bay, Florida.

SPECIFIC CONDITIONS:

1. The hours of operation of this facility are not restricted.

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

3. Copies of all applications, reports, tests, and notifications shall also be submitted to the Air Pollution Control Section of the Palm Beach County Public Health Unit located at 901 Evernia Street (Post Office Box 29), West Palm Beach, Florida 33402-0029.

4. All reasonable precautions shall be taken to prevent emissions of unconfined particulate matter. Reasonable precautions may include, but not be limited to, the following:

   A. Paving and maintenance of roads, parking areas, and yards.
   B. Application of water when necessary to control emissions.
   C. Removal of particulate matter from roads and other paved areas under control of the owner or operator to prevent reentrainment, and from buildings or work areas to prevent particulate.
   D. Enclosure or covering of conveyor systems.
   E. Posting of vehicle (or truck) speed limits.

[Rule 62-296.320(3), F.A.C.]

5. 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.]

Conditions of Compliance:

6. 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.
[Rule 62-4.050(3), F.A.C.]

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

8. Each of the emission units has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse. Therefore the Department waives any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specify an alternative standard of 5% opacity.

SPECIFIC CONDITIONS:

If the Department has reason to believe that the particulate weight emission standard applicable to such an emissions unit is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Rule 62-297.620(4), F.A.C.]

9. Okeelanta Corporation, the Permittee, has requested lower emissions limits than what is allowed in the Process Weight Tables. Based on baghouse manufacturer's guarantees, these emissions would be the basis for the Title V fees and are shown in the attached Table A-1.

10. The nominal sugar packaging rate will be 865 tons/day.

Required Testing:

11. 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 test shall be conducted within 30 days of initial operation. The Department shall be notified at least 15 days prior to testing to allow witnessing.
[Rule 62-297.310, F.A.C.]

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 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 on site.
[Rule 62-297.310, F.A.C.]

Reports and Recordkeeping:

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

General Conditions:

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

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-008-AC
Date of Issue: May 10, 2001
Expiration Date: May 10, 2006

SPECIFIC CONDITIONS:

General Conditions:

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 10th day of May, 2001.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell

Richard W. Cantrell
Director of
District Management

RWC/DMK/jw

9 Pages Attached

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-008-AC
Date of Issue: May 10, 2001
Expiration Date: May 10, 2006

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.

Table A-1. Summary of Particulate Emissions for the Transhipment Facility, Florida Crystals Food Corporation

Emission Segment Source	Point ID	Baghouse Guaranteed Manufacturer's Emission Rate	Baghouse Gas Flow Rate	Hourly Emissions (lb/hr)	Annual Emissions[a] (TPY)
Existing Sources					
Vacuum System 1 Baghouse	018	0.01 gr/scf	280 scfm	0.024	0.105
Packaging Lines Baghouse	019	0.01 gr/acf	10,000 acfm	0.857	3.754
Grinder Baghouse	020	0.0005 gr/scf	2,960 scfm	0.013	0.060
Silo No. 1 Baghouse	026	0.02 gr/scf	500 scfm	0.0857	0.375
Silo No. 2 Baghouse	027	0.02 gr/scf	500 scfm	0.0857	0.375
Silo No. 3 Baghouse	028	0.02 gr/scf	500 scfm	0.0857	0.375
			Subtotal Existing Sources	1.151 lb/hr	5.044 TPY
New Sources					
Main Sugar Receiver Baghouse		0.01 gr/acf	9,000 acfm	0.771	3.379
Powdered Sugar Hopper Baghouse		0.01 gr/acf	1,800 acfm	0.154	0.676
Packaging Lines Baghouse		0.01 gr/acf	6,000 acfm	0.514	2.253
			Subtotal New Sources	1.440 lb/hr	6.308 TPY
			Total Particulate Emissions All Sources	2.591 lb/hr	11.352 TPY

Note: Compliance with the PM Emission rates will be demonstrated through a visible emissions test using EPA Method 9.
[a] Based on current construction permit for existing sources and 8,760 hr/yr operation for new sources.

EMISSION UNIT 3

SUGAR REFINERY

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ 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.

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).

   ☒ 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. Description of Emissions Unit Addressed in this Section:
   Sugar Refinery

3. Emissions Unit Identification Number: **021-025, 034, 035**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**20**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    The sugar refinery produces standard white sugar or a specialty sugar from the raw sugar sent from the sugar mill. Some of the refined sugar is sold in bulk and shipped by truck on rail car. The majority of the refined sugar produced is transferred by truck to an on-site packaging and distribution warehouse.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouse

Wet Cyclonic Separators (4)

Process Enclosed

2. Control Device or Method Code(s): **018, 057, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **390,000 TPY**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

Maximum production rate refers to the amount of refined sugar produced by the refinery utilizing the fluidized bed drying system and rotary drying system.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **See comment.**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **See Attachment OC-EU3-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **47** feet	7. Exit Diameter: **2.2** feet
8. Exit Temperature: **100** °F	9. Actual Volumetric Flow Rate: **14,100** 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 Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **See Attachment OC-EU3-C15. Stack parameters represent Wet Cyclone No. 1. All other stack parameters included in Attachment OC-EU3-C15.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 3

1. Segment Description (Process/Fuel Type): **Food and Agriculture - Sugar Cane Processing, General**		
2. Source Classification Code (SCC): **3-02-015-01**	3. SCC Units: **Tons Sugar Produced**	
4. Maximum Hourly Rate: **62.5 (24-hr avg.)**	5. Maximum Annual Rate: **390,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum hourly and annual rates refer to the amount of refined sugar produced by the refinery from the fluidized bed and rotary drying systems. Maximum process rates for either system are 1,200 TPD. Maximum process rates while operating both drying systems simultaneously are 1,500 TPD.**		

Segment Description and Rate: Segment 2 of 3

1. Segment Description (Process/Fuel Type): **Food and Agriculture - Sugar Cane Processing, Other Not Classified**		
2. Source Classification Code (SCC): **3-02-015-99**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **44**	5. Maximum Annual Rate: **117,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum hourly and maximum annual rates refer to the maximum amount of refined sugar that could be loaded at the bulk load-out area. Annual operating hours are 8,760 hours.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 3

1. Segment Description (Process/Fuel Type): **Food and Agriculture - Sugar Cane Processing, Other Not Classified**		
2. Source Classification Code (SCC): **3-02-015-99**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **72**	5. Maximum Annual Rate: **273,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum hourly and annual rates refer to the maximum amount of refined sugar that could be loaded at the trans-shipment bulk load-out area. Annual operating hours are 8,760 hours.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	057, 018	054	EL
PM_{10}	057, 018	054	EL
VOC			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99.4**
3. Potential Emissions: **21.66** lb/hour **36.80** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 0990005-005-AC.**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Total potential hourly and annual emissions represent sugar drying and handling (fluidized bed and rotary systems combined) and load-out operations. See Attachment OC-EU3-F1.8.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **See Attachment OC-EU3-F1.8 for complete calculations and description of control equipment.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **36.80 TPY**	4. Equivalent Allowable Emissions: **21.66** lb/hour **36.80** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on permit No. 0990005-005-AC.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: **99.0%**
3. Potential Emissions: **10.0** lb/hour **13.39** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Permit No. 099005-005-AC.**	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Total potential hourly emissions from sugar drying and handling (rotary system) and load-out operations. Total potential annual emissions represent sugar drying and handling (fluidized bed and rotary systems combined) and load-out operations. See Attachment OC-EU3-F1.8.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **See Attachment OC-EU3-F1.8 for complete calculations and description of control equipment.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **13.39 TPY**	4. Equivalent Allowable Emissions: **10.0** lb/hour **13.39** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on permit No. 0990005-005-AC.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Rule 62-297.620(4), F.A.C. and Permit No. 0990005-005-AC. This limit applies to each point source exhaust stack, and is requested in lieu of a PM stack test.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. 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: **Rule 62-296.310(2), F.A.C. This limit applies to all fugitive emission points.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be 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:	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU3-I1** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU3-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU3-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☐ Not Applicable
3. Alternative Methods of Operation
   ☒ Attached, Document ID: **OC-EU3-I1** ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-EU3-C15

EMISSION POINT INFORMATION

ATTACHMENT OC-EU3-C15

EMISSION POINT INFORMATION

Descriptions of Emissions Points Comprising this Emissions Unit:

ID 021 Rotary Dryer/Wet Rotoclone No. 1
022 Conveying/Wet Rotoclone No. 2
023 Cooler No. 1/ Rotoclone No. 3
024 Cooler No. 2/ Rotoclone No. 4
025 Fluidized Bed Dryer/Cooler
034 Bulk Load-out Operation
035 Transfer Bulk Load-out Operation

Emission Point Comment:

1. Identification of Point on Plot Plan or Flow Diagram:
   - Bulk Load-Out Area
   - Transfer Bulk Load-Out Area
   - C1 - Cooler No. 1/Wet Cyclone No. 1
   - C2 - Cooler No. 2/Wet Cyclone No. 2
   - Fluidized Bed Dryer/Cooler Baghouse
   - R1 – Rotary Dryer/Wet Rotoclone No. 1
   - R2 – Conveying/Wet Rotoclone No. 2

14. Emission Point Comment: Stack parameters above represent average for Cooler No. 1 and No. 2 Wet Rotoclones. This emission unit has five vertical stacks serving individual control equipment and two fugitive emissions sources.

See the following table for stack/vent information for each emission point.

Stack Parameters for the Okeelanta Sugar Refinery

EU ID	Stack Description	Stack Height (ft)	Exit Diameter (ft)	Stack Temp (°F)	Actual Volumetric Flow Rate (acfm)	Percent Water Vapor (%)	Maximum Dry Standard Flow Rate (dscfm)
021	Wet Rotoclone No. 1	93 (a)	2.5	100	15,000	NA	NA
022	Wet Rotoclone No. 2	93 (a)	2.5	90	15,000	NA	NA
023	Cooler No. 1/Wet Cyclone No. 1	47 (a)	2.16 (b)	100	14,100	NA	NA
024	Cooler No. 21/Wet Cyclone No. 2	35 (a)	2.16 (b)	100	14,100	NA	NA
025	Fluidized Bed Baghouse	80	7	115	70,620	0.7	64,390

Footnote:

(a) Estimated height based on best available information.

(b) Equivalent exit diameter based on rectangular exhaust duct (2 ft x 1.83 ft) cross-sectional area of 3.67 ft^2.

ATTACHMENT OC-EU3-F1.8

CALCULATION OF EMISSIONS

Attachment OC-EU3-F1.8e. Summary of Maximum Annual and Short Term Particulate Matter Emissions from Okeelanta Sugar Refinery

Source Emission Point Description	Emission Unit ID	Individual EU Maximum Emissions lb/hr	Individual EU Maximum Emissions TPY	Overall Maximum Emissions lb/hr	Overall Maximum Emissions TPY
Particulate Matter (PM)[a]					
Fluidized Bed Drying System					
Fluidized Bed Baghouse	025	3.00	11.70	2.63	7.80
Rotary Drying System					
Cooler No. 1 / Wet Cyclone No. 1	023	7.70	10.01	7.70	10.01
Cooler No. 2 / Wet Cyclone No. 2	024	7.70	10.01	7.70	10.01
AAF Skimmer/Wet Rotoclone No.1 (from dryer)	021	3.15	4.09	3.15	4.09
Material Handling					
AAF Skimmer/Wet Rotoclone No.1 (from transfer points)	021	0.01	0.04	0.01	0.04
AAF/Wet Rotoclone No.2	022	0.06	0.18	0.05	0.18
Bulk and Transfer Load-Out Operations					
Bulk load-out Operations	034	2.30	3.06	2.30	3.06
Transfer Bulk Load-out Operations	035	0.75	1.43	0.75	1.43
	Total	--	--	**21.66**	**36.62**
Particulate Matter (PM_{10})[b]					
Fluidized Bed Drying System					
Fluidized Bed Baghouse	025	0.12	0.47	--	0.31
Rotary Drying System					
Cooler No. 1 / Wet Cyclone No. 1	023	4.30	5.59	4.30	5.59
Cooler No. 2 / Wet Cyclone No. 2	024	4.30	5.59	4.30	5.59
AAF Skimmer/Wet Rotoclone No.1 (from dryer)	021	1.26	1.64	1.26	1.64
Material Handling					
AAF Skimmer/Wet Rotoclone No.1 (from transfer points)	021	0.005	0.016	0.004	0.016
AAF/Wet Rotoclone No.2	022	0.024	0.073	0.019	0.073
Bulk and Transfer Load-Out Operations					
Bulk load-out Operations	034	0.09	0.12	0.09	0.12
Transfer Bulk Load-out Operations	035	0.03	0.06	0.03	0.06
	Total	--	--	**10.00**	**13.40**

[a] Maximum emissions occur when using the combination of the Fluidized Bed and Rotary drying systems.

[b] Maximum hourly emissions occur when using the Rotary drying system
Maximum overall annual emissions occur when using the combination of the Fluidized Bed and Rotary drying systems.

Attachment OC-EU3-F1.8f. Annual and Short Term Emissions of VOCs from Sugar Refinery Chemical Usage

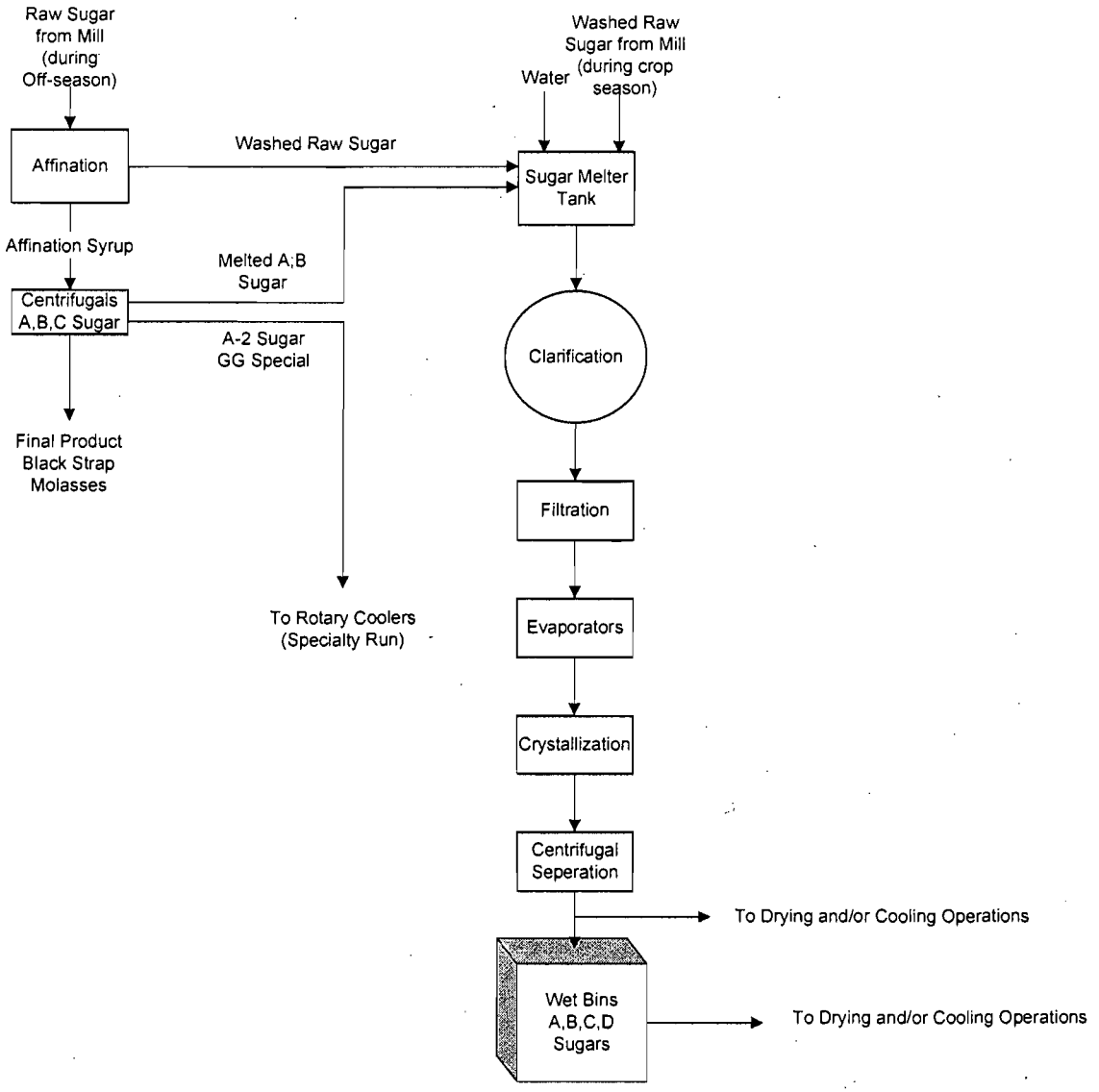
Material	Chemical	VOC Content	Potential Chemical Usage[a] (lb/yr)	Potential VOC Emissions (TPY)	
Pure Isopropyl Alcohol	Isopropyl Alcohol	100%	77,500	38.75	
Rodine 213	Isopropyl Alcohol	15%	3,000	0.225	
	Propargyl Alcohol	3%	3,000	0.045	
		Total VOCs =	11.54 lb/hr[b]	39.02	TPY

[a] Based on mill estimates for maximum usage rates.

[b] Based on an average 6762 hours per year for the dryers during 1998 and 1999 operation, assuming that 100% of compound is emitted to the atmosphere.

ATTACHMENT OC-EU3-I1

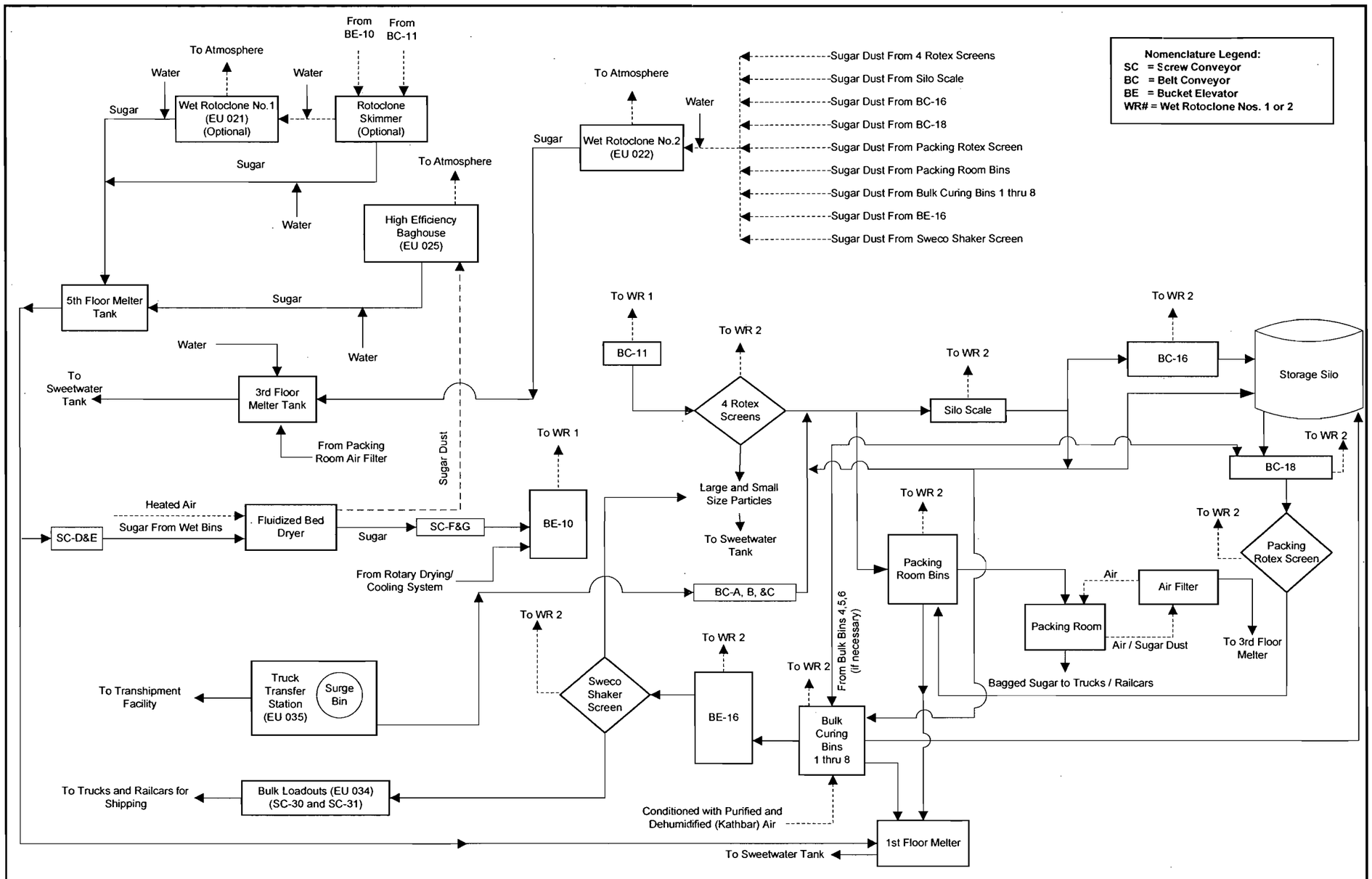
PROCESS FLOW DIAGRAM



Attachment OC-EU1-I1a. Process Flow Diagram
Sugar Mill Refinery Expansion
Florida Crystals Refinery
South Bay, Florida

Process Flow Legend
Solid/Liquid ——→
Gas ----------→

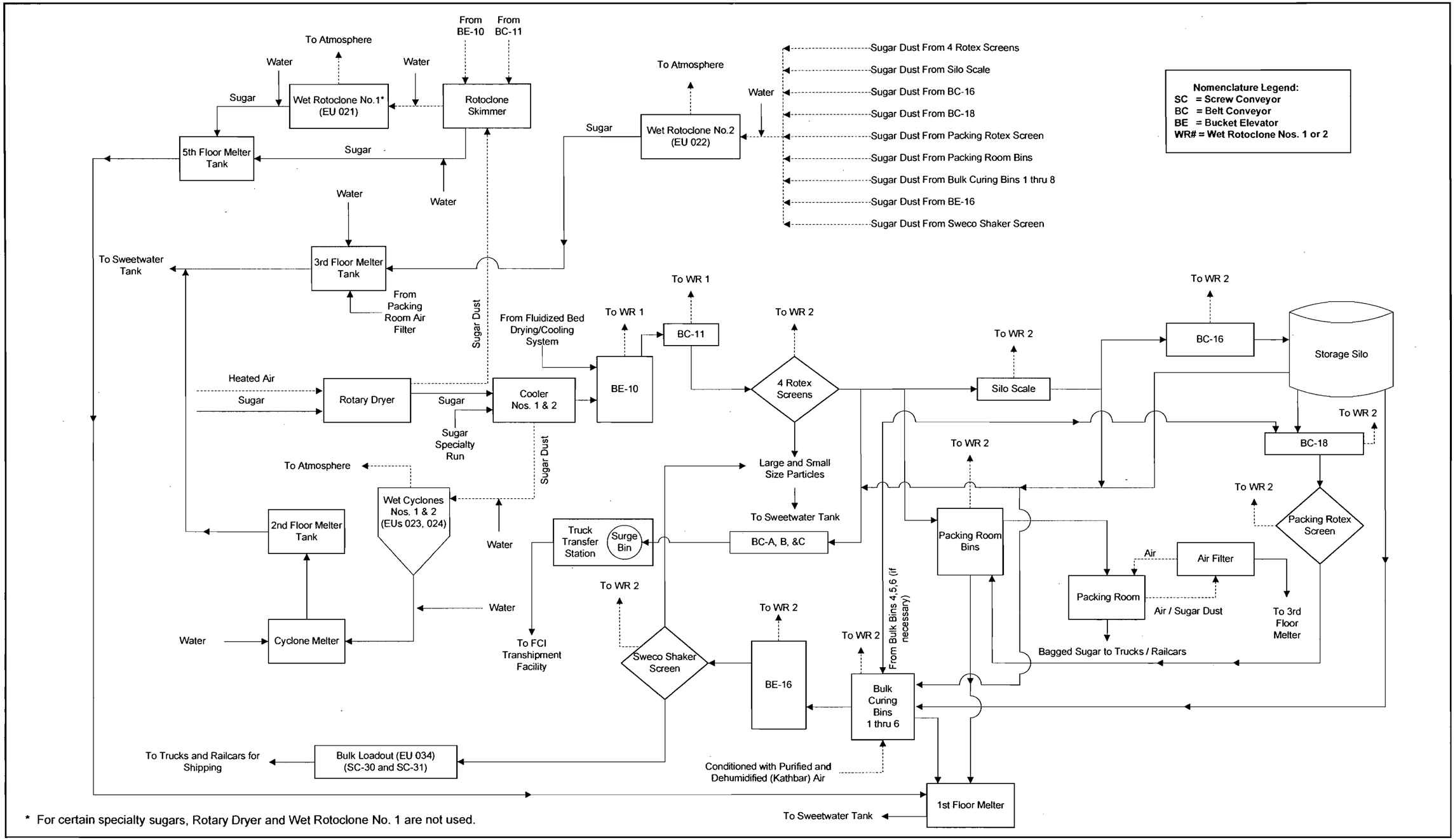
Golder Associates



Attachment OC-EU3-I1b. Process Flow Diagram
Refinery Operations with Fluidized Bed Dryer/Cooler
Okeelanta Refinery
South Bay, Florida

Process Flow Legend
Solid/Liquid ——→
Gas - - - - →

Golder Associates



* For certain specialty sugars, Rotary Dryer and Wet Rotoclone No. 1 are not used.

Attachment OC-EU3-I1c. Process Flow Diagram
Refinery Operations with Rotary Dryer/Coolers
Okeelanta Refinery
South Bay, Florida

Process Flow Legend
Solid/Liquid ——→
Gas - - - →

Golder Associates

ATTACHMENT OC-EU3-I3

DESCRIPTION OF CONTROL EQUIPMENT

Attachment OC-EU3-I3a. Control Equipment Parameters and Particulate Removal Efficiencies for Sugar Dust Wet Collection Systems at Okeelanta Sugar Refinery

Name	Cooler No. 1 Wet Rotoclone	Cooler No. 2 Wet Cyclone	Wet Rotoclone No. 1	Wet Rotoclone No. 2
ID Designation	023	024	021	022
Manufacturer	Unknown	Unknown	American Air Filter (AAF)	American Air Filter (AAF)
Type/Design	Lapple [a] Wet Cyclone	Lapple [a] Wet Cyclone	Wet Rotoclone [b] Type W, Size 27	Wet Rotoclone [b] Type W, Size 27
Outlet Gas Temp (°F)	100	100	100	90
Outlet Gas Flow Rate (acfm) [c]	7,050	7,050	19,000	19,000
Water Injection Rate (gal/min) (minimum) [d]	24	24	2	2
Pressure Drop Across Device (inches H_2O) (min) [d]	1	1	6.8	6.8
Total PM Control Efficiency (%)	95.6	95.6	99.9	99.9
Total PM_{10} Control Efficiency (%)	38.6	38.6	99.0	99.0

Sample calculations:

Control efficiency (%) = [(inlet loading rate - outlet loading rate) / inlet loading rate] X 100.

Note:

[a] Control efficiency based on standard cyclone design calculations by Lapple and Shepherd.
Outlet gas flow rate based on Phelps Fan Manufacturing fan curve at 1,600 RPM and 3" static pressure.
Flow rate represents combined flow of each cyclone pair.

[b] Outlet gas flow rate based on AAF fan operating curves at 1,000 RPM.
Control efficiency is manufacturer's guarantee for PM_{10}.

[c] Typical outlet temperatures and estimated flow rates are shown. (Note: There are 2 identical wet cyclones per cooler.)

[d] Based on 2002 stack testing.

Attachment OC-EU3-I3b. Control Equipment Parameters and Particulate Removal Efficiency Derivation for Fluidized Bed Dryer Cooler Pulse Jet Baghouse (EU 025) at Okeelanta Sugar Refinery

Manufacturer	BETH GmbH, 23556 Lobeck
Type	BETHPULS 6.60 x 7.5.10
Outlet Gas Temp (°F)	115
Outlet Gas Flow Rate (acfm)	70,620
Exhaust Gas Moisture Content (%)	0.7
Cleaning Method	Pulse Jet Compressed Air
Compressed Air Consumption (cfm)	51.8
Number of Bags	420
Total Filter Media Surface Area (sq. ft)	9,041
Air to Cloth Ratio (cfm per sq ft.)	7.81
Outlet Loading (grains/dscf)	0.00348 [a]

Pollutants

	Inlet[b] Loading lb/hr	Control[c] Efficiency (%)	Outlet Loading lb/hr
Particulate Matter	960	99.80	1.92

Note: All parameters are based on manufacturers design information.

Footnotes:

[a] Calculated based on expected outlet loading rate (lb/hr) and outlet gas flow rate (scfm) at operational conditions.

[b] Inlet loading to the filter specified by the fluidized bed dryer manufacturer while operating at Okeelanta's estimated maximum refined sugar production (includes a 20% design safety factor).

[c] Control efficiency based on baghouse manufacturers design information for dust content in raw gas (10g/m³ at standard conditions) and for dust content in clean gas (20 mg/m³ at standard conditions).

Sample calculations:

Outlet loading rate = inlet loading rate X (1-(control efficiency/100))

ATTACHMENT OC-EU3-I3c

CALCULATION OF COOLERS NOS. 1 AND 2 STANDARD CYCLONE EFFICIENCY AND PRESSURE DROP

Step 1. Calculate Number of Effective Turns (Ne)

$Ne = l/H \times [L_b + L_c/2]$

H, L_b, and L_c are as shown in diagram

Values as follows:

H=	2.083 ft
L_b=	4.46 ft
L_c=	5 ft
Ne=	3.34

Step 2. Calculate 50% Cut diameter (dpc)

$$dpc = \frac{(9 \times \mu \times W)^{0.5}}{(2 \times pi \times Ne \times Vi \times (pp - pg)^{0.5}}$$

W is as shown in the diagram

Ne is as derived above

pp = density of particulate

pg = density of gas

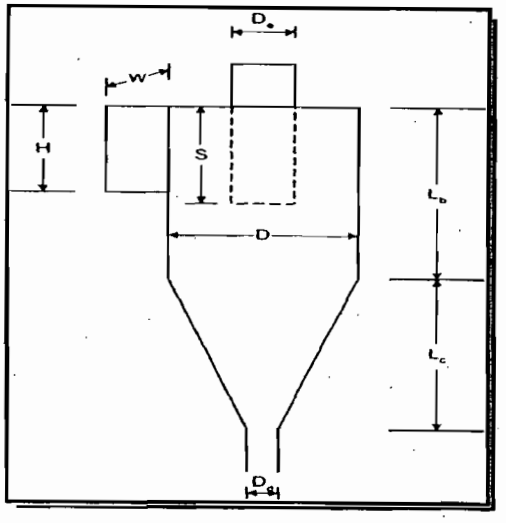
Vi = gas velocity

μ = gas viscosity = 1.3055E-05 lb mass/ft-sec

Q = air flow based on ID fan curve for both cyclones in parallel

Q = Vi x Inlet Area = Vi x H x W

Q=	7,050 cfm per cyclone
W=	1 ft
Ne=	3.34
Vi=	56.40 ft/sec
pp=	58 lb/ft³
pg=	0.0708 lb/ft³ for Air @ 100°F
dpc=	4.14E-05 ft
=	12.62 µm



Step 3. Based on Particle Size Distribution, determine efficiency for each particle size range and sum for total.

Table 1. Particle Size Distribution for Refined Sugar Dust at Okeelanta Sugar Refinery

Smallest Size in Range (micrometers)	Largest Size in Range (micrometers)	Dust Analysis (%)
0	20	4
20	34	2
34	51	3
51	71	5
71	125	50
125	--	36
	Total	100

dp_j = midpoint of distribution range

$eff_j = 1 / (1 + (dp_c/dp_j)^2)$ for range

m_i= $eff_i \times dp_i$

$eff_i * m_i$= $eff_i \times m_i$

Cummulative Percent collected = sum of $eff_i * m_i$ for all ranges up to the size range

Table 2. Cyclone Efficiency dpc= 12.617 micrometers

j	Size Range Micrometers	dp_j	dp_c/dp_j	eff_j	m_j %	Percent Collected $eff_j * m_j$%	Cummulative Percent Collected
1	0-20	10	0.79	38.6%	4.0	1.54	1.54
2	20-34	27	2.14	82.1%	2.0	1.64	3.18
3	34-51	42.5	3.37	91.9%	3.0	2.76	5.94
4	51-71	61	4.83	95.9%	5.0	4.79	10.74
5	71-125	98	7.77	98.4%	50.0	49.18	59.92
6	>125	125	9.91	99.0%	36.0	35.64	95.56
						Total	95.56

Calculated "Dry" Cyclone Efficiency

CALCULATED TOTAL PM EFFICIENCY IS 95.6%

CALCULATED PM_{10} EFFICIENCY IS 38.6%

Step 4. Calculate Pressure Drop

$Hv = K \times [H \times W / De^2]$

Hv = pressure drop, expressed in number of inlet velocity heads

K = a constant that depends on cyclone configuration and operating conditions

K = 16 ; recommended default value

De = 1.67 ft

Hv = 12

Delta $P = 0.5 \times pg \times Vi^2 \times Hv$

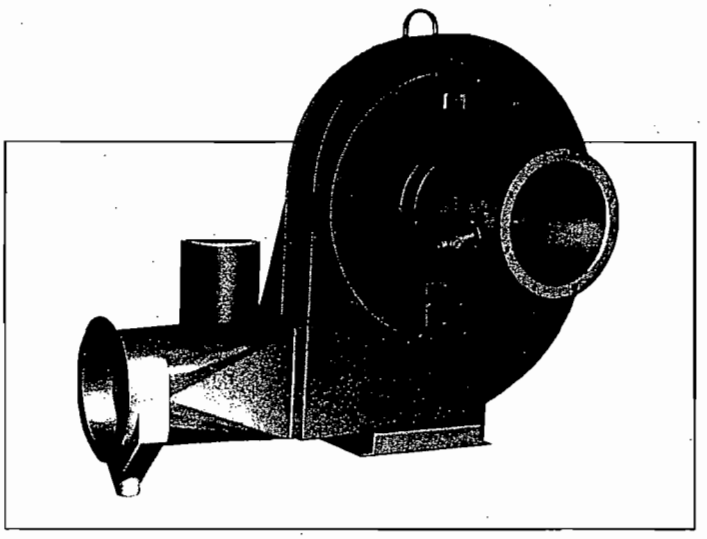
Delta P = pressure drop in N/m^2 or Pa

pg = 1.13 kg/m^3

Vi = 17.19 m/s

Delta P = 2,011 N/m^2

Pressure Drop = 8.06 inches of water



Type W RotoClone

WET CENTRIFUGAL COLLECTOR

American Air Filter
Snyder General

TYPE W RotoClone

COLLECTS MORE DUST FOR FEWER DOLLARS!

The Type W RotoClone has become a dust control favorite throughout industry. The reason: Type W is the lowest priced high efficiency wet dust collector in its class.

The distinguishing feature of the Type W is the addition of water sprays to the basic principle of dynamic precipitation. The spray maintains a flowing film of water on all collecting surfaces which:

1. **Lowers water requirements to a minimum.**
2. **Traps even the lightest and finest dust particles.**
3. **Delivers collected dust in slurry form for easy disposal.**

Type W RotoClone provides everything you need, except duct connections, in one complete, shop-assembled package — high efficiency collector, exhauster, motor and drive. Available in 12 sizes from 1,000 to 50,000 cfm.

For heavy dust concentrations, a Precleaner is used with the Type W. The Precleaner removes the bulk of the dust, either wet or dry, leaving only the fines to be collected by the RotoClone.

Highest Efficiency
Combines dynamic precipitation with a water spray. Maintains efficiency over entire operation range, regardless of speed or air volume. **98% or better dust removal for most applications.**

Minimum Water Requirement
Water consumption is limited to a small amount required to maintain a flowing film on all collecting surfaces. **From ½ to 1 gallon per 1,000 cfm of air cleaned.**

Small Space Requirements
RotoClone combines exhauster and dust collector. **Basically no larger than a centrifugal exhauster.**

Low Installation Cost
Factory-assembled, tested, and shipped in sub-assemblies convenient to handle and easy to erect. **As simple to install as a centrifugal fan with the exception that furnace type ducting is not recommended — use welded duct. Water supply and drain are the only additional connections.**

Continuous Operation
Uniform performance at peak efficiency without interruption for reconditioning or servicing of any kind. **Will operate around the clock — day after day.**

Great Flexibility
Variety of sizes for any exhaust requirement. Compact design allows relocation at minimum expense. **Sizes with capacities from 1,000 to 50,000 cfm.**

Constant Exhaust Volume
Proper conveying velocity in ducts and effective dust control at hoods maintained by constant exhaust air volume. **Build-up in ducts and escapement from hoods is prevented.**

No Secondary Dust Problem
Collected dust discharges as slurry to process, sewer or sump.

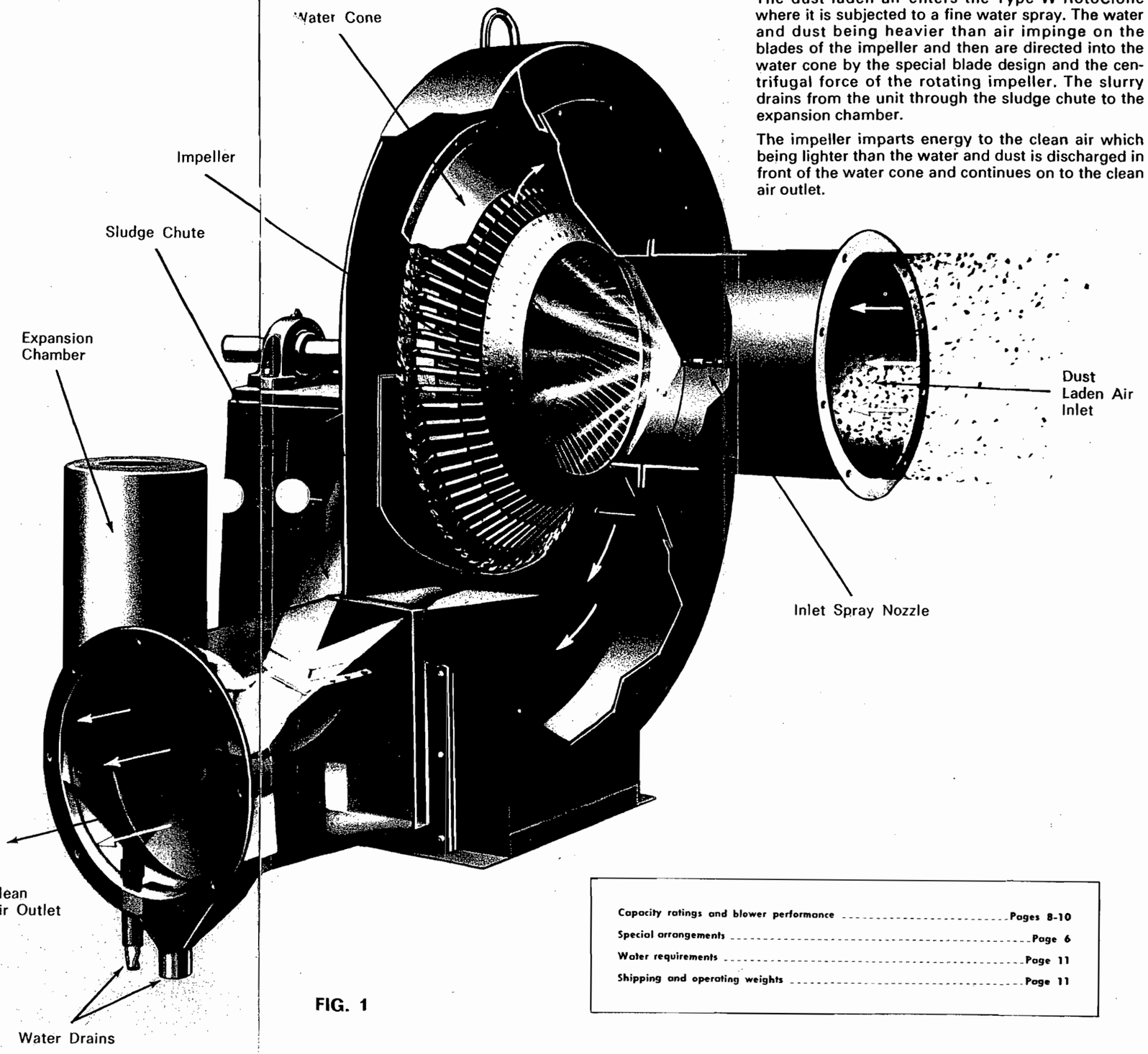


FIG. 1

OPERATING PRINCIPLE

The dust laden air enters the Type W RotoClone where it is subjected to a fine water spray. The water and dust being heavier than air impinge on the blades of the impeller and then are directed into the water cone by the special blade design and the centrifugal force of the rotating impeller. The slurry drains from the unit through the sludge chute to the expansion chamber.

The impeller imparts energy to the clean air which being lighter than the water and dust is discharged in front of the water cone and continues on to the clean air outlet.

Capacity ratings and blower performance ..... Pages 8-10
Special arrangements ..... Page 6
Water requirements ..... Page 11
Shipping and operating weights ..... Page 11

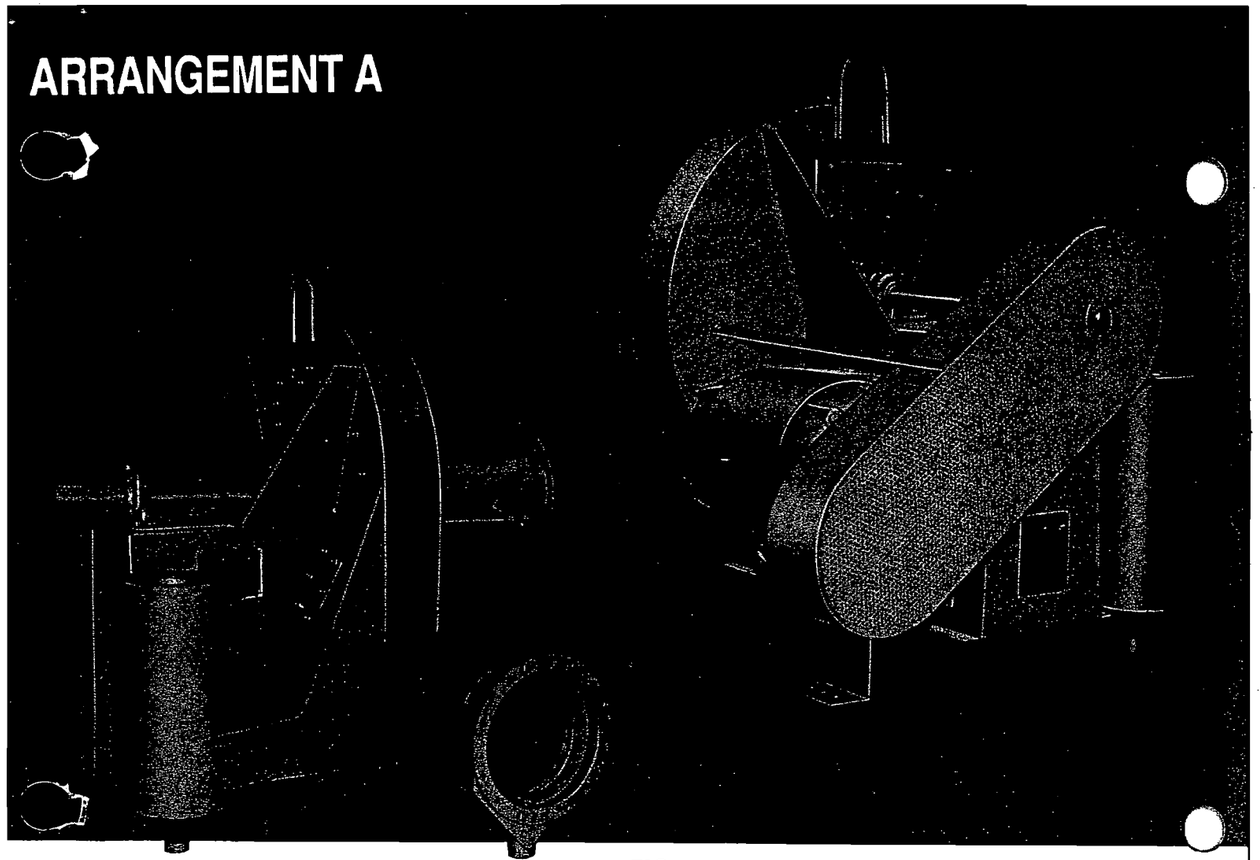


FIG. 2

Type W RotoClone, Arrangement A, from drive side. Clean air outlet may be horizontal duct, as shown, or rectangular elbow.

The Type W RotoClone, Arrangement A, is recommended for the collection of light loadings of granular dusts and mist. Dynamic forces developed by the rotating impeller cause even the finest particles to impinge on and be trapped by the flowing water film which covers all blade surfaces. The slurry formed by water and collected dust drains from the bottom of the RotoClone expansion chamber (see Figure 1). Slurry may be piped to a sump or sewer, returned to process, or discharged to a settling tank where the collected solids precipitate by gravity and clear water overflows to the sewer or drain.

The Type W RotoClone has the performance characteristics of a centrifugal fan. The relation between pressure, volume, and horsepower follows the standard laws of fan performance. Maximum operating speeds are shown in Table C, page 11.

If high temperature, corrosive, or toxic exhaust gases are cleaned, the expansion chamber should be vented to the outside of the building as illustrated in Figure 11, page 11.

FIG. 3

Type W RotoClone, Arrangement A, is available in Arrangement 9 motor mounting where dimensions permit mounting motor on bearing pedestal.

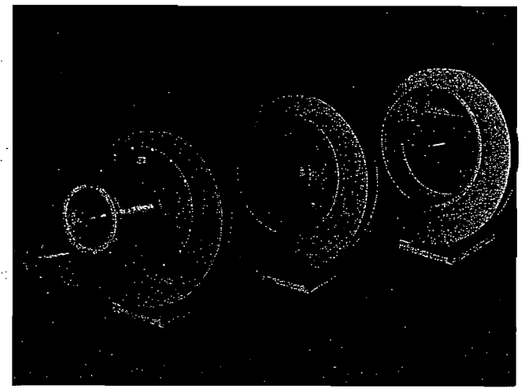
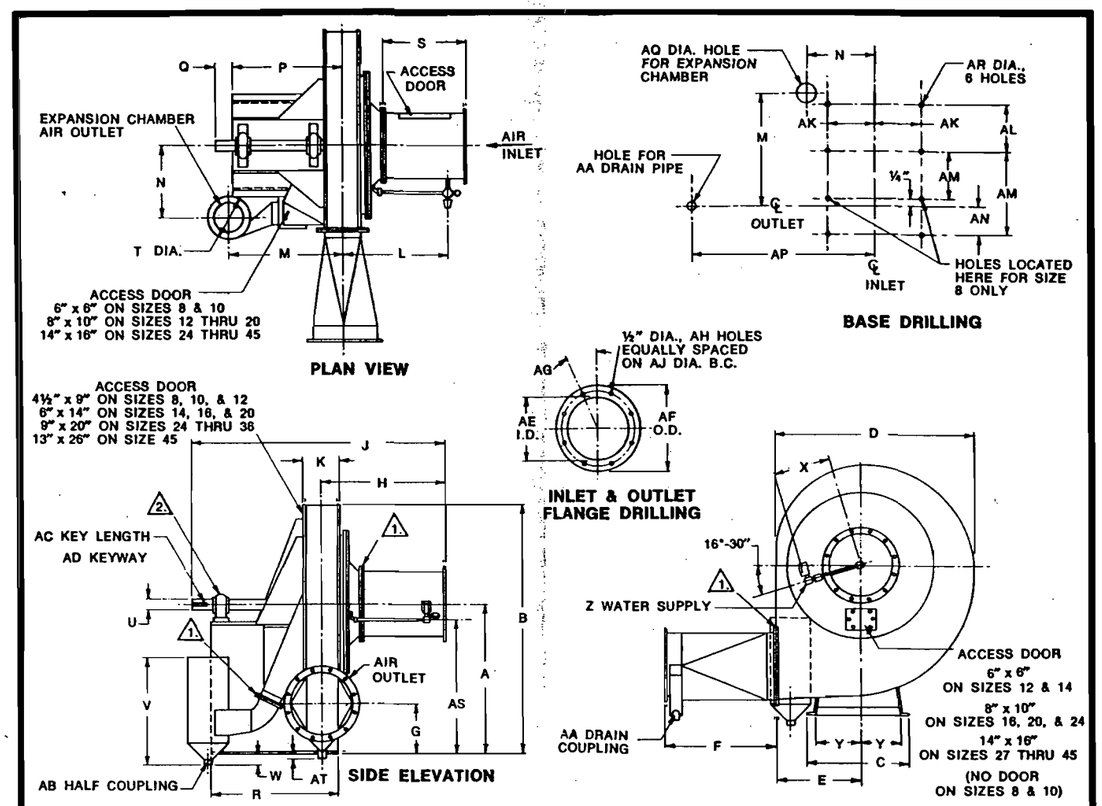


FIG. 4

Standard construction includes brass spray nozzles, stainless steel impeller blades and rivets. Water cone, impeller discs, and welded housing are hot rolled steel plate. All parts can be supplied of aluminum, stainless steel or other metals or the internal housing can be protected with corrosion resistant material (the impeller cannot be coated). See Fig. 5 for additional construction data.

ARRANGEMENT A

FIG. 5



1. STANDARD ROTO-CLONES SIZES 16 AND SMALLER HAVE INLET, OUTLET, AND EXPANSION CHAMBER WELDED TO HOUSING IN LIEU OF FLANGED AND BOLTED CONNECTION.
2. 5"/₁₆" DIAMETER BEARING ON SIZE 45; BEARING SIZE SAME AS "U" ON OTHERS.

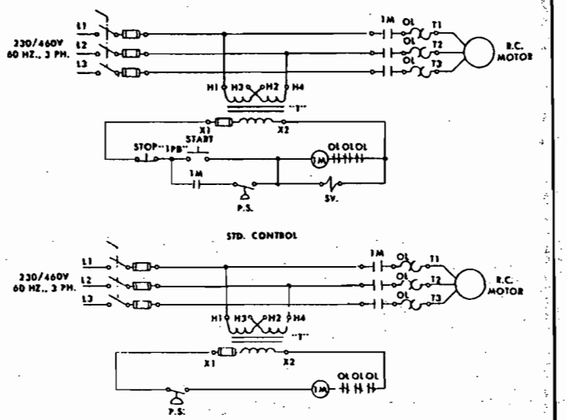
SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
8	20"	2'-8 1/16"	12 3/4"	2'-1 7/8"	11 1/8"	14"	7 3/8"	18 3/16"	3'-7 1/4"	4 1/16"	11 1/16"	20 1/16"	10"	21 5/16"	3 1/2"	23 1/16"	14"	7 1/8"	1 1/16"	18 3/16"	1 13/16"
10	24"	3'-3 3/16"	15"	2'-7 3/8"	13 1/16"	17 1/2"	8 1/4"	21 3/16"	4'-3 3/4"	5 1/16"	14 13/16"	2'-1 1/2"	10 3/4"	2'-2 1/16"	3 7/8"	2'-4 3/16"	18"	8 1/16"		22 1/16"	2 13/16"
12	2'-5"	4'-0 1/4"	19 3/4"	3'-2 1/2"	16 3/16"	21"	10"	2'-1"	4'-10 1/16"	6 1/16"	17 3/8"	2'-3 3/8"	14 1/2"	2'-4 3/16"	4 1/2"	2'-7 5/16"	18"	10 1/16"	1 15/16"	2'-3 1/4"	3 5/16"
14	2'-8 1/2"	4'-6 3/4"	21 1/2"	3'-8 1/2"	19 1/8"	24 1/2"	10 5/16"	2'-4"	5'-2 13/16"	7 1/4"	20 3/8"		16 5/16"	2'-5 1/16"	5 3/8"	2'-8 5/16"	20"	11 1/8"	2 5/16"	2'-5 11/16"	4 3/8"
16	3'-1 1/2"	5'-3 1/8"	2'-4 1/2"	4'-3 1/4"	22"	2'-4"	12 1/16"	2'-7 7/16"	5'-6 1/2"	8 1/4"	22 13/16"	2'-6 9/16"	18 1/2"	2'-5 5/16"	5 3/8"	2'-9 5/16"	22"	12 1/16"	2 7/16"	2'-8 1/16"	2 13/16"
20	3'-10"	6'-5 9/16"	2'-8 1/2"	5'-3 1/8"	2'-3 1/16"	2'-11"	14 3/8"	2'-11 1/2"	6'-9 5/16"	10 1/4"	2'-8 1/8"	3'-0 1/16"	21 1/8"	3'-3 1/16"	8 3/8"	3'-0 1/16"	24"	13 1/16"		3'-0 3/8"	2 1/2"
24	4'-8 3/8"	7'-10 1/16"	3'-2 1/2"	6'-3 1/8"	2'-8 1/4"	3'-6"	18 13/16"	3'-9 1/16"	7'-10 13/16"	12 3/8"	3'-2 1/16"	3'-7 3/4"	2'-2"	3'-6 1/16"	6 9/16"	4'-0 1/16"	2'-8"	15 1/16"	2 15/16"	3'-4 1/16"	3 1/16"
27	5'-2"	8'-8 1/4"	3'-8 1/2"	7'-0 1/2"	3'-0 1/2"	3'-11"	20"	4'-2 1/16"	8'-8 1/4"	13 7/8"	3'-6 3/4"	4'-1 7/8"	2'-5"	3'-9 5/16"	8 7/16"	4'-4 5/16"	2'-11"	17 1/16"	3 1/16"	3'-9 13/16"	4"
30	5'-7 1/16"	9'-5 3/4"		7'-9"	3'-3 3/4"	4'-4 1/2"	21"	4'-7 1/16"	9'-3 1/16"	15 3/8"	4'-0 7/16"	4'-6 1/16"	2'-8"	3'-10 1/16"	9 1/16"	4'-5 1/16"	3'-2"	18 3/16"	3 5/16"	4'-2 7/16"	5 3/16"
33	6'-2"	10'-5 1/16"	4'-2 1/2"	8'-7 3/8"	3'-8 5/16"	4'-10"	22 1/16"	4'-11 1/16"	10'-1 7/16"	17"	4'-4 1/16"	5'-0 7/16"	3'-1"	4'-3"	10 3/16"	4'-11 1/16"	3'-5"	19 1/16"	3 13/16"	4'-6 1/16"	5 9/16"
36	6'-7 1/2"	11'-3 1/16"		9'-3 1/2"	3'-11 3/16"	5'-3 1/2"	24"	5'-4 1/16"	10'-11 1/16"	18 1/2"	4'-9 1/16"	5'-3 5/16"	3'-3"	4'-6 3/16"	12 1/16"	5'-3 3/16"	3'-8"	20 1/16"		4'-10"	4 1/16"
45	8'-0 3/16"	13'-9 1/16"	5'-2 1/2"	11'-4 7/8"	4'-10 13/16"	6'-7"	2'-4 1/2"	6'-8 7/16"	12'-1 7/16"	23"	5'-10 11/16"	6'-7 1/16"	4'-0"	4'-5 3/16"	11 3/16"	5'-5"	4'-7"	23 1/16"	4 1/16"	6'-0 1/16"	5 3/16"

SIZE	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT
8	11 1/2"	4 7/8"				3"		8"	11 1/8"	30°	8	9 3/16"	5 3/16"	12"	7"		22 3/16"	4 3/16"		16 3/16"	1 1/2"
10	11 3/16"	6"	3/4"	1 1/2"	1 1/2"	3 1/16"	3/8"	10"	13 1/16"			11 3/16"	6 7/16"		10"	1/2"	2'-4 3/16"	6 1/16"	5/16"	20 3/16"	2 1/16"
12	14"	7 1/8"				3 3/16"		12"	15 1/16"			14"	9"	14"	13"	3/4"	2'-11"	7 1/16"		2'-1"	1 3/16"
14	15 1/16"	8 1/16"					1/2"	14"	17 1/16"	22 1/2°		15 1/16"	9 7/16"	14 1/2"	13 1/2"	1 1/16"	3'-4"	9 7/16"		2'-3 1/16"	2 13/16"
16	16 3/16"	11 1/16"			2"	5 1/16"		16"	20 1/16"		8	18 7/16"	13"	16"	13"	1 3/16"	3'-10 7/16"			2'-8 3/16"	2 7/16"
20	19 1/16"	13 1/16"					3/8"	20"	24 1/16"	15°		22 1/2"	15"	19 1/2"	20"	2 3/16"	4'-10 7/16"	6"	1 1/16"	3'-4 1/16"	2 9/16"
24	21 3/16"	16 1/16"				6"		24"	2'-4 1/16"		12	2'-2 1/16"	18"	24"	20 1/16"	3 3/16"	5'-10 9/16"	8 1/16"	1 15/16"	4'-2 1/16"	1 13/16"
27	23 9/16"		1"	2"	2 1/2"	7 3/16"	1/4"	2'-3"	2'-7 1/16"			2'-5 3/16"		23 1/2"		4 1/2"	6'-7 1/2"	9 1/2"		4'-7 1/16"	2 1/16"
30	2'-1 1/2"	19 1/16"				9"	1/16"	2'-6"	2'-10 1/16"			2'-8 1/16"	21"	2'-1"	24 1/16"	5 1/16"	7'-4 3/16"	12 1/16"	7/16"	5'-0"	3 1/2"
33	2'-3 1/16"					9 1/2"		2'-9"	3'-1 1/16"			2'-11 3/16"		2'-3"	2'-3 3/16"	6"	8'-2 1/16"	12"		5'-6 1/16"	4 1/16"
36	2'-5 3/16"	22 1/16"			3"	11"	1"	3'-0"	3'-4 1/16"	11 1/4°	16	3'-2 3/16"	24"	2'-5"	2'-6 1/16"	6 3/16"	8'-11 1/2"	11 1/16"	1 1/16"	5'-11 1/16"	4 3/16"
45	2'-10 1/16"	2'-4 1/16"		2 1/2"	3 1/2"	10"		3'-9"	4'-3 1/16"	9°	20	4'-0 1/16"	2'-6"	2'-3"	2'-9 1/2"	9"	11'-2 9/16"	1'-4"		7'-2 3/16"	7'-1 3/16"

FEATURES & OPTIONS

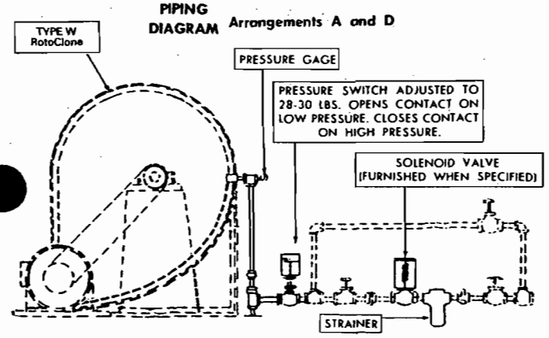
WIRING DIAGRAM FIG. 6

WITH MOD. "SV" CONTROL

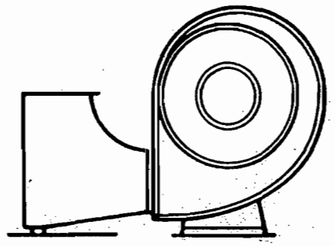


STD. CONTROL

PIPING DIAGRAM Arrangements A and D



90° OUTLET ELBOW



The 90° outlet elbow is recommended where a vertical stack is required immediately at the RotoClone discharge. Refer to Drawing 48P-870790 for dimensions.

CENTRIFUGAL OUTLET

The centrifugal outlet is recommended where cleaned air is recirculated back to work area or where corrosive mists may be exhausted. It protects against possible damage from occasional water droplets. The centrifugal outlet replaces and is interchangeable with the standard air outlet. Ask for Drawing 48P-1023266 showing dimensions of this accessory.

If the centrifugal outlet is used there is an additional loss of 2VP based on the inlet velocity of the Type W RotoClone.

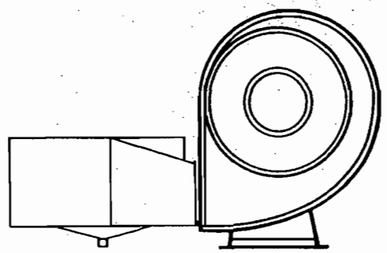


FIG. 7

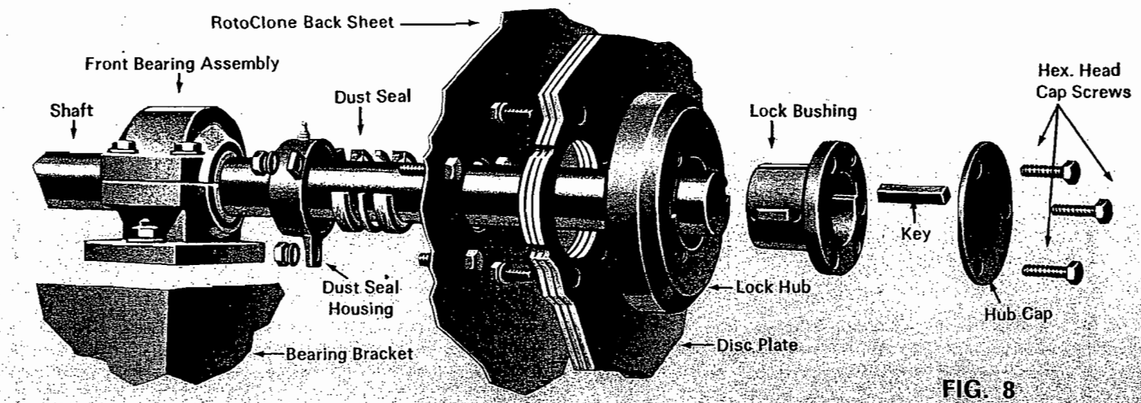
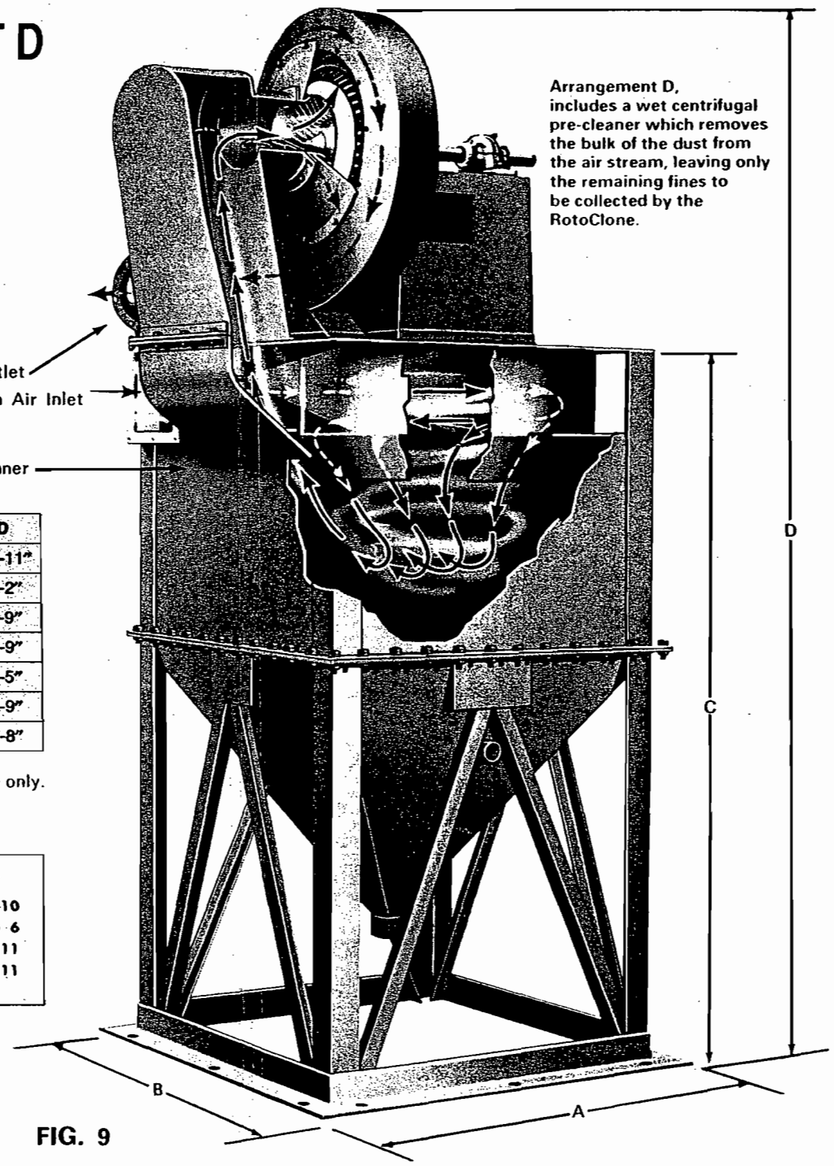


FIG. 8

SHAFT ASSEMBLY

Construction details of Type W RotoClone shaft assembly showing heavy duty bearings, oversized shaft, watertight shaft seal, laminated impeller disc, and cast iron hub with taper lock for easy impeller removal.

ARRANGEMENT D



Arrangement D, includes a wet centrifugal pre-cleaner which removes the bulk of the dust from the air stream, leaving only the remaining fines to be collected by the RotoClone.

FIG. 9

Size	A	B	C	D
8	3'-6"	3'-1"	6'-2"	8'-11"
10	4'-2"	3'-1"	6'-10"	10'-2"
12	4'-8"	3'-1"	6'-9"	10'-9"
14	5'-3"	5'-3"	7'-2"	11'-9"
16	5'-9"	5'-9"	7'-1"	12'-5"
20	6'-11"	6'-11"	8'-4"	14'-9"
24	8'-1"	8'-1"	8'-10"	16'-8"

Note: These dimensions are approximate only. See drawing 48P-851964 for final dimensions.

Capacity ratings and blower performance ..... Pages 8-10
Special arrangements ..... Page 6
Water requirements ..... Page 11
Shipping and operating weights ..... Page 11

The Type W RotoClone, Arrangement D, is designed to collect heavy concentrations of granular dust. It is recommended where facilities for separating the collected dust from the clean water are available, or where the slurry can be returned to process or discharged to a sump or waste tract.

The Arrangement D is equipped with an integral wet centrifugal Precleaner which removes a high percentage of the incoming dust from the airstream. The wet Precleaner is more effective than the dry-type Skimmer Precleaner or other dry centrifugal collectors, and minimizes the dust loading to the RotoClone even where very heavy concentrations of fine material are encountered.

The pressure loss in the wet Precleaner section is approximately twice the value of the inlet velocity pressure for an Arrangement A RotoClone of the same size. Precleaner loss has been included in the Arrangement D performance tables on pages 8-10.

Collected dust and water are continuously discharged as a slurry through a single hopper drain.

Arrangement D is available in RotoClone sizes 8 thru 24.

PERFORMANCE CHARACTERISTICS

These performance tables cover the usual operating range for each size RotoClone.

Maximum speeds for Standard design are shown on page 11.

Capacities are based on standard air — .07488 lbs. per cubic foot (dry air @ 70°F) and barometric pressure of 29.92 inches or mercury. The total pressure values represent the sum of all resistance and velocity pressure losses in the system.

The resistance of the Arrangement D pre-cleaner has been included in the mechanical efficiency of the RotoClone and need not be considered.

No. 8 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
1000	2860	1680	1.2	1920	1.5	2160	1.9	2400	2.4	2600	2.9	2800	3.5	3000	4.0	3150	4.7
1100	3150	1720	1.3	1970	1.7	2200	2.1	2420	2.6	2620	3.2	2820	3.7	3010	4.3	3170	4.9
1200	3430	1800	1.5	2030	1.9	2250	2.3	2450	2.9	2650	3.4	2830	3.9	3020	4.6	3180	5.2
1300	3720	1890	1.8	2100	2.2	2300	2.6	2500	3.2	2680	3.6	2850	4.2	3040	4.9	3200	5.5
1400	4000	1950	2.2	2170	2.5	2360	2.9	2530	3.4	2710	4.0	2900	4.5	3070	5.2	3220	5.8
1500	4290	2040	2.5	2240	2.8	2420	3.3	2590	3.8	2760	4.3	2920	4.9	3100	5.5	3250	6.1
1600	4580	2140	2.8	2300	3.2	2490	3.7	2650	4.2	2800	4.7	2980	5.3	3120	5.9	3190	6.5
1700	4870	2200	3.2	2400	3.5	2560	4.1	2720	4.6	2880	5.2	3020	5.7	3180	6.3	3320	6.9
1750	5010	2260	3.4	2440	3.8	2600	4.4	2750	4.8	2910	5.4	3050	6.0	3200	6.6	3340	7.2

No. 8 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
1000	2860	1920	1.5	2160	1.9	2400	2.4	2600	2.9	2800	3.5	3000	4.0	3150	4.7	3310	5.2
1100	3150	2020	1.8	2250	2.2	2470	2.7	2670	3.3	2860	3.8	3030	4.5	3210	5.1	3320	5.5
1200	3430	2120	2.1	2320	2.5	2530	3.1	2720	3.6	2900	4.2	3100	4.9	3250	5.4	3380	5.9
1300	3720	2230	2.5	2440	3.0	2610	3.5	2800	4.0	2980	4.7	3150	5.3	3310	5.8	3420	6.3
1400	4000	2360	2.9	2530	3.4	2710	4.0	2900	4.5	3070	5.2	3220	5.8	3370	6.3	3460	7.0
1500	4290	2470	3.4	2640	4.0	2810	4.5	2980	5.2	3140	5.7	3300	6.3	3420	6.8	3580	8.1
1600	4580	2600	4.0	2750	4.5	2920	5.1	3060	5.7	3220	6.2	3380	6.8	3500	8.4	3660	9.2
1700	4870	2700	4.5	2860	5.1	3000	5.7	3150	6.3	3310	6.8	3460	8.8	3590	9.6	3740	10.0
1750	5010	2750	4.8	2910	5.4	3050	6.0	3200	6.6	3340	7.2	3600	9.6	3620	10.0	3760	10.4

No. 10 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
1600	2930	1590	1.9	1820	2.5	2050	3.2	2240	3.9	2430	4.6	2605	5.3	2770	6.0	2920	6.9
1750	3210	1620	2.1	1860	2.8	2090	3.6	2280	4.4	2460	5.1	2630	5.9	2795	6.8	2950	7.4
1900	3480	1700	2.5	1910	3.2	2110	4.0	2310	4.8	2490	5.6	2660	6.4	2820	7.2	2970	8.1
2050	3760	1750	2.9	1970	3.6	2170	4.5	2350	5.3	2520	6.2	2690	7.0	2850	7.9	3000	8.9
2200	4030	1810	3.3	2020	4.0	2205	4.9	2400	5.9	2570	6.9	2730	7.8	2880	8.7	3030	9.6
2350	4310	1900	3.8	2080	4.6	2270	5.5	2440	6.5	2610	7.5	2770	8.4	2910	9.2	3070	10.4
2500	4580	1960	4.3	2150	5.1	2310	6.0	2490	7.1	2650	8.0	2800	9.1	2950	10.2	3100	11.2
2650	4760	2050	5.0	2210	5.8	2380	6.8	2540	7.8	2700	8.9	2850	9.9	2990	11.0	3130	12.2
2700	4930	2100	5.2	2230	6.0	2400	7.0	2560	8.0	2710	9.1	2870	10.2	3010	11.3	3150	12.5

No. 10 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
1600	2910	1820	2.5	2050	3.2	2240	3.9	2430	4.6	2605	5.3	2770	6.0	2920	6.9	3080	7.7
1750	3210	1940	3.1	2140	3.8	2330	4.5	2510	5.2	2660	6.0	2820	6.9	2980	7.6	3120	8.5
1900	3480	2010	3.6	2210	4.4	2400	5.2	2575	6.0	2740	6.8	2900	7.7	3050	8.6	3180	9.4
2050	3760	2130	4.3	2320	5.1	2500	6.0	2660	6.9	2820	7.8	2970	8.7	3120	9.8	3230	10.6
2200	4030	2205	4.9	2400	5.9	2570	6.9	2730	7.8	2880	8.7	3030	9.6	3160	10.7	3300	11.8
2350	4310	2320	5.8	2500	6.8	2660	7.7	2810	8.7	2960	9.7	3105	10.8	3240	12.0	3370	13.0
2500	4580	2430	6.8	2600	7.7	2750	8.8	2900	9.8	3050	10.8	3180	12.0	3320	13.3	3430	14.3
2650	4760	2520	7.6	2680	8.7	2830	9.7	2980	11.0	3120	12.0	3250	13.2	3380	14.2	3500	15.3
2700	4930	2580	8.0	2730	9.2	2880	10.3	3030	11.5	3160	12.6	3300	13.8	3420	15.0	3550	16.1

No. 12 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
2200	2810	1200	2.0	1400	2.8	1575	3.6	1730	4.5	1875	5.4	2010	6.4	2140	7.5	2250	8.8
2400	3060	1230	2.3	1430	3.1	1600	4.0	1750	4.9	1890	5.9	2030	7.0	2150	8.0	2270	9.2
2600	3310	1260	2.6	1450	3.5	1625	4.5	1775	5.4	1910	6.4	2050	7.6	2170	8.8	2290	9.8
2800	3570	1300	2.9	1480	3.9	1650	4.9	1800	6.0	1940	7.0	2070	8.2	2190	9.3	2300	10.4
3000	3820	1350	3.4	1510	4.3	1680	5.4	1825	6.6	1960	7.7	2090	8.8	2210	9.9	2320	11.1
3200	4080	1380	3.8	1550	4.9	1710	6.0	1850	7.1	1990	8.3	2110	9.4	2230	10.7	2340	11.9
3400	4330	1420	4.2	1590	5.4	1740	6.6	1880	7.8	2020	9.0	2140	10.2	2250	11.4	2370	12.8
3600	4580	1480	4.8	1630	6.0	1775	7.2	1910	8.4	2040	9.6	2170	11.0	2280	12.1	2390	13.6
3800	4840	1540	5.5	1660	6.7	1810	7.9	1940	9.2	2070	10.5	2200	11.9	2310	13.0	2420	14.5

No. 12 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
2200	2810	1400	2.8	1575	3.6	1730	4.5	1875	5.4	2010	6.4	2140	7.5	2250	8.8	2370	9.7
2400	3060	1460	3.3	1625	4.2	1780	5.2	1925	6.2	2050	7.2	2175	8.2	2290	9.4	2410	10.4
2600	3310	1525	3.9	1680	4.8	1830	5.9	1970	6.9	2100	8.0	2220	9.1	2330	10.2	2450	11.3
2800	3570	1590	4.5	1750	5.6	1890	6.7	2020	7.7	2150	8.9	2265	10.0	2380	11.2	2490	12.4
3000	3820	1650	5.2	1800	6.3	1940	7.4	2065	8.6	2190	9.7	2300	10.9	2415	12.1	2520	13.4
3200	4080	1710	6.0	1850	7.1	1990	8.3	2110	9.4	2230	10.7	2340	11.9	2450	13.1	2560	14.4
3400	4330	1800	7.0	1930	8.3	2060	9.3	2180	10.6	2300	11.8	2410	13.1	2510	14.4	2620	15.8
3600	4580	1860	8.0	1990	9.3	2120	10.5	2240	11.7	2350	13.1	2470	14.4	2560	15.8	2660	17.2
3800	4840	1930	9.0	2065	10.4	2180	11.7	2300	13.0	2410	14.4	2520	15.9	2620	17.5	2710	18.9

No. 14 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
3200	2990	1070	3.2	1230	4.2	1370	5.5	1490	6.5	1610	8.0	1715	9.4	1825	11.0	1920	12.5
3450	3230	1100	3.6	1260	4.6	1400	6.0	1515	7.3	1630	8.7	1740	10.4	1845	12.0	1940	13.5
3700	3460	1140	4.0	1290	5.0	1425	6.7	1540	8.0	1660	9.6	1770	11.4	1870	13.0	1960	14.5
3950	3700	1175	4.5	1320	5.6	1450	7.3	1570	8.8	1680	11.0	1790	12.5	1890	14.0	1980	15.5
4200	3930	1215	5.0	1350	6.4	1475	8.0	1590	9.8	1700	12.2	1815	13.7	1910	15.5	2000	17.0
4450	4160	1260	5.8	1380	7.2	1510	9.0	1620	11.0	1730	13.0	1840	15.0	1930	17.0	2020	19.0
4700	4400	1300	7.0	1420	8.1	1540	10.0	1650	12.0	1760	14.0	1865	16.2	1950	18.5	2040	21.0
4950	4630	1350	8.0	1460	9.0	1575	11.2	1680	13.0	1790	15.0	1880	17.5	1975	19.5	2070	22.0
5200	4870	1390	9.0	1500	10.6	1605	12.3	1710	14.0	1820	16.5	1910	18.6	2000	21.5	2095	23.5

No. 14 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
3200	2990	1250	4.2	1380	5.5	1515	6.7	1620	8.1	1730	9.4	1840	11.0	1930	12.7	2020	14.0
3450	3230	1300	4.9	1430	6.3	1555	7.7	1670	9.0	1775	11.0	1875	12.5	1970	14.0	2060	16.0
3700	3460	1360	5.9	1485	7.0	1600	8.8	1715	10.5	1820	12.2	1915	13.7	2000	16.0	2090	18.0
3950	3700	1410	6.9	1530	8.2	1650	10.2	1755	12.0	1860	13.6	1950	15.5	2030	17.8	2125	19.0
4200	3930	1470	8.0	1580	9.5	1695	11.0	1800	13.3	1900	15.5	1990	17.6	2080	19.3	2170	21.5
4450	4160	1525	9.0	1640	11.2	1750	13.0	1850	15.0	1945	17.0	2030	19.4	2120	21.2	2210	23.0
4700	4400	1580	10.7	1690	12.5	1800	14.6	1900	17.0	1990	19.0	2080	21.5	2170	23.2	2250	25.5
4950	4630	1650	12.5	1755	14.3	1855	16.4	1950	18.7	2040	21.0	2125	23.5	2220	25.5	2300	28.0
5200	4870	1710	14.0	1820	16.5	1910	18.6	2000	21.5	2095	23.5	2180	26.0	2270	28.0	2350	31.0

No. 16 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
4000	2870	925	4.0	1070	5.5	1200	7.0	1325	8.7	1425	11.0	1535	13.0	1625	14.5	1720	17.0
4400	3150	955	4.8	1095	6.5	1220	8.0	1340	9.5	1450	12.0	1550	14.0	1645	16.5	1740	18.0
4800	3440	990	6.5	1120	7.0	1245	9.0	1360	11.0	1470	13.0	1570	15.0	1665	17.5	1755	20.0
5200	3730	1030	7.0	1150	8.0	1270	10.0	1380	12.0	1485	14.0	1590	17.0	1680	19.0	1770	22.0
5600	4010	1075	8.0	1180	9.0	1300	12.0	1405	13.0	1510	16.0	1610	18.0	1700	21.0	1785	23.0
6000	4300	1125	9.0	1225	11.0	1330	13.0	1430	15.0	1535	17.0	1630	19.0	1720	22.0	1810	25.0
6400	4580	1170	11.0	1255	12.0	1365	14.0	1465	17.0	1555	18.0	1650	22.0	1740	24.0	1830	27.0
6800	4870	1220	12.0	1300	14.0	1400	16.0	1495	18.0	1585	21.0	1675	23.0	1770	26.0	1850	29.0
7200	5150	1270	13.0	1350	16.0	1440	18.0	1530	20.0	1620	23.0	1700	26.0	1790	28.0	1870	32.0

No. 16 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
4000	2870	1070	5.5	1200	7.0	1325	8.7	1425	11.0	1535	13.0	1625	14.5	1720	17.0	1815	19.0
4400	3150	1125	6.5	1250	8.5	1370	11.0	1475	12.0	1575	14.0	1670	17.0	1760	18.0	1850	22.0
4800	3440	1180	8.0	1305	10.0	1410	12.0	1520	14.0	1620	17.0	1710	18.0	1800	22.0	1885	23.0
5200	3730	1235	9.5	1355	12.0	1460	14.0	1560	16.0	1660	18.0	1750	21.0	1830	23.0	1910	25.0
5600	4010	1300	12.0	1405	13.0	1510	16.0	1610	18.0	1700	21.0	1785	23.0	1875	26.0	1950	28.0
6000	4300	1365	13.0	1465	16.0	1560	18.0	1655	21.0	1750	23.0	1830	26.0	1920	28.0	1990	31.0
6400	4580	1425	16.0	1525	18.0	1620	21.0	1720	23.0	1805	27.0	1890	28.0	1970	32.0	2040	34.0
6800	4870	1490	18.0	1580	21.0	1675	23.0	1770	26.0	1850	29.0	1930	32.0	2000	35.0	2080	37.0
7200	5150	1540	21.0	1625	23.0	1715	26.0	1805	28.0	1880	32.0	1960	34.0	2040	37.0	2120	40.0

No. 20 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
6500	2980	710	6.0	825	7.6	935	10.5	1025	13.0	1120	16.0	1205	18.0	1275	22.0	1345	24.0
7000	3210	725	6.5	835	8.5	940	11.5	1040	14.0	1125	17.0	1210	19.0	1285	23.0	1355	26.0
7500	3440	750	7.0	850	9.5	950	12.5	1050	15.0	1135	18.0	1215	21.0	1295	24.0	1365	27.0
8000	3670	775	8.0	870	11.0	970	13.0	1060	16.0	1145	19.0	1220	22.0	1300	25.0	1375	28.0
8500	3900	790	9.0	885	12.0	980	14.0	1070	17.0	1150	20.0	1230	23.0	1310	27.0	1385	30.0
9000	4130	810	11.0	910	13.0	990	16.0	1080	18.0	1165	22.0	1240	24.0	1320	28.0	1390	32.0
9500	4360	850	12.0	930	14.0	1010	17.0	1090	20.0	1175	23.0	1250	26.0	1330	30.0	1395	34.0
10000	4590	890	14.0	960	17.0	1030	18.0	1110	21.0	1185	24.0	1265	28.0	1340	32.0	1405	36.0
10500	4820	930	17.0	980	18.0	1050	20.0	1125	23.0	1200	27.0	1275	30.0	1350	34.0	1415	38.0

No. 20 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G.															
		2"		3"		4"		5"		6"		7"		8"		9"	
		R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.	R.P.M.	B.H.P.
6500	2980	835	8.0	950	11.0	1040	13.0	1125	16.0	1215	18.0	1295	22.0	1350	24.0	1425	28.0
7000	3210	870	9.0	975	12.0	1070	14.0	1150	17.0	1240	20.0	1310	23.0	1380	26.0	1445	31.0
7500	3440	900	11.0	1000	13.0	1095	17.0	1180	18.0	1255	22.0	1325	25.0	1400	28.0	1465	33.0
8000	3670	935	12.0	1030	15.0	1120	18.0	1200	21.0	1275	24.0	1350	27.0	1425	32.0	1480	35.0
8500	3900	970	14.0	1060	17.0	1145	20.0	1225	23.0	1300	27.0	1380	30.0	1440	34.0	1500	37.0
9000	4130	1005	16.0	1095	18.0	1175	22.0	1255	25.0	1330	28.0	1400	33.0	1460	37.0	1520	41.0
9500	4360	1045	18.0	1130	21.0	1205	24.0	1280	28.0	1355	32.0	1420	35.0	1480	39.0	1550	44.0
10000	4590	1075	20.0	1160	23.0	1235	27.0	1310	31.0	1380	34.0	1445	38.0	1515	42.0	1570	47.0
10500	4820	1120	23.0	1195	26.0	1270	29.0	1340	33.0	1410	37.0	1475	42.0	1535	46.0	1590	49.0

No. 24 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
9000	2860	570	8.5	655	12.0	743	14.0	815	18.0	890	22.0	955	25.0	1020	28.0	1075	32.0
9500	3020	575	9.0	665	13.0	750	16.0	825	19.0	895	23.0	960	26.0	1025	29.0	1080	33.0
10000	3180	585	11.0	675	14.0	755	17.0	830	20.0	900	24.0	965	27.0	1030	31.0	1085	35.0
11000	3500	605	13.0	695	16.0	770	18.0	840	23.0	910	27.0	970	31.0	1035	35.0	1090	38.0
12000	3820	630	14.0	710	18.0	785	22.0	855	26.0	920	30.0	985	34.0	1040	38.0	1095	42.0
13000	4140	650	17.0	737	21.0	800	25.0	870	28.0	935	34.0	995	38.0	1055	43.0	1110	47.0
14000	4460	675	19.0	755	23.0	820	28.0	887	32.0	950	38.0	1010	42.0	1065	47.0	1120	51.0
15000	4780	710	23.0	780	27.0	840	32.0	905	36.0	965	42.0	1025	46.0	1080	51.0	1130	56.0
15500	4940	735	25.0	795	29.0	850	34.0	915	39.0	975	44.0	1030	49.0	1085	54.0	1135	59.0

No. 24 TYPE W RotoClone Arrangement D

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
9000	2860	655	12.0	743	14.0	815	18.0	890	22.0	955	25.0	1020	28.0	1075	32.0	1125	36.0
9500	3020	675	13.0	760	16.0	835	19.0	900	23.0	960	26.0	1030	29.0	1090	33.0	1135	37.0
10000	3180	695	14.0	775	18.0	850	22.0	915	24.0	980	28.0	1040	33.0	1100	36.0	1145	40.0
11000	3500	732	17.0	805	21.0	875	25.0	945	29.0	1003	33.0	1063	37.0	1117	41.0	1160	45.0
12000	3820	768	22.0	835	25.0	905	28.0	970	34.0	1030	38.0	1090	42.0	1140	46.0	1190	51.0
13000	4140	815	26.0	880	30.0	940	35.0	1008	39.0	1060	43.0	1115	47.0	1165	51.0	1215	55.0
14000	4460	853	30.0	920	35.0	980	40.0	1037	45.0	1092	49.0	1143	53.0	1198	59.0	1238	62.0
15000	4780	895	36.0	957	41.0	1015	46.0	1070	51.0	1125	56.0	1175	61.0	1230	69.0	1273	71.0
15500	4940	915	39.0	975	44.0	1030	49.0	1185	54.0	1135	59.0	1190	64.0	1250	71.0	1285	76.0

No. 27 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
12000	3020	507	12.0	587	16.0	662	19.0	727	23.0	790	28.0	850	32.0	906	38.0	958	42.0
13000	3270	523	13.0	600	18.0	670	22.0	735	26.0	800	31.0	856	35.0	908	40.0	960	46.0
14000	3520	540	16.0	612	20.0	680	24.0	745	28.0	805	35.0	860	38.0	915	44.0	965	49.0
15000	3770	555	18.0	625	22.0	692	27.0	755	32.0	815	37.0	870	42.0	925	47.0	970	53.0
16000	4020	575	20.0	640	24.0	705	29.0	765	35.0	825	40.0	879	46.0	932	51.0	978	57.0
17000	4270	590	23.0	655	27.0	716	32.0	775	38.0	832	44.0	890	50.0	940	55.0	987	62.0
18000	4530	610	26.0	675	31.0	730	36.0	790	42.0	843	48.0	900	54.0	950	59.0	992	66.0
19000	4780	625	29.0	690	34.0	750	40.0	805	46.0	855	52.0	910	58.0	956	64.0	1003	70.0
20000	5030	650	33.0	710	38.0	762	44.0	815	50.0	870	56.0	920	63.0	968	70.0	1015	76.0

No. 30 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
14000	2860	440	12.0	515	16.0	585	20.0	646	24.0	702	28.0	755	34.0	805	38.0	855	44.0
15500	3160	450	13.0	525	18.0	590	23.0	650	27.0	705	33.0	756	38.0	807	43.0	857	48.0
17000	3460	475	16.0	537	21.0	600	26.0	655	31.0	710	37.0	760	42.0	810	47.0	860	53.0
18500	3760	490	18.0	555	24.0	615	29.0	670	35.0	718	40.0	768	46.0	813	52.0	863	58.0
20000	4070	505	22.0	568	27.0	625	33.0	680	39.0	730	45.0	775	51.0	818	57.0	865	63.0
21500	4380	525	25.0	590	32.0	640	37.0	690	43.0	740	50.0	785	56.0	830	63.0	870	69.0
23000	4680	550	29.0	602	36.0	656	42.0	705	48.0	750	55.0	795	62.0	840	69.0	881	76.0
24500	5000	575	34.0	620	40.0	675	47.0	720	54.0	765	62.0	809	68.0	850	75.0	890	83.0
25000	5090	590	36.0	630	42.0	680	49.0	725	57.0	772	64.0	815	71.0	855	78.0	895	85.0

No. 33 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
17000	2860	400	15.0	470	21.0	530	27.0	590	33.0	640	38.0	690	45.0	735	51.0	775	58.0
18500	3110	405	17.0	475	23.0	535	29.0	595	36.0	644	42.0	694	49.0	739	56.0	778	65.0
20000	3370	410	20.0	482	26.0	540	33.0	600	39.0	648	46.0	697	53.0	743	60.0	781	68.0
21500	3620	430	23.0	490	29.0	550	36.0	605	43.0	652	50.0	700	58.0	747	66.0	785	74.0
23000	3870	445	26.0	500	33.0	558	40.0	610	47.0	656	55.0	705	64.0	750	72.0	790	79.0
24500	4125	460	29.0	512	37.0	568	44.0	615	52.0	662	60.0	710	69.0	753	77.0	795	85.0
26000	4370	475	34.0	525	41.0	575	48.0	625	57.0	668	66.0	715	74.0	756	82.0	800	91.0
27500	4625	490	39.0	537	46.0	587	54.0	635	63.0	678	72.0	720	80.0	762	89.0	805	99.0
29000	4880	510	44.0	550	51.0	600	59.0	640	68.0	688	77.0	728	86.0	768	96.0	810	106

No. 36 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
20000	2830	362	16.0	425	24.0	485	31.0	540	38.0	587	45.0	630	54.0	675	61.0	710	69.0
22000	3110	375	21.0	435	28.0	490	35.0	545	43.0	592	51.0	635	58.0	678	67.0	712	76.0
24000	3400	388	24.0	440	32.0	500	39.0	550	48.0	596	56.0	640	65.0	680	74.0	720	83.0
26000	3680	400	27.0	450	36.0	508	45.0	555	53.0	600	62.0	645	72.0	685	81.0	725	90.0
28000	3960	410	32.0	462	41.0	515	50.0	560	59.0	604	68.0	650	78.0	690	88.0	730	98.0
30000	4250	425	38.0	475	46.0	525	56.0	568	66.0	610	75.0	655	86.0	695	96.0	735	106
32000	4525	440	45.0	490	53.0	535	63.0	577	73.0	617	83.0	660	94.0	700	105	740	115
34000	4820	465	50.0	505	60.0	550	70.0	587	80.0	625	90.0	665	103	705	113	745	125
36000	5100	480	55.0	520	68.0	565	77.0	600	88.0	635	99.0	675	111	710	123	750	136

No. 45 TYPE W RotoClone Arrangement A

Capacity in C.F.M.	Inlet Velocity F.P.M.	TOTAL PRESSURE OF SYSTEM—INCHES W. G. 2" R.P.M.	2" B.H.P.	3" R.P.M.	3" B.H.P.	4" R.P.M.	4" B.H.P.	5" R.P.M.	5" B.H.P.	6" R.P.M.	6" B.H.P.	7" R.P.M.	7" B.H.P.	8" R.P.M.	8" B.H.P.	9" R.P.M.	9" B.H.P.
32500	2940	290	19.0	345	40.0	390	50.0	430	62.0	470	75.0	510	87.0	540	100	570	112
35000	3170	300	25.0	350	44.0	395	55.0	435	68.0	475	80.0	512	94.0	543	108	573	120
37500	3390	310	35.0	355	48.0	400	62.0	440	75.0	480	88.0	515	102	545	115	575	130
40000	3620	315	43.0	365	54.0	405	68.0	445	82.0	485	95.0	517	110	548	123	578	138
42500	3850	325	48.0	370	60.0	410	74.0	450	89.0	488	103	520	119	550	132	582	148
45000	4075	335	55.0	375	67.0	415	81.0	455	96.0	490	110	523	125	552	140	585	158
47500	4300	345	62.0	380	75.0	420	90.0	460	105	493	120	525	134	556	150	587	168
50000	4525	360	70.0	390	84.0	428	97.0	463	113	500	130	528	144	559	160	590	178
52500	4750	380	80.0	400	90.0	437	105.0	470	122	506	138	532	155	562	170	592	190

EQUIPMENT DATA

RotoClone ERECTION DIAGRAM

Arrangements A and D

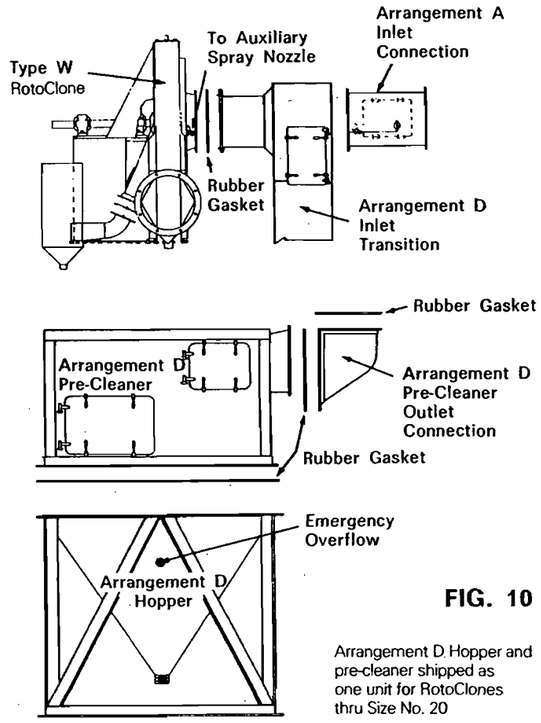


FIG. 10

Arrangement D Hopper and pre-cleaner shipped as one unit for RotoClones thru Size No. 20

VENTING SECONDARY AIR

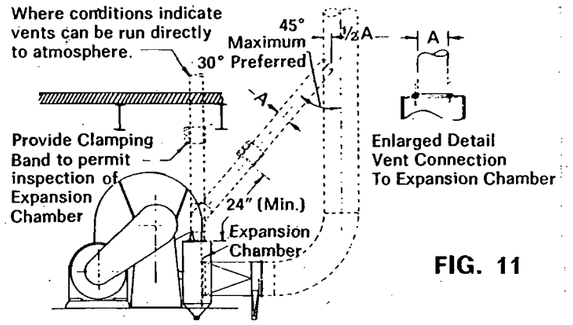


FIG. 11

DIMENSION TABLE IN INCHES

R. C. Size	8	10	12	14	16	20	24	27	30	33	36	45
Vent Dia. "A"	3½"	4"	5"	6"	7"	8"	10"	11"	12"	14"	15"	18"

TABLE A

NORMAL WATER SUPPLY RATES
TYPE W RotoClones

Roto Clone Size	Arrangement A GPM Supplied 40 PSIG	50 PSIG	60 PSIG	Arrangement D GPM Supplied 40 PSIG	50 PSIG	60 PSIG
8	1.1	1.2	1.3	2.1	2.2	2.5
10	1.5	1.6	1.8	3.1	3.4	3.8
12	1.8	2.0	2.2	4.6	5.0	5.4
14	2.3	2.5	2.9	5.1	5.5	6.3
16	3.4	3.7	4.1	7.2	7.9	8.7
20	4.4	4.8	5.4	8.2	9.0	10.0
24	5.4	6.0	6.5	13.2	14.9	16.1
27	7.4	8.2	8.9	—	—	—
30	7.9	8.8	9.7	—	—	—
33	11.9	13.3	14.6	—	—	—
36	13.9	15.7	17.0	—	—	—
45	20.9	25.1	25.2	—	—	—

NOTE: 1: For air temperatures in excess of 300°F, cooling spray nozzles should be provided in inlet duct to compensate for evaporation. A safe approximation will be 0.2 gpm of additional water per 1000 cfm for each 100°F temperature reduction.

TABLE B

SHIPPING AND OPERATING WEIGHTS

RotoClone Size	Arrangement A Shipping Weight (lbs.)	Arrangement A Operating Weight (lbs.)	Arrangement D Shipping Weight (lbs.)	Arrangement D Operating Weight (lbs.)
8	225	425	1,725	2,625
10	360	610	1,810	3,010
12	630	880	2,030	3,380
14	990	1,340	2,790	5,320
16	1,260	1,710	3,760	6,310
20	1,620	2,270	5,420	9,650
24	1,890	2,590	7,190	13,290
27	2,970	3,720	—	—
30	3,870	5,020	—	—
33	4,860	6,360	—	—
36	5,850	7,350	—	—
45	13,500	16,000	—	—

NOTE 1: Shipping weight does not include motor and drive.

NOTE 2: Operating weight includes motor and drive for Arrangements, "A" and "D". Also includes maximum sludge capacity based on 100 lbs. per cubic foot for Arrangement D hopper in the event of plugged drain line.

TABLE C

TYPE W RotoClone
IMPELLER CHARACTERISTICS

RotoClone Size	Maximum Speed (RPM)	Fly Wheel Effect - WR^2 (Lb. - $Ft.^2$)
8	4100	2.03
10	3300	6.28
12	2800	14.7
14	2400	30.7
16	2100	50.8
20	1700	150.8
24	1400	372.0
27	1250	596.0
30	1100	1026.0
33	1000	1400.0
36	925	2410.0
45	730	6250.0

HUMIDIFYING ACTION

Generally, for normal temperature applications, recirculation from the Type W RotoClone is practical without reheat. Temperature change or moisture increase is moderate. The exit dry bulb temperature from the Type W will always be less than the inlet temperature provided the latter exceeds the temperature of the spray water. For normal inlet velocities, the humidifying efficiency is approximately 50%, therefore, moisture increase in the air stream is not enough to cause condensation in the average plant or work area. Actual temperature change and moisture increase can be easily determined.

Low Temperature: The humidifying action of the Type W RotoClone can be treated in terms of adiabatic addition of moisture to the air and the heat gain through the unit. The addition of heat may be assumed to take place at constant moisture content (dew point temperature) and the moisture addition at constant total heat content. In making these assumptions, the heat transfer between the air and water due to any temperature differential, which may exist, is neglected as is any condensation or re-evaporation of moisture through the unit. The moisture gain can be determined by the equation defining humidifying efficiency:

$$N\,h = \frac{(X_2 - X_1)}{(X'_2 - X_1)} \quad \text{.....Equation 1}$$

N h = humidifying efficiency, Fig. 14 X_1 = moisture content of inlet air, grains

X_2 = moisture content of outlet air, grains

X'_2 = moisture content of inlet air after saturation, grains

The sensible heat gain of an air mover has two components, fan inefficiency and heat of compression. However, where fan inefficiency is determined by test, both of these energy components are included in the diffarential between horsepower input (BHP) to the fan and air horsepower (AHP). Ignoring heat loss through the housing, tests have shown that the sensible heat gain through the Type W RotoClone to be approximately 0.25 BTU per pound of dry air per inch water gage of fan Total Pressure. The temperature rise of the air stream due to this heat gain approximates 1°F per inch water gage of fan Total Pressure.

Heat gain = 0.25 BTU/lb. of dry air/inch of TP .....Equation 2
Temperature Rise = 1°F/inch TP .....Equation 3

A portion of this sensible heat gain is converted to the latent heat of the moisture absorbed by the air. Since the evaporation of 1 grain of moisture will adiabatically reduce the temperature by 0.62°F, the temperature reduction of the air due to loss of sensible heat is 0.62 $(X_2 - X_1)$. Taking both sensible and latent heat changes into consideration, this temperature change of the air leaving the Type W results in:

$$\Delta t = (TP) - 0.62\,(X_2 - X_1) \quad \text{.....Equation 4}$$

Δt = temperature change, °F

TP = fan Total Pressure, inches of water gage, (Equation 3)

$(X_2 - X_1)$ = moisture gain through the RotoClone, grains (Equation 1)

Data required to determine the humidifying efficiency of the Type W are CFM, Total Pressure, Size, Arrangement, Inlet Dry Bulb Temperature, and Relative Humidity or Inlet Wet Bulb Temperature.

EXAMPLE: A No. 8 Type W, Arrangement A, RotoClone is exhausting 1400 cfm at 6" TP. Inlet air is at 70°F and 50% relative humidity. Find the moisture increase and the temperature of the air leaving the RotoClone. Point "A" on the psychrometric chart (Fig. 13) represents the entering air conditions of 70°F and 50% relative humidity. The addition of heat from Equation 2 is .25 X 6" TP) = 1.5 BTU per pound of dry air. Point "B" indicates the heat content of the entering air and by adding the 1.5 BTU gain; point "C" is located on the total heat scale. Following the line of constant total heat corresponding with point "C", locates point "D" at the intersection of this total heat line and the 100% relative humidity or saturation line. Point "D" would represent the condition of the exit air if the RotoClone had a 100% humidifying efficiency 1400 cfm in a No. 8 Type W RotoClone has a 4,000 fpm inlet velocity. Fig 13 shows the humidifying efficiency to be 53% for Arrangement A and 4 000 fpm velocity. Therefore, the exit condition along the same total heat line can be located by using Equation 1 and substituting N h = 53%, X'_2 = 80 grains (point "E"), X_1 = 55 grains (point "F"). Therefore,

$$X_2 = N\,h\,(X'_2 - X_1) + X_1$$
$$= 0.53\,(80 - 55) + 55 = 68.3 \text{ grains per pound of dry air}$$

Following the same total heat line until it intersects the horizontal line for 68.3 grains per pound of dry air, locates the exit condition, point "G". Note the exit dry bulb temperature is 67.8°F, relative humidity is 68% and moisture increase is $(X_2 - X_1)$ = 13.3 grains per pound of dry air.

A check on the result or a quick method of determining the temperature change can be obtained by using Equation 4.

$$\Delta t = (TP) - 0.62\,(X_2 - X_1)$$
$$= (6) - 0.62\,(68.3 - 55) = -2.25°F$$

Therefore 70°F—2.25°F = 67.75°F which agrees with exit temperature of 67.8° found on the psychrometric chart.

High Temperature: Recirculation would never be used on processes involving high temperature exhaust gases. Additional spray nozzles are necessary for temperatures over 200°F to avoid evaporation of the normal water requirements. Assuming the spray nozzles in the inlet duct will have a humidifying efficiency of 50%, the equation to determine the quantity of water required to cool the inlet gases to 200°F is:

$$W = \frac{M(ti - 200)}{16{,}800} \quad \text{.....Equation 5}$$

W = water, gpm; M = air, pounds per minute: ti = inlet temperature, degrees F

For more information, write SnyderGeneral Corporation.

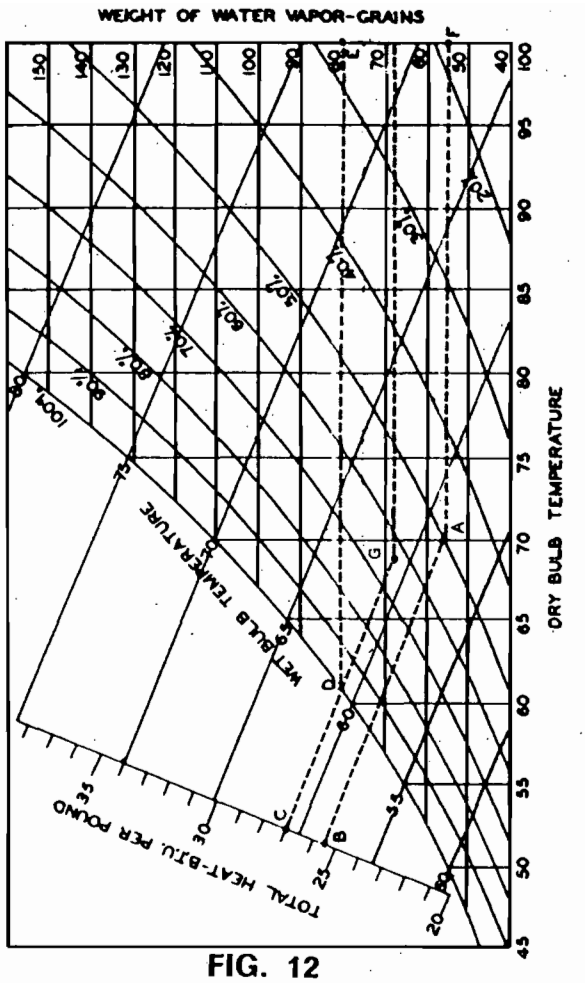
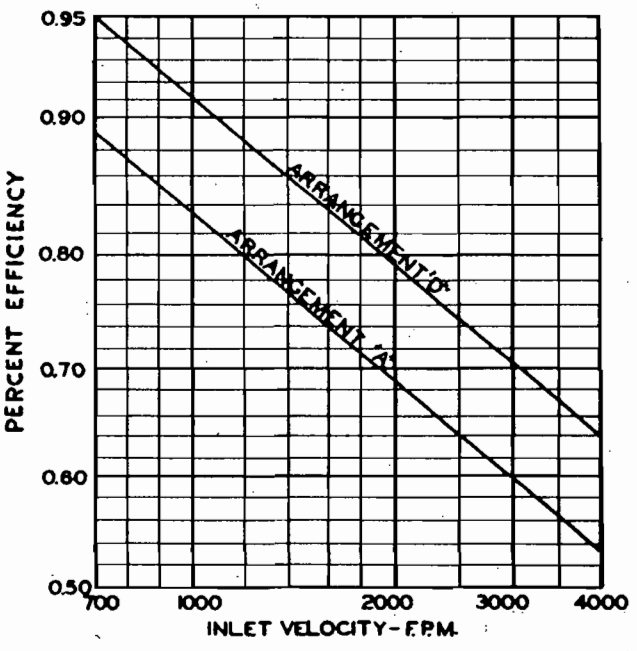


FIG. 12



HUMIDIFYING EFFICIENCY
FIG. 13

SnyderGeneral Corporation
P.O. BOX 35690 • LOUISVILLE, KENTUCKY 40232-5690

SMCP-1-512L - JAN 93 (5M)
Printed in USA

ENTRAL AVENUE
SVILLE KY 40208-1406
IOX 35690
SVILLE KY 40232-5690

DataFax

	Paul Wesson	From:	Rick Stewart Answer Center Technical Support
mpany:		Phone No.:	(800) 705-8290 (For Answer Center)
K No.:		Return FAX No.:	(502) 637-0299
ge 1 of:	2	Date:	January 12, 1996
bject:	RotoClone Efficiency	cc:	

Paul:

We do not have any efficiency ratings on skimmer. Here are some efficiency ratings on the W Rotoclone and much smaller micron than we discussed yesterday. Also, I'm sending a copy of the capacity table for the # 27.

Particle Size	Efficiency
2 µm	86.2 %
10 µm	99.0 %
16 µm	99.65 %
20 µm	99.8 %
26 µm	99.9 %

Hope this information is helpful.

Rick Stewart

ATTACHMENT OC-EU3-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT OC-EU3-IV1

SUGAR REFINERY RULE APPLICABILITY

FOR OKEELANTA CORPORATION

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE
APPLICABLE	62-297	62-297	Stationary Sources - Emissions Monitoring
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.
APPLICABLE	62-297	62-297.310(1)	required number of test runs.
APPLICABLE	62-297	62-297.310(2)	Operating rate during testing.
APPLICABLE	62-297	62-297.310(4)	Applicable test procedures.
APPLICABLE	62-297	62-297.310(4)(a)2	
APPLICABLE	62-297	62-297.310(5)	Determination of process variables.
APPLICABLE	62-297	62-297.310(7)	Frequency of compliance tests.
APPLICABLE	62-297	62-297.310(7)(a)4	
APPLICABLE	62-297	62-297.310(7)(a)9	
APPLICABLE	62-297	62-297.310(7)(b)	
APPLICABLE	62-297	62-297.310(7)(c)	
APPLICABLE	62-297	62-297.310(8)	Test reports.
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards
APPLICABLE	62-296	62-296.320(4)(a)	General Particulate Emission Limiting Standards - Process weight table
APPLICABLE	62-296	62-296.320(4)(b)	General Visible Emission Standards

PERMIT NO. 0990005-005-AC

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

NOTICE OF PERMIT ISSUANCE

January 19, 2001

CERTIFIED MAIL 7000 0600 0024 1469 5622
RETURN RECEIPT REQUESTED

In the matter of an Application
for Permit by:

Mr. Ricardo A. Lima
Vice President and General Manager
Okeelanta Corporation
Post Office Box 86
South Bay, Florida 33493

Re: Palm Beach County - AP
Okeelanta Corporation
DEP File No. 0990005-005-AC
South Florida EMA

Enclosed is Permit Number 0990005-005-AC to construct a 40 ft. x 80 ft. building to house a new 1,700 cubic ft. vacuum pan and associated process equipment. The associated equipment includes a vacuum pan condenser, two centrifugals, syrup and molasses feed tanks, final liquor syrup storage tanks, 5,000 gallon condensate collection tank, 1,000 gallon centrifugal wash water tank, 1,200 cubic ft. seeder cutover tanks (2), motor control center room, MCC and centrifugal controller room, refined sugar conveying system, 2,000 cubic ft. receiver, various pumps and a lunch and locker room.

Changes to existing conveying system will also be implemented to allow flexibility in operations. Two additional storage and curing bins and new rotex screens will be added in the existing refinery building. This permit is issued pursuant to Section(s) 403.087, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit 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, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

"More Protection, Less Process"

NOTICE OF PERMIT ISSUANCE
Okeelanta Corporation
DEP File No. 0990005-005-AC
January 19, 2001

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881
(941) 332-6975

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on January 19, 2001 to the listed persons.

Clerk Stamp

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

Joan Kelly 1-19-01
(Clerk) (Date)

RWC/DMK/jw

Enclosures

Copies furnished to:

Palm Beach County Health Department
Jeff Koerner, P.E., DEP, Tallahassee
David A. Buff, P.E., Golder Associates, Inc.

Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

I.D. No.: 0990005
Permit/Certification
Number: 0990005-005-AC
Date of Issue: January 19, 2001
Expiration Date: January 19, 2006
County: Palm Beach
Latitude: 26° 35' 00" N
Longitude: 80° 45' 00" W
Section/Town/Range: 16/45S/36E
Project: Sugar Refinery Modification

This permit is issued under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) 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:

Construct a 40 ft. x 80 ft. building to house a new 1,700 cubic ft. vacuum pan and associated process equipment. The associated equipment includes a vacuum pan condenser, two centrifugals, syrup and molasses feed tanks, final liquor syrup storage tanks, 5,000 gallon condensate collection tank, 1,000 gallon centrifugal wash water tank, 1,200 cubic ft. seeder cutover tanks (2), motor control center room, MCC and centrifugal controller room, refined sugar conveying system, 2,000 cubic ft. receiver, various pumps and a lunch and locker room.

Changes to existing conveying system will also be implemented to allow flexibility in operations. Two additional storage and curing bins and new rotex screens will be added in the existing refinery building.

SPECIFIC CONDITIONS:

Facility Operations:

1. Refined sugar production shall not exceed 1,500 tons per day and 390,000 tons per year.
[Permit Application 0990005-005-AC]

2. Refined sugar production from the fluidized bed sugar drying system shall not exceed 1,200 tons per day.
[Permit Application 0990005-005-AC]

3. Refined sugar production from the rotary sugar drying system shall not exceed 1,200 tons per day and 130,000 tons per year.
[Permit Application 0990005-005-AC]

4. Refined sugar handling through the bulk load out area shall not exceed 117,000 tons per year.
[Permit Application 0990005-005-AC]

5. Refined sugar handling through the trans-shipment load out area shall not exceed 273,000 tons per year.
[Permit Application 0990005-005-AC]

6. Isopropyl alcohol usage shall not exceed 78,040 pounds per year.
[Permit Application 0990005-005-AC]

7. Visible emissions from baghouse exhausts shall not exceed 5% opacity.
[Permit Application 0990005-005-AC]

8. This facility shall comply with the Process Weight Table Emission Rates shown in table 296.320-1. Interpolation of the data in table 296.320-1 for process weight rates up to 30 tons per hour shall be accomplished by the use of the equation: $E = 3.59*P^{0.62}$, where P is less than or equal to 30 tons per hour. Interpolation and extrapolation of the data for process weight rates in excess of 30 tons per hour shall be accomplished by the use of the equation: $E = 17.31* P^{0.16}$, where P is greater than 30 tons per hour. In both equations, E = Emissions in pounds per hour, and P = Process weight rate in tons per hour. [62-296.320(4) F.A.C.]

9. Okeelanta Corporation, the Permittee, has requested lower annual emissions limits than what is allowed in the Process Weight Tables. Based on control equipment manufacturer's guarantees and design data, the following emission rates for the entire sugar refinery shall be used as the basis for the sugar refinery's Title V fees:

10. Particulate matter emissions from the sugar refinery shall not exceed 36.80 tons/year.
[Permit Application 0990005-005-AC]

SPECIFIC CONDITIONS:

11. PM-10 emissions from the sugar refinery shall not exceed 13.39 tons/year.
[Permit Application 0990005-005-AC]

Required Testing:

12. The test method for visible emissions shall be EPA Method 9, incorporated in Rule 62-297.401, F.A.C. The required minimum period of observation for a compliance test shall be thirty (30) minutes.
[62-297.310(4)(a)2., F.A.C.]

13. During each Federal fiscal year (October 1 - September 30) unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for visible emissions, if there is an applicable standard.
[62-297.310(7)(a)4., F.A.C.]

14. The permittee shall notify the compliance authority fifteen (15) days prior to emission unit testing.
[62-297.310(7)(a)9., F.A.C.]

15. The permittee shall file a report with the Department on the results of each test as soon as practical but no later than 45 days after the test.
[62-297.310(8), F.A.C.]

Conditions of Compliance:

16. For Particulate Matter (PM and PM-10), the permitting authority has waived the particulate matter compliance test requirements and specified the alternative standards of 5% opacity (Specific Condition 7). If the compliance authority has reason to believe that either the design specifications or the emission rates (specified in Specific Conditions 10. and 11.) are not being met, it shall require that compliance be demonstrated by appropriate EPA test methods and a report on the results of said tests be provided to the Department.
[62-297.310(7)(b), F.A.C.]

Reports and Recordkeeping:

17. The permittee shall keep records of the total daily refined sugar production.
[62-213.440(1) (b)2., F.A.C.]

18. The permittee shall keep records of the daily refined sugar production from the fluidized bed sugar drying system.
[62-213.440(1) (b)2., F.A.C.]

19. The permittee shall keep records of the daily refined sugar production from the rotary sugar drying system.
[62-213.440(1) (b)2., F.A.C.]

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-005-AC
Date of Issue: January 19, 2001
Expiration Date: January 19, 2006

SPECIFIC CONDITIONS:

20. The permittee shall keep records of the daily quantity of refined sugar handled through the bulk load out area.
[62-213.440(1) (b)2., F.A.C.]

21. The permittee shall keep records of the daily quantity of refined sugar handled through the trans-shipment load out area.
[62-213.440(1) (b)2., F.A.C.]

22. The permittee shall keep records of the weekly use of isopropyl alcohol.
[62-213.440(1) (b)2., F.A.C.]

23. Records shall be maintained available for inspection for a period of five years.
[62-213.440(1) (b)2., F.A.C.]

24. 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. The engineer shall submit a letter certifying completion of construction to the South District Office within 90 days of completion of construction.

General Conditions:

25. An integral part of this permit is the attached 15 General Conditions.
[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 19th day of January, 2001.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management

RWC/DMK/jw

10 Pages Attached

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-005-AC
Date of Issue: January 19, 2001
Expiration Date: January 19, 2006

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.

EMISSION UNIT 4

PAINT SPRAY BOOTH

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ 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.

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).

   ☐ 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. Description of Emissions Unit Addressed in this Section:
   Paint Spray Booth

3. Emissions Unit Identification Number: **048**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**07**	☐ Yes ☒ No

9. Package Unit: **Paint Spray Booth**
   Manufacturer: **AFC, Inc.** Model Number: **TSD6036**

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    A Crossflo truck spray booth.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Glass fiber paint arrestor pad

2. Control Device or Method Code(s): **058**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **4,950 gallons/year**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	
Maximum throughput rate refers to gallons of paint and thinner.	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Paint Spray Booth**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **25.7** feet	7. Exit Diameter: **4** feet
8. Exit Temperature: **77** °F	9. Actual Volumetric Flow Rate: **45,500** 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 Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **There are two exhaust stacks for the Paint Spray Booth. Both are 25.7 ft tall with a 4-ft diameter and ahve a flow rate of 45,500 acfm.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Surface Coating Application General - Paint: Solvent Based**		
2. Source Classification Code (SCC): **4-02-001-10**	3. SCC Units: **Gallons of coatings**	
4. Maximum Hourly Rate: **16.8**	5. Maximum Annual Rate: **4,950**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

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

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **70.4** lb/hour **9.40** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **See Attachment OC-EU4-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. 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: **Rule 62-297.620(4)(b), F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be 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:	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU4-I1** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU4-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU4-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-EU4-F1.8

EMISSION CALCULATIONS

Attachment OC-EU4-F1.8a. Calculation of PM/PM_{10} Emissions from the Existing Spray Booth at Okeelanta Corporation, South Bay

Paint Type	Product ID	Density (lb/gal)	Solids Content [a]		Maximum Usage Rate		Maximum Emissions [b]	
			% by Weight	lb Solids/gal	(gal/hr)	(gal/yr)	(lb/hr)	(TPY)
Coatings	Various	7.57	70.00	5.30	12.5	4,370	1.99	0.347
Thinner	Naptha (MCM)	6.28	0.00	0.00	4.3	580	--	--
				Maximum Coating Use =	16.8	4,950		
				Maximum PM/PM_{10} Emissions =			1.99	0.35

Footnotes:

[a] Solid weight percent assumed as 100 percent of total non-volatile ingredients.

[b] Manufacturers average efficiency of 94% reflected in emission rates; 50 percent overspray assumed.

Paint manufacturer or product may change; however, usage and emission rates will remain similar.
See Attachment B for MSDS product information.

Attachment OC-EU4-F1.8b. Calculation of VOC Emissions from Existing Spray Booth at Okeelanta Corporation, South Bay

Paint Type	Manufacturer	Product Density (lb/gal)	Maximum Usage Rate (gal/hr)	Maximum Usage Rate (gal/yr)	VOC Content (lb/gal)	Maximum Emissions (lb/hr)	Maximum Emissions lb/yr	Maximum Emissions (TPY)
Coatings	Various	7.57	12.5	4,370	3.47	43.38	15,163.9	7.58
Thinner	Naptha	6.28	4.3	580	6.28	27.00	3,642.4	1.82
Totals			16.8	4,950		70.38	18,806.3	9.40

Footnotes:
Paint manufacturer or product may change; however, usage and emission rates will remain similar.

Attachment OC-EU4-F1.8c. Calculation of HAPs Emissions from Existing Spray Booth at Okeelanta Corporation, South Bay

Paint Type/HAP	Product ID	Product Density (lb/gal)	Maximum Usage Rate (gal/hr) [a]	Maximum Usage Rate (gal/yr) [a]	CAS No.	HAP Content (% Weight) [a]	HAP Content (lb /gal)	Maximum Emissions (lb/hr)	Maximum Emissions (lb/yr)
Coatings	Varies	7.57	12.50	4,370					
Xylene					1330-20-7	2.85	0.22	2.70	942.81
Thinner	--	6.28	4.30	100					
No HAPs					--	--	--		--
							Total HAPs (lb/yr) =		942.8
							Total HAPs (TPY) =		0.47

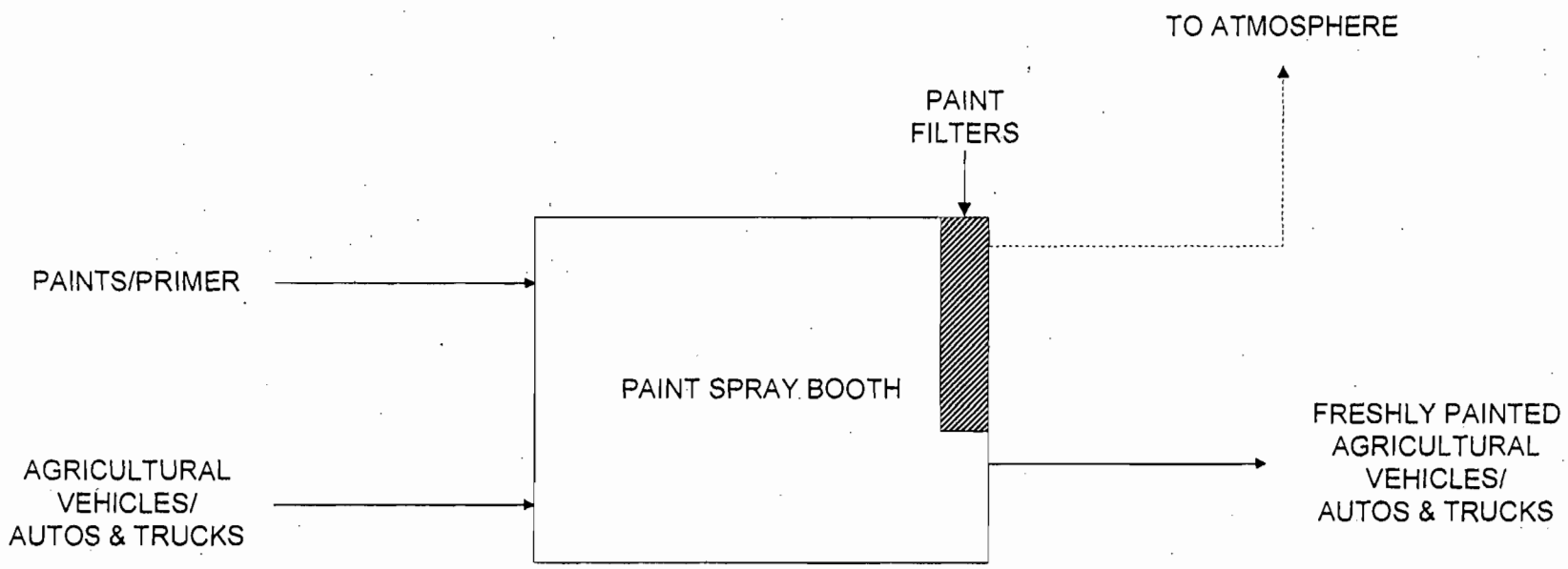
Footnotes:

[a] Based on MSDS Information using the highest % weight given.

Paint manufacturer or product may change; however, usage and emission rates will remain similar.
See Attachment B for MSDS product information.

ATTACHMENT OC-EU4-I1

PROCESS FLOW DIAGRAM



Attachment OC-EU4-I1. Process Flow Diagram
Paint Spray Booth
Okeelanta Corporation
South Bay, Florida

Process Flow Legend
Solid/Liquid ——→
Gas ·····→

Golder Associates

ATTACHMENT OC-EU4-I3

DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT OC-EU4-I3

OKEELANTA CORPORATION
DESCRIPTION OF PAINT BOOTH ARRESTOR PADS

Arrestor Pad Type	Glass Fiber Paint Arrestor Pad
Manufacturer	Superior Glass Fibers, Inc.
Model Number	TGT 25-250-14-2-2-00
Dimensions	20" x 20" x 2.5"
Quantity	60
Average Paint Over Spray Removal Efficiency	94%
Paint Holding Capacity (lbs)	2.22

Source: Air Filter Testing Laboratories, Inc., Report No. 6269 (8/16/91).

AIR FILTER TESTING LABORATORIES, INC.

4632 Old LaGrange Road Crestwood, Kentucky 40014

REPORT NO. 6269 TEST NO. 1

PAINT ARRESTOR FILTER PERFORMANCE TEST
REMOVAL EFFICIENCY AND PAINT HOLDING CAPACITY

DEVICE TESTED

TEST REQUESTED BY			SUPERIOR GLASS FIBERS, INC.		
MANUFACTURER			SUPERIOR GLASS FIBERS, INC.		
PRODUCT NAME			GLASS FIBER PAINT ARRESTOR PAD		
HOW LABORATORY PROCURED TEST SAMPLE			FURNISHED BY MANUFACTURER		
MODEL NO.			TGT 25-250-14-2-2 ~~00~~		
DIMENSIONS	20	IN. H	20	IN. W	2 1/2 IN. D
PRODUCT DESCRIPTION:	GLASS FIBER PAD – 14 GRAM GTO PA				

For PA+GA Series

TEST CONDITIONS

AIRFLOW RATE	150	FPM
PAINT APPLICATION RATE	1	QT/40 MIN
AIR TEMPERATURE	70–80	DEGREE F
DESCRIPTION OF PAINT USED	AIR DRY SYNTHETIC ENAMEL	

TEST RESULTS

INITIAL RESISTANCE CLEAN PAINT ARRESTOR FILTER			0.03	IN. W.G.
WEIGHT GAIN PAINT ARRESTOR FILTER			1413.5	GRAMS
FINAL ARRESTANCE FILTERS WEIGHT GAIN			78.34	GRAMS
TOTAL WEIGHT PAINT FED (DRY BASES)			1491.84	GRAMS
PERFORMANCE TO CHANGE OUT RESISTANCE			1.00	IN. W.G.
AVERAGE PAINT OVER SPRAY REMOVAL EFFICIENCY			94.0	%
PAINT HOLDING CAPACITY	1005	GRAMS	OR	2.22 POUNDS

DATES OF TEST 8-16-1991

TEST SUPERVISOR W.T.S.

ENGINEERING APPROVAL David J. Murphy Jr.

STATE OF KENTUCKY
DAVID J. MURPHY JR.
6035
REGISTERED PROFESSIONAL ENGINEER

ATTACHMENT OC-EU4-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT OC-EU4-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT A OF PERMIT APPLICATION TO MODIFY THE PAINT SPRAY BOOTH AT OKEELANTA CORPORATION (dated February 2005)

1.0 INTRODUCTION

The Okeelanta facility consists of two operating units: the Okeelanta Corporation (Okeelanta) sugar mill and refinery, and the New Hope Power Partnership (NHPP) cogeneration facility. The facility is located approximately 6 miles south of South Bay, Florida in Palm Beach County (see Attachment OC-FI-CC1). The Okeelanta Sugar Mill receives sugar cane from the surrounding cane fields and processes it into raw sugar. The NHPP cogeneration facility provides steam to the sugar mill with three boilers.

Okeelanta is proposing to revise the air construction permit for their existing paint spray booth, which is used to re-paint the vehicles and equipment used in Okeelanta's agricultural activities. Some automobile and truck re-painting will also be performed. The refinishing operations conducted on vehicles and equipment in the spray booth should not be subject to Reasonably Achievable Control Technology (RACT) requirements for Surface Coating of Miscellaneous Metal Parts and Products [Rule 62-296.513, Florida Administrative Code (F.A.C.)]. DEP issued a guidance memo (DARM-PER-23) "Guidance on Manufacturing vs. Refinishing Regarding the RACT Rule on Surface Coating of Miscellaneous Metal Parts." The RACT emission controls according to the guidance memo apply to the manufacturing, not refinishing, of surface coating of miscellaneous metal parts. The application of coatings to in-service vehicles and equipment refinishing that takes place in the above-referenced paint booth is therefore not subject to RACT.

In addition, re-painting operations conducted on autos and light-duty trucks are not subject to any RACT regulation. The following sections describe the project and rule applicability in further detail.

2.0 EMISSION UNIT DESCRIPTION

2.1 PROCESS DESCRIPTION

Okeelanta is proposing a modification to their air construction permit for a spray paint booth at the sugar mill facility located south of South Bay, Florida (Permit Nos. 0990005-010-AC and 0990005-013-AC). This paint booth (EU 048) is used to re-paint farm equipment that is used in the agricultural fields, trailers for the delivery of cane to the mill, as well as other vehicles. The existing paint booth was manufactured by AFC, Inc. It is the Drive-Thru model of the Crossflo Truck spray booth, model number TSD6036. The inside dimensions of the booth are 26 feet (ft) wide by 17 ft 4 inches high by 54 ft deep. The outside dimensions are 28 ft 6 inches wide by 18 ft 6 inches high by 54 ft deep. The paint booth has two exhaust stacks on the east side of the paint booth. Each stack is 4.0 ft in diameter and 25.7 ft high. The flow rate from each stack is approximately 45,500 actual cubic feet per minute (acfm). The manufacturer's data on the spray booth is on file with DEP but has been included in Attachment B for convenience.

The exhaust air is filtered through arrestor pad filters before exiting into the atmosphere. Each filter is 20 inches by 20 inches by 2.5 inches. There are a total of 60 of these pads in the spray booth. The average paint particulate removal efficiency is estimated at 94 percent by the manufacturer. The manufacturer's data sheet is included in the application form.

Paint is applied in the booth by an airless paint sprayer. The airless paint sprayer operates at a pressure of approximately 3,200 pounds per square inch (psi).

2.2 EMISSION ESTIMATES

The emissions from the paint spray booth are based on paint and solvent usages and Material Safety Data Sheets (MSDSs). Various coatings will continue to be used in the spray booth as well as a reducer/thinner for cleaning and paint thinning. Representative MSDSs for the paint most commonly used and solvent are presented in Attachment C. All coating operations are conducted under ambient conditions.

Maximum hourly and annual coating usage and emissions from the spray booth are presented in Attachments OC-EU1-F1.8a through OC-EU1-F1.8c. As shown, the maximum annual emissions of particulate matter (PM/PM_{10}), volatile organic compounds (VOC) and hazardous air pollutants

(HAPs) are estimated as 0.35 tons per year (TPY), 9.40 TPY, and 0.47 TPY, respectively. These estimates assume that all of the VOC and HAPs in the coatings are emitted to the atmosphere. In the case of PM/PM_{10} emissions, the estimates assume a maximum coating overspray amount of 50 percent and paint filter removal efficiency of 94 percent.

3.0 RULE APPLICABILITY

The Okeelanta facility is located in Palm Beach County, Florida, which is classified as an air quality maintenance area for ozone. The facility has also been classified as a major VOC and NO_x emitting facility. The original air construction permit made the existing paint spray booth at Okeelanta subject to RACT requirements of Rule 62-296.500, F.A.C., and Rule 62-296.513, F.A.C. This modification to the facility's construction permit serves to remove the requirements of RACT from the permit. The RACT Rule on Surface Coating of Miscellaneous Parts refers only to manufacturing and not refinishing. The existing spray booth is only used to refinish in-service vehicles and equipment and, therefore, the RACT Rule does not apply. The following sections describe Okeelanta's requirements.

4.0 RECORDKEEPING AND REPORTING REQUIREMENTS

Okeelanta is required by the current permit to maintain the types of coatings used and the calculated emissions shall be included in an annual report. Okeelanta will maintain MSDSs of all types of coatings and solvents used at the facility.

5.0 RECOMMENDED SPECIFIC CONDITIONS

The following presents Okeelanta's recommended specific conditions to be incorporated into the revised construction permit for the paint booth. These are suggested conditions to replace the specific conditions in Permit No. 0990005-010-AC as modified in Permit No. 099005-013-AC.

1. This permit replaced in its entirety to all previous construction permits issued for this emission unit (i.e., 099005-010 and -013).
2. Permitted Capacity. The maximum throughput rate of paint and thinner is 4,950 gallons per year.
3. Methods of Operation. The painting operations are conducted on agricultural equipment, automobiles, and trucks. Paint will be applied using an airless sprayer or compressed-air spray gun.

4. There are two exhaust stacks for the paint spray booth. Both are 25.7 feet tall with a 4-feet diameter and a have a flow rate of approximately 45,500 acfm.
5. Coatings and thinners to be used in the spray booth are not limited. The permittee shall maintain on file all MSDSs for a period of 5 years.

Emissions Limitations and Standards

6. Emissions of volatile organic compounds (VOCs) from the spray booth are limited to 9.40 tons per year.
7. Emissions of particulate matter (PM) are estimated to be less than 0.35 tons per year.
8. The exhaust stacks for the paint spray booth shall be equipped with glass fiber arrestor pads.
9. Visible emissions from the exhaust stacks of the paint spray booth shall not exceed 20 percent opacity. [Rule 62-296.320, F.A.C.]
10. The permittee shall not discharge air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
11. The permittee shall take all reasonable precautions to prevent emissions of unconfined particulate matter. Reasonable precautions may include, but shall not be limited to, (a) removal of particulate matter from roads and other paved areas under the control of the permittee and form buildings or work areas to prevent particulates from becoming airborne; (b) landscaping or planting of vegetation; (c) use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter; and (d) confining abrasive blasting and sanding where possible. [Rule 62-296.320, 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 or solvent materials. [Rule 62-296.320F.A.C.]
13. If the Department has reason to believe that any applicable emission standard or condition of this permit is being violated, then the Department may require the permittee to conduct compliance tests or keep additional records which identify the nature and quantity of pollutant emissions. [Rule 62-297.310(7)(b), F.A.C.]
14. Issuance of this permit does not relieve the permittee 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. Although there are no minimum ventilation air flow rates (this is a fugitive VOC emitting source) required by this permit to satisfy the

Department of Environmental Protection, other regulations (i.e., OSHA) may require such flow rates. It is the permittee's responsibility to comply with all applicable regulations. Future regulations may impact this facility at some future date. The permittee shall comply within a reasonable time with any applicable future regulations when they become effective. [Rule 62-210.300, F.A.C.]

Record Keeping and Reporting Requirements

15. The permittee will maintain records of the types of coatings used and the calculated emissions shall be included in the annual report.

16. Copies of all reports, tests, notifications, or other submittals required by this permit shall be submitted to the Department of Environmental Protection, South District, and the Palm Beach County Public Health Unit. [Rule 62-210.370, F.A.C.]

General Conditions:

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

PAINT SPRAY BOOTH PERMITS

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

NOTICE OF PERMIT ISSUANCE

November 13, 2003

GOLDER ASSOCIATES INC

NOV 17 2003

GAINESVILLE

CERTIFIED MAIL 7002 2410 0002 4843 8256
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit by:

Mr. Ricardo A. Lima
Vice President and General Manager
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

Palm Beach County - AP
Okeelanta Corporation
DEP File No. 0990005-013-AC

Enclosed is Permit Number 0990005-013-AC to Okeelanta Corporation to address these modifications: A modification to Construction Permit 0990005-008-AC to incorporate a change in the process flow of baghouse E.U. 045. The baghouse will control a new powdered sugar dryer and cooler. The source description will be changed due to this modification. For Construction Permit 0990005-010-AC, the applicant requests a modification to allow for flexibility in product substitution in regards to coatings used in the paint booth. The product substitution or increase in hourly usage rates will not result in an exceedance of the permitted capacity, the opacity limit, or in any RACT (reasonable available control technology) requirements. The Okeelanta Corporation's Sugarcane Processing, Sugar Refining, and Power Generation (New Hope Power Partnership) facilities are located approximately 6 miles south of South Bay on U.S. Highway 27, South Bay, Palm Beach County, Florida.

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

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

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons

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other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F. S. or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name, address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of how and when petitioner received notice of the agency action or proposed action;

(d) A statement of all disputed issues of material facts. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and,

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth below.

Mediation is not available in this proceeding.

Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida rules of Appellate

Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881
(239) 332-6975

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on November 13, 2003 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.

(Clerk) 11/13/03 (Date)

RWC/MGN/jw

Copies furnished to:
James Meriwether, New Hope Power Partnership
David A. Buff, P.E., Golder Associates, Inc.
James Stormer, Palm Beach County Air Program Administrator

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

Facility I.D.: 0990005
Permit Number: 0990005-013-AC
Date of Issue: November 13, 2003
Expiration Date: August 22, 2006
County: Palm Beach
Latitude: 26° 34' 16" N
Longitude: 80° 44' 45" W
Project: Modification of Construction Permits 0990005-008-AC and 0990005-010-AC

This permit is issued under the provisions of Chapter 403.087, 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:

A modification to Construction Permit 0990005-008-AC to incorporate a change in the process flow of baghouse E.U. 045. The baghouse will control a new powdered sugar dryer and cooler. The source description will be changed due to this modification. For Construction Permit 0990005-010-AC, the applicant requests a modification to allow for flexibility in product substitution in regards to coatings used in the paint booth. The product substitution or increase in hourly usage rates will not result in an exceedance of the permitted capacity or the opacity limit.

The facility is located approximately 6 miles south of South Bay on U.S. Highway 27, Palm Beach County, Florida.

Pertinent Documents	**Dated**
Construction Application	04/04/2003

Construction Permit 0990005-008-AC:

FROM:

This permit is issued under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) 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:

Install a new baghouse on the main sugar receiver, a new sugar grinder with baghouse and new packaging lines with baghouse. These changes will be made at the transshipment facility located about 0.5 mile south of the sugar refinery, west of U.S. Highway 27, south of South Bay, Florida.

TO:

This permit is issued under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) 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:

Install a new baghouse to control a new powdered sugar dryer and cooler, a new sugar grinder with baghouse and new packaging lines with baghouse. These changes will be made at the transshipment facility located about 0.5 mile south of the sugar refinery, west of U.S. Highway 27, south of South Bay, Florida.

All other conditions of DEP Permit 0990005-008-AC shall remain the same.

Construction Permit 0990005-010-AC:

Specific Condition 4.

FROM:

4. Coatings to be used in the spray booth will consist of the following paints or paints having equivalent or lesser VOC contents: yellow (Code 4320) by Dupont, medium green (Code B886) by Belmar Paint Corporation, universal red primer (Code 6011, 6014, 6015) by Transtar Auto Body Technologies, Australian gold (Code MMAHGW1) by MCM Paints, Australian green (Code MMAHGW1) by MCM Paints, international red (Code MMAHGW1) by MCM Paints, caterpillar yellow (Code B-888) by Belmar Paint Corporation, reducer/thinner (Code 8093S) by Dupont and mineral spirits by Sunoco. [Application received July 6, 2001]

TO:

4. The permittee may adjust the amounts and types of coatings used as necessary to comply with the conditions of this permit.
[Applicant Request dated April 4, 2003]

Specific Condition 5.

FROM:

5. The painting operations conducted on agricultural equipment in the spray booth are subject to Reasonably Achievable Control Technology (RACT) requirements of Rule 62-296.513, Florida Administrative Code (F.A.C.).

TO:

5. For painting operations conducted on agricultural equipment:

a) The permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds (VOC) in excess of 3.5 pounds per gallon of coating (0.42 kilograms per liter), excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm dried at temperatures up to 194 degrees Fahrenheit (90 degrees Celsius).

b) All VOC emissions from solvent washings shall be considered in the emission limitations in Specific Condition 5., unless the solvent is directed into containers that prevent evaporation into the atmosphere.
[Rule 62-296.513(2)(b), F.A.C.]

c) The emissions limit in Specific Condition 5. shall be achieved by the application of low solvent coating technology.
[Rule 62-296.513(3)(a), F.A.C. and Applicant Request dated April 2, 2003]

d) The test method for VOC emissions using low solvent coating technology shall be EPA Method 24 incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Rule 62-296.513(4)(a), F.A.C. and Applicant Request dated April 2, 2003]

e) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Rule 62-296.513(4), F.A.C. and Applicant Request dated April 2, 2003]

f) The permittee shall maintain daily records of operations for the most recent two-year period. The records shall be made available to the Department upon request. The records shall include, but not limited to, the following:

1. The rule number applicable to the operation for which the records are being maintained.
2. The application method and substrate type (metal, plastic, paper, etc.)
3. The amount and type of adhesive, coatings (including catalysts and reducer for multicomponent coatings), solvent, and/or graphic arts material used at each point of application, including exempt compounds.
4. The VOC content as applied in each adhesive coating, solvent and/or graphic arts material.
5. The date for each application of adhesive coating, solvent, and/or graphic arts material.

6. The amount of surface preparation, clean up, wash-up of solvent (including exempt compounds) used and the VOC content of each.
7. Oven temperature (where applicable)
[Rule 62-296.500(2)(b)1., F.A.C. and Applicant Request dated April 2, 2003]

g) The VOC content shall be calculated using a percent solids basis (less water and exempt solvents) for adhesives, coating, and inks, using EPA Reference Method 24.
[Rule 62-296.500(2)(b)2., F.A.C. and Applicant Request dated April 2, 2003]

Specific Condition 15.

FROM:

15. The permittee shall record and maintain records of the following:
a) the number of hours that the spray booth is in use (actual);
b) the dates of operation;
c) the amounts and types of coating used;
d) a monthly inventory of the volatile organic compounds and solvents used in the spray booth.

The permittee shall calculate the VOCs emitted on a monthly basis by assuming that all VOCs in the coatings and cleanup solvents are evaporated. The mass fraction of VOCs from each coating material (and cleanup solvents) shall be determined from the MSDS supplied from the vendors. The permittee shall have until the 15th day of the following month to complete these records.
[Rule 62-210.370, F.A.C.]

TO:

15. The permittee shall record and maintain records of the following:
a) the number of hours that the spray booth is in use (actual);
b) the dates of operation;
c) the amounts and types of coating used;
d) a monthly inventory of the volatile organic compounds and solvents used in the spray booth.

The permittee shall calculate the VOC emitted on a monthly basis by assuming that all VOC in the coatings and cleanup solvents are evaporated. The mass fraction of VOC from each coating material (and cleanup solvents) shall be determined from the Material Safety Data Sheets (MSDS) supplied from the vendors. The permittee shall maintain a file of MSDS for each raw material which indicates the composition of the volatile organic compounds. Raw materials include, but are not limited to, powder coatings, solvent coatings, thinners, and cleaners. The file must be maintained on site and made available for inspection upon request. The permittee shall have until the 15th day of the following month to complete these records.
[Rules 62-210.370, and 62-296.500(2)(c), F.A.C. and Applicant Request dated April 2, 2003]

PERMITTEE:
Okeelanta Corporation

Facility I.D. No.: 0990005
Permit Number: 0990005-013-AC
Date of Issue: November 13, 2003
Expiration Date: August 22, 2006

Specific Condition 16.

FROM:

16. The amounts and types of coatings used and the calculated VOC emissions shall be included in the annual report.
[Rule 62-210.370, F.A.C.]

TO:

16. The amounts and types of coatings used and the calculated VOC emissions shall be included in the annual report.
[Rules 62-210.370 and 62-296.500(2)(c), F.A.C. and Applicant Request dated April 2, 2003]

All other conditions of DEP Permit 0990005-010-AC shall remain the same.

Issued this 13th day of November 2003.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management
Post Office Box 2549
Fort Myers, Florida 33902-2549
(239) 332-6975

RWC/MGN/jw

PERMITTEE:
Okeelanta Corporation

Facility I.D. No.: 0990005
Permit Number: 0990005-013-AC
Date of Issue: November 13, 2003
Expiration Date: August 22, 2006

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 or 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 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 or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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 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 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 Sections 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 62-730.300, 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 incorporates the following previously issued determinations:

(a) Determination of Best Available Control Technology ( );
(b) Determination of Prevention of Significant Deterioration ( ); and
(c) 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 or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

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.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

NOTICE OF PERMIT ISSUANCE

August 22, 2001

CERTIFIED MAIL 7000 0600 0024 1470 2467
RETURN RECEIPT REQUESTED

In the matter of an Application
for Permit by:

Mr. Ricardo A. Lima
Vice President and General Manager
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

Palm Beach County - AP
Okeelanta Corporation
DEP File No. 0990005-010-AC
South Florida EMA

Enclosed is Permit Number to 0990005-010-AC to construct a paint booth that will be used to paint farm equipment. The existing facility is located at 21250 U.S. Highway 27, South Bay, Florida in Palm Beach County. This permit is issued pursuant to Section(s) 403.087, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit 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, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881
(941) 332-6975

AUG 24 2001

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NOTICE OF PERMIT ISSUANCE
Okeelanta Corporation
DEP File No. 0990005-010-AC
August 22, 2001

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on August 22, 2001 to the listed persons.

Clerk Stamp

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

Laurie Ratliff (Clerk) 8/22/01 (Date)

RWC/DMK/jw

Enclosures

Copies furnished to:

David A. Buff, P.E., Golder Associates, Inc. ✓
Matthew Capone, P.E., Director of Environmental Programs, Okeelanta Corporation
Palm Beach County Health Department

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

I.D. No.: 0990005
Permit/Certification
Number: 0990005-010-AC
Date of Issue: August 22, 2001
Expiration Date: August 22, 2006
County: Palm Beach
Latitude: 26° 35' 16" N
Longitude: 80° 45' 45" W
Section/Town/Range: 16/45S/36E
Project: Paint Booth

This permit is issued under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) 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:

Construct a paint spray booth that will be used to paint farm equipment. The paint spray booth is manufactured by AFC, Inc. The model number is TSD6036.

The facility is located 6 miles south of South Bay, west of U.S. Highway 27, in Palm Beach County.

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-010-AC
Date of Issue: August 22, 2001
Expiration Date: August 22, 2006

SPECIFIC CONDITIONS:

Essential Potential to Emit (PTE) Parameters

1. Permitted Capacity. The maximum throughput rate of paint and thinner is 2,475 gallons per year. [Application received July 6, 2001]

2. Methods of Operation. Paint will be applied by one of two methods, compressed air spray gun or an airless paint sprayer. The compressed air spray gun will use house air within a pressure range of 60 to 80 pounds per square inch (psi). The airless paint sprayer will be a Titan airless paint sprayer, Model Epic 1100HPX. It will operate at a pressure of approximately 3,200 psi. [Application received July 6, 2001]

3. There are two exhaust stacks for the paint spray booth. Both are 25.7 feet tall with a 4-foot diameter and have a flowrate of 45,500 acfm. [Application received July 6, 2001]

4. Coatings to be used in the spray booth will consist of the following paints or paints having equivalent or lesser VOC contents: yellow (Code 4320) by Dupont, medium green (Code B886) by Belmar Paint Corporation, universal red primer (Code 6011, 6014, 6015) by Transtar Auto Body Technologies, Australian gold (Code MMAHGW1) by MCM Paints, Australian green (Code MMAHGW1) by MCM Paints, international red (Code MMAHGW1) by MCM Paints, caterpillar yellow (Code B-888) by Belmar Paint Corporation, reducer/thinner (Code 8093S) by Dupont and mineral spirits by Sunoco. [Application received July 6, 2001]

Emissions Limitations and Standards

5. The painting operations conducted on agricultural equipment in the spray booth are subject to reasonably achievable control technology (RACT) requirements of Rule 62-296.513, Florida Administrative Code (F.A.C.).

6. Emissions of volatile organic compounds (VOCs) from the spray booth are limited to 3.9 tons per year. [Application received July 6, 2001]

7. Emissions of particulate matter (PM) are estimated to be less than 0.23 tons per year. [Application received July 6, 2001]

8. The exhaust stacks for the paint spray booth will be equipped with glass fiber paint arrestor pads. [Application received July 6, 2001]

9. Visible emissions from the paint spray booth shall not exceed 20% opacity. [Rule 62-296.320, F.A.C.]

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

SPECIFIC CONDITIONS:

11. The permittee shall take all reasonable precautions to prevent emissions of unconfined particulate matter. Reasonable precautions may include, but shall not be limited to, (a) removal of particulate matter from roads and other paved areas under the control of the permittee, and from buildings or work areas to prevent particulate from becoming airborne, (b) landscaping or planting of vegetation, (c) use of hoods, fans, filter, and similar equipment to contain, capture and/or vent particulate matter, and (d) confining abrasive blasting and sanding where possible. [Rule 62-296.320(4)(c), 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 solvent materials. [Rule 62-296.320, F.A.C.]

13. If the Department has reason to believe that any applicable emission standard or condition of this permit is being violated, then the Department may require the permittee to conduct compliance tests or keep additional records, which identify the nature and quantity of pollutant emissions.
[Rule 62-297.310(7)(b), F.A.C.]

14. Issuance of this permit does not relieve the permittee 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. Although there are not minimum ventilation air flow rates (this is a fugitive VOC emitting source) required by this permit to satisfy the Department of Environmental Protection, other regulations (i.e. OSHA) may require such flow rates. It is the permittee's responsibility to comply with all applicable regulations. Future regulations my impact this facility at some future date. The permittee shall comply with any applicable future regulations when they become effective.
[Rule 62-210.300, F.A.C.]

Record Keeping and Reporting Requirements

15. The permittee shall record and maintain records of the following:

a) the number of hours that the spray booth is in use (actual);
b) the dates of operation;
c) the amounts and types of coating used;
d) a monthly inventory of the volatile organic compounds and solvents used in the spray booth.

The permittee shall calculate the VOCs emitted on a monthly basis by assuming that all VOCs in the coatings and cleanup solvents are evaporated. The mass fraction of VOCs from each coating material (and cleanup solvents) shall be determined from the MSDS supplied from the vendors. The permittee shall have until the 15th day of the following month to complete these records. [Rule 62-210.370, F.A.C.]

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-010-AC
Date of Issue: August 22, 2001
Expiration Date: August 22, 2006

SPECIFIC CONDITIONS:

16. The amounts and types of coatings used and the calculated VOC emissions shall be included in the annual report.
[Rule 62-210.370, F.A.C.]

17. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Protection, South District and the Palm Beach County Public Health Unit.
[Rule 62-210.370, F.A.C.]

Conditions of Compliance:

18. 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. The permittee shall submit an Application for Air Permit with the test results. This is to be submitted to the South District Office within 105 days of the completion of construction. An up-to-date copy of the records required by this permit documenting at least two months of compliance shall be included with the application.
[Rule 62-4.090(1), F.A.C.]

General Conditions:

19. 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 22nd day of August, 2001.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard W. Cantrell
Director of
District Management
Post Office Box 2549
Fort Myers, Florida 33902-2549
Telephone: 941/332-6975

RWC/DMK/jw

PERMITTEE:
Okeelanta Corporation

I.D. No.: 0990005
Permit/Cert. No.: 0990005-010-AC
Date of Issue: August 22, 2001
Expiration Date: August 22, 2006

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.

EMISSION UNIT 5

COGEN BOILER A

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ 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.

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).

   ☐ 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. Description of Emissions Unit Addressed in this Section:
   Cogen Boiler A fired by Biomass/No. 2 Fuel Oil/Natural Gas

3. Emissions Unit Identification Number: **001**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**49**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    74.9 MW net generating capacity for entire facility. Approval currently sought to increase the facility capacity to 140 MW net.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

ESP - Electrostatic Precipitator - High Efficiency

Selective Non-catalytic Reduction for NO_x

Multiple Cyclone without Fly Ash Reinjection

Activated Carbon Injection System

2. Control Device or Method Code(s): **010, 107, 076, 048**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: **760** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **Maximum heat input rates:** **Biomass - 760 MMBtu/hr** **No. 2 Fuel Oil - 490 MMBtu/hr** **Natural Gas - 605 MMBtu/hr**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **BLR A**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **199** feet	7. Exit Diameter: **10.0** feet
8. Exit Temperature: **352** °F	9. Actual Volumetric Flow Rate: **324,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: **10** feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **Stack parameters based on biomass firing. See Attachment OC-EU5-C15 for all boiler stack data.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Bagasse**		
2. Source Classification Code (SCC): **1-01-011-01**	3. SCC Units: **Tons Burned (all solid fuels)**	
4. Maximum Hourly Rate: **105.56**	5. Maximum Annual Rate: **924,667**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **7.2**
10. Segment Comment: **Based on 760 MMBtu/hr and 8,760 hr/yr. See Attachment OC-EU5-D10.**		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Wood-fired Boiler**		
2. Source Classification Code (SCC): **1-01-009-03**	3. SCC Units: **Tons Burned (all solid fuels)**	
4. Maximum Hourly Rate: **84.44**	5. Maximum Annual Rate: **739,733**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.3**	8. Maximum % Ash: **9.0**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment: **Based on 760 MMBtu/hr and 8,760 hr/yr. See Attachment OC-EU5-D10.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment **3** of **4**

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **3.551**	5. Maximum Annual Rate: **12,013**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

Segment Description and Rate: Segment **4** of **4**

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Natural Gas**		
2. Source Classification Code (SCC): **1-01-006-01**	3. SCC Units: **Million Standard Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.605**	5. Maximum Annual Rate: **1,658**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	076	010	EL
PM_{10}	076	010	EL
SO_2			EL
NO_x	107		EL
CO			EL
VOC			EL
Mercury Compounds (H114)	048		EL
Hydrochloric Acid (H106)			NS
Total Hazardous Air Pollutants (HAPs)			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **19.8** lb/hour **86.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.026 lb/MMBtu** Reference: **Permit Limit (0990332-016-AC)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.026 lb/MMBtu x 760 MMBtu/hr = 19.8 lb/hr** **19.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 86.7 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **19.8** lb/hour **86.7** tons/year
5. Method of Compliance: **Annual Stack testing using EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **12.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on No. 2 fuel oil firing.** **Hourly: 0.026 lb/MMBtu x 490 MMBtu/hr = 12.7 lb/hr** **Annual: 0.026 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **15.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Good combustion practices and limit natural gas burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on natural gas firing.** **Hourly: 0.026 lb/MMBtu x 605 MMBtu/hr = 15.7 lb/hr** **Annual: 0.026 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **19.8** lb/hour **86.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.026 lb/MMBtu** Reference: **Permit Limit (0990332-016-AC)**	7. Emissions Method Code: **0**

8. Calculation of Emissions:

0.026 lb/MMBtu x 760 MMBtu/hr = 19.8 lb/hr

19.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 86.7 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **19.8** lb/hour **86.7** tons/year
5. Method of Compliance: **Annual Stack testing using EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **12.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on No. 2 fuel oil firing.** **Hourly: 0.026 lb/MMBtu x 490 MMBtu/hr = 12.7 lb/hr** **Annual: 0.026 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **15.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Good combustion practices and limit natural gas burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on natural gas firing.** **Hourly: 0.026 lb/MMBtu x 605 MMBtu/hr = 15.7 lb/hr** **Annual: 0.026 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **228.0** lb/hour **199.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.30 lb/MMBtu (3-hr max)** Reference: **CEM data**	7. Emissions Method Code: **1**

8. Calculation of Emissions:

3-hour maximum: 0.30 lb/MMBtu x 760 MMBtu/hr = 228 lb/hr

24-hr rolling CEMS average: 0.20 lb/MMBtu x 760 MMBtu/hr = 152 lb/hr

12-month rolling CEMS average: 0.06 lb/hr x 760 MMBtu/hr = 45.6 lb/hr

Annual: 0.06 lb/hr x 760 MMBtu/hr x 8,760 hr/yr x 1 ton/2,000 lb = 199.7 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.20 lb/MMBtu (24-hour average)**	4. Equivalent Allowable Emissions: **152.0** lb/hour **199.7** tons/year
5. Method of Compliance: **Continuous SO_2 monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions = 0.20 lb/MMBtu, 24-hour average; 0.06 lb/MMBtu, 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.10 lb/MMBtu (30-day average)**	4. Equivalent Allowable Emissions: **76.0** lb/hour **199.7** tons/year
5. Method of Compliance: **Continous SO_2 monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions = 0.10 lb/MMBtu, 30-day average; 0.06 lb/MMBtu, 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** lb/hour **41.4** tons/year
5. Method of Compliance: **Fuel Analysis and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on No. 2 fuel oil firing and BACT.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **152.0** lb/hour **499.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.20 lb/MMBtu (3-hr max)** Reference: **CEM data**	7. Emissions Method Code: **1**

8. Calculation of Emissions:

3-hour maximum: 0.20 lb/MMBtu x 760 MMBtu/hr = 152 lb/hr

30-day rolling average: 0.15 lb/MMBtu x 760 MMBtu/hr = 114.0 lb/hr

Annual: 0.15 lb/MMBtu x 760 MMBtu/hr x 8,760 hr/yr x 1 ton/2,000 lb = 499.3 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **114.0** lb/hour **499.3** tons/year
5. Method of Compliance: **Continuous NO_x monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing as 30-day rolling average.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **73.5** lb/hour **124.3** tons/year
5. Method of Compliance: **Continuous NO_x monitor and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: NSPS. Based on No. 2 fuel oil firing as a 30-day rolling average.** **Hourly: 0.15 lb/MMBtu x 490 MMBtu/hr = 73.5 lb/hr** **Annually: 0.15 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lbs = 124.3 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **90.8** lb/hour **124.4** tons/year
5. Method of Compliance: **Continuous NO_x monitor and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: NSPS. Based on natural gas firing as a 30-day rolling average.** **Hourly: 0.15 lb/MMBtu x 605 MMBtu/hr = 90.8 lb/hr** **Annually: 0.15 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lbs = 124.4 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1,462.5** lb/hour **1,165.1** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.5 lb/MMBtu (1-hr max)** Reference: **CEM data**	7. Emissions Method Code: **0**

8. Calculation of Emissions:

Cold start-up: 225 MMBtu/hr x 6.5 lb/MMBtu = 1,462.5 lb/hr

30-day rolling average: 0.50 lb/MMBtu x 760 MMBtu/hr = 380.0 lb/hr

12-month rolling average: 0.35 lb/MMBtu x 760 MMBtu/hr = 266.0 lb/hr

Annual: 0.35 lb/MMBtu x 760 MMBtu/hr x 8,760 x 1 ton/2,000 lb = 1,165.1 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Maximum emissions occur under cold start-up conditions. Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.50 lb/MMBtu**	4. Equivalent Allowable Emissions: **380.0** lb/hour tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.50 lb/MMBtu limit based on a 30-day rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.35 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour **1,165.1** tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.35 lb/MMBtu limit based on a 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **38.0** lb/hour **166.4** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05 lb/MMBtu** Reference: **Permit Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.05 lb/MMBtu x 760 MMBtu/hr = 38.0 lb/hr** **38.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 166.4 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **38.0** lb/hour **166.4** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 25A/18.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing @ 760 MMBtu/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** lb/hour **41.4** tons/year
5. Method of Compliance: **Limit No. 2 Fuel Oil burning to 490 MMBtu/hr and 24.9 percent heat input.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on No. 2 fuel oil firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **30.25** lb/hour **41.4** tons/year
5. Method of Compliance: **Limit natural gas burning to 605 MMBtu/hr and 24.9 percent heat input.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on natural gas firing.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **Mercury - H114**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.0041** lb/hour **0.018** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.4 x 10^{-6} lb/MMBtu** Reference: **Permit Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **5.4 x 10^{-6} lb/MMBtu x 760 MMBtu/hr = 0.0041 lb/hr** **0.0041 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 0.018 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **5.4 x 10^{-6} lb/MMBtu**	4. Equivalent Allowable Emissions: **0.0041** lb/hour **0.018** tons/year
5. Method of Compliance: **Stack test using EPA Method 29, once every 5 years.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **27** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **Continuous opacity monitor, or EPA Method 9.**	
5. Visible Emissions Comment: **40 CFR 60, Subpart Da and Permit No. 0990332-016-AC/PSD-FL-196(P)**	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **5**

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement: ☒ Rule ☐ Other	
4. Monitor Information... Manufacturer: **Durag** Model Number: **D-R281-31-V** Serial Number: **31019**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

Continuous Monitoring System: Continuous Monitor **2** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement: ☒ Rule ☐ Other	
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **42D** Serial Number: **42D-52618-292**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **3** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement: ☐ Rule ☒ Other	
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **43B** Serial Number: **43B-51400-292**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor **4** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement: ☐ Rule ☒ Other	
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **48** Serial Number: **48-45334-273**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **5** of **5**

1. Parameter Code:	2. Pollutant(s): O_2
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Yokogowa** Model Number: **ZA8C**	Serial Number: **JJ113MA345**
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I4** ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I5** ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements ☒ Attached, Document ID: **OC-EU5-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring ☒ Attached, Document ID: **CAM PLAN** ☐ Not Applicable
3. Alternative Methods of Operation ☒ Attached, Document ID: **OC-EU5-IV3** ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading) ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application ☐ Certificate of Representation (EPA Form No. 7610-1) ☐ Copy Attached, Document ID: _____ ☐ Acid Rain Part (Form No. 62-210.900(1)(a)) ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____ ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____ ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.) ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____ ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____ ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____ ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____ ☒ Not Applicable

Additional Requirements Comment

See Attachment OC-EU5-ARC for ash and fuel inspection and testing plan.

ATTACHMENT OC-EU5-C15

EMISSION POINT COMMENT

Attachment OC-EU5-C15. Stack Parameters for Each Boiler, New Hope Power Partnership

Source	Heat Input Rate (MMBtu/hr)	Stack Height ft	Stack Height m	Stack Diameter ft	Stack Diameter m	Actual Gas Flowrate (acfm)	Gas Velocity ft/s	Gas Velocity m/s	Gas Temperature °F	Gas Temperature K
Boilers (each)										
Biomass	760	199	60.66	10	3.05	319,000 - 348,000	67.7 - 73.8	20.63 - 22.51	352-373	451-463
No. 2 Fuel Oil	490	199	60.66	10	3.05	140,000 - 150,000	29.7 - 31.8	9.06 - 9.70	295-350	419-450
Natural Gas	605	199	60.66	10	3.05	140,000 - 150,000	29.7 - 31.8	9.06 - 9.70	295-350	419-450

Note: acfm = actual cubic feet per minute
°F = degrees Fahrenheit
ft = feet
ft/s = feet per second
K = degrees Kelvin
m = meters
m/s = meters per second
MMBtu/hr = Million British thermal units per hour

ATTACHMENT OC-EU5-D10

PROCESS/FUEL CALCULATIONS

Attachment OC-EU5-D10. Maximum Fuel Usage and Heat Input Rates per Boiler, New Hope Power Partnership

Fuel	Heat Input	Heat Transfer Efficiency (%)	Heat Output	Fuel Firing Rate	
	Maximum Short-Term (per boiler)				
	(MMBtu/hr)		(MMBtu/hr)		
Biomass - Bagasse	760	68	517	211,111	lb/hr [a]
- Wood	760	68	517	168,889	lb/hr [b]
No. 2 Fuel Oil	490	85	417	3,551	gal/hr
Natural Gas	605	85	514	605,000	scf/hr
	Annual Average (per boiler)				
	(Btu/yr)		(Btu/yr)		
NORMAL OPERATIONS (100% BIOMASS)					
Biomass	6.658E+12	68	4.527E+12	924,667	TPY [a]
No. 2 Fuel Oil	0	85	0	0	gal/yr
Natural Gas	0	85	0	0	MMscf/yr
TOTAL	6.658E+12		4.527E+12		
24.9% OIL FIRING					
Biomass	5.000E+12	68	3.400E+12	694,425	TPY [a]
No. 2 Fuel Oil	1.658E+12	85	1.409E+12	12,012,626	gal/yr
Natural Gas	0	85	0	0	MMscf/yr
TOTAL	6.658E+12		4.809E+12		
24.9% NATURAL GAS FIRING					
Biomass	5.000E+12	68	3.400E+12	694,425	TPY [a]
No. 2 Fuel Oil	0	85	0	0	gal/yr
Natural Gas	1.658E+12	85	1.409E+12	1,658	MMscf/yr
TOTAL	6.658E+12		4.809E+12		

[a] Based on bagasse firing.

[b] Based on wood firing.

Notes:

40 CFR 60, Subpart Da, limits fossil-fuel firing to less than 25% for each boiler (heat input basis).

Total heat output required = 4.527E+12 Btu/yr per boiler.

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse - 3,600 Btu/lb

Wood - 4,500 Btu/lb

No. 2 Fuel Oil - 138,000 Btu/gal

Natural gas - 1,000 Btu/scf

ATTACHMENT OC-EU5-F1.8

CALCULATIONS OF EMISSIONS

Table OC-EU5-F1.8a. Maximum Short-Term Emissions for New Hope Power Partnership Cogeneration Facility (per boiler)

Regulated Pollutant	Biomass			No. 2 Fuel Oil			Natural Gas			Maximum Emissions for any fuel (lb/hr)	Total All Three Boilers (lb/hr)
	Emission Factor (lb/MMBtu)	Activity Factor (MMBtu/hr)	Maximum Emissions (lb/hr)	Emission Faetor (lb/MMBtu)	Activity Factor (MMBtu/hr)	Maximum Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Activity Faetor (MMBtu/hr)	Maximum Emissions (lb/hr)		
Particulate (PM)	0.026 (1)	760	19.8	0.026 (1)	490	12.7	0.026 (1)	605	15.7	19.8	59.3
Particulate (PM_{10})	0.026 (1)	760	19.8	0.026 (1)	490	12.7	0.026 (1)	605	15.7	19.8	59.3
Sulfur Dioxide--3-hr Average	0.30 (3)	760	228.0	--	--	--	--	--	--	228.0	684.0
--24-hr Rolling Average	0.20 (1)	760	152.0	0.05 (1)	490	24.5	0.00059 (5)	605	0.36	152.0	456.0
--30-day Rolling Average	0.10 (1)	760	76.0	--	--	--	--	--	--	76.0	228.0
Carbon Monoxide--1-hr Average (cold-startup)	6.5 (3)	225 [a]	1,462.5	1.0 (2)	490	490.0	0.08 (5)	605	48.4	1,462.5	4,387.5
--30-day Rolling Average	0.5 (1)	760	380.0	--	--	--	--	--	--	380.0	1,140.0
Nitrogen Oxides -- 3-hr Average	0.20 (3)	760	152.00	0.20 (3)	490	98.00	0.20 (3)	605	121	152.00	456.0
-- 30-day Rolling Average	0.15 (1)	760	114.00	0.15 (1)	490	73.5	0.15 (1)	605	90.8	114.00	342.0
VOC	0.05 (1)	760	38.0	0.05 (1)	490	24.50	0.05 (1)	605	30.25	38.00	114.00
Lead	2.6E-05 (1)	760	0.02	9.0E-06 (4)	490	4.4E-03	4.9E-07 (5)	605	3.0E-04	0.02	0.06
Mercury	5.4E-06 (1)	760	4.10E-03	3.0E-06 (4)	490	1.5E-03	2.5E-07 (5)	605	1.5E-04	4.10E-03	0.0123
Fluorides	1.9E-04 (1)	760	0.14	2.70E-04 (4)	490	1.3E-01	--	--	--	0.14	0.43
Sulfuric Acid Mist	0.018 (2)	760	13.68	0.003 (2)	490	1.4700	3.48E-04 (2)	605	2.11E-01	13.68	41.04

[a] Under cold startup conditions, each boiler is limited to 150,000 lb/hr of steam. Heat input rate is based on this limited steam rate.

References:

1. Based on Permit No. 0990332-017-AC.
2. Based on 6% of the SO_2 emissions (Permit No. 0990332-017-AC).
3. Based on CEM data.
4. Fuel oil combustion, Section 1.3, AP-42, September, 1998.
5. Natural gas combustion, Section 1.3, AP-42, July, 1998.

Table OC-EU5-F1.8b. Maximum Annual Emissions Per Boiler, New Hope Power Partnership Cogeneration Facility

Regulated Pollutant	Biomass Emission Factor (lb/MMBtu)	Biomass Activity Factor (E12 Btu/yr)	Biomass Annual Emissions (TPY)	Alternate Fuel Emission Factor (lb/MMBtu)	Alternate Fuel Activity Factor (E12 Btu/yr)	Alternate Fuel Annual Emissions (TPY)	Total Annual Emissions Per Boiler (TPY)	Total Annual Emissions 3 Boilers (TPY)
			100% Biomass					
Particulate (PM)	0.026	6.658	86.55	--	--	--	86.5 [a]	259.6
Particulate (PM_{10})	0.026	6.658	86.55	--	--	--	86.5 [a]	259.6
Sulfur dioxide[b]	0.06	6.658	199.73	--	--	--	199.7 [a]	599.2
Nitrogen oxides[c]	0.15	6.658	499.32	--	--	--	499.3 [a]	1,498.0
Carbon monoxide[b]	0.35	6.658	1165.08	--	--	--	1,165.1 [a]	3,495.2
VOC	0.05	6.658	166.44	--	--	--	166.4 [a]	499.3
Lead	2.6E-05	6.658	0.087	--	--	--	0.09 [a]	0.26
Mercury	5.4E-06	6.658	0.0180	--	--	--	0.018 [a]	0.054
Fluorides	1.9E-04	6.658	0.6325	--	--	--	0.63	1.90
Sulfuric acid mist	0.0036	6.658	11.98	--	--	--	11.98 [a]	36.0
			75.1% Biomass / 24.9% Fuel Oil					
Particulate (PM)	0.026	5.000	65.00	0.026	1.658	21.6	86.55 [a]	259.65
Particulate (PM_{10})	0.026	5.000	65.00	0.026	1.658	21.6	86.55 [a]	259.65
Sulfur dioxide[b]	0.06	5.000	150.00	0.05	1.658	41.4	191.44	574.32
Nitrogen oxides[c]	0.15	5.000	374.99	0.15	1.658	124.3	499.32 [a]	1,498.0
Carbon monoxide[b]	0.35	5.000	874.98	0.35	1.658	290.10	1,165.08 [a]	3,495.2
VOC	0.05	5.000	125.00	0.05	1.658	41.44	166.44 [a]	499.32
Lead	2.6E-05	5.000	0.065	9.0E-06	1.658	7.46E-03	0.07	0.22
Mercury	5.4E-06	5.000	0.0135	3.0E-06	1.658	0.0025	0.016	0.048
Fluorides	1.9E-04	5.000	0.4750	2.70E-04	1.658	0.2238	0.70 [a]	2.10
Sulfuric acid mist	0.0036	5.000	9.00	0.003	1.658	2.49	11.49	34.5
			75.1% Biomass / 24.9% Natural Gas					
Particulate (PM)	0.026	5.000	65.00	0.026	1.658	21.6	86.55 [a]	259.65
Particulate (PM_{10})	0.026	5.000	65.00	0.026	1.658	21.6	86.55 [a]	259.65
Sulfur dioxide[b]	0.06	5.000	150.00	0.0006	1.658	0.5	150.48	451.45
Nitrogen oxides[c]	0.15	5.000	374.99	0.15	1.658	124.3	499.32 [a]	1,498.0
Carbon monoxide[b]	0.35	5.000	874.98	0.08	1.658	66.31	941.28	2,823.9
VOC	0.05	5.000	125.00	0.05	1.658	41.44	166.44 [a]	499.32
Lead	2.6E-05	5.000	0.065	4.9E-07	1.658	4.06E-04	0.07	0.20
Mercury	5.4E-06	5.000	0.0135	2.5E-07	1.658	2.07E-04	0.014	0.041
Fluorides	1.9E-04	5.000	0.4750	--	--	--	0.47	1.42
Sulfuric acid mist	0.0036	5.000	9.00	3.48E-04	1.658	0.29	9.29	27.9

[a] Denotes maximum annual emissions for any fuel scenario.

[b] Based on 12-month rolling average.

[c] Based on 30-day rolling average.

Note: No emissions of total reduced sulfur, asbestos, or vinyl chloride are expected.
Fuel type percentages are based on heat input.

ATTACHMENT OC-EU5-I2

FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT OC-EU5-I2

DESIGN FUEL SPECIFICATIONS[a] FOR THE NEW HOPE POWER PARTNERSHIP COGENERATION FACILITY

Parameter	Biomass		No. 2 Fuel Oil	Natural Gas
	Bagasse	Wood Waste		
Specific Gravity	–	–	0.865	–
Heating Value (Btu/lb)	3,653	4,504	19,175	–
Heating Value (Btu/gal)	–	–	138,000	–
Heating Value (Btu/scf)				1,000
Ultimate Analysis (dry basis percentage):				
Carbon	48.93	49.58	87.01	
Hydrogen	6.14	5.87	12.47	
Nitrogen	0.25	0.40	0.02	
Oxygen	43.84	40.90	0.00	
Sulfur	0.03	0.07	0.05	
Ash/Inorganic	1.0	9.0	0.00	
Moisture	52	37	–	

[a] Represents average fuel characteristics.

Sources: New Hope Power Partnership, 2002; Combustion Engineering, 1981.

ATTACHMENT OC-EU5-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT OC-EU5-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The cogeneration facility utilizes several emission control techniques to reduce emissions. A selective non-catalytic reduction (SNCR) system is used to reduce NO_X emissions. Further, the cogeneration boilers minimize CO and VOC through proper furnace design and good combustion practices, including: control of combustion air and combustion temperature; distribution of fuel on the combustion grate; and controls over the furnace loads and transient conditions. Particulate emissions are controlled by an ESP. Multiple cyclones were installed during the 2000 calendar year to improve control of particulate emissions. Mercury emissions are controlled through a carbon injection system and the ESP system.

Electrostatic Precipitator

The EPS's for the New Hope Power Partnership facility are manufactured by Flakt, Inc. Design specifications for the ESP (one per boiler) are provided below:

Chambers = 1

Collecting Plate = 12.30 ft L x 39.37 ft H

Fields/Chamber = 3

Specific Collection Area = 200 ft^2/1,000 acfm (minimum)

Gas Velocity = <4 ft/s

Pressure Drop = less than 2.8 inches H_2O

Operating Temperature = 350°F

Ash Handling = Trough hopper with screw conveyor

Particulate removal efficiency: >99.2%

NO_X Control System

The NO_X control system design employs a urea injection system manufactured by Nalco-Fueltech for NO_X control. The technology is a selective non-catalytic reduction process, which reduces NO_X emissions through chemical reaction with urea. In the process, urea is injected into the flue gas stream and reacts with nitrogen oxides to form nitrogen and water vapor.

The NO_X control system includes the following major components:

- Carrier air compressors;
- Urea tank;
- Urea/air flow controls;
- Control panel;
- Injection manifolds and injectors; and
- Valves and instrumentation.

A single urea storage tank system is installed to supply urea to all three boilers. Urea for injection into the boilers is drawn from the tank. Two injection zones are used to provide injection at full and part load conditions. Each zone has six injectors. Zone switching valves will direct the urea/carrier mixture to the appropriate injection zone.

Specifications for the urea injection system to meet the NO_X emission rate of 0.15 lb/MMBtu when firing biomass or No. 2 fuel oil are provided below (on a per boiler basis):

Urea injection rate - 65 gal/hr (max)

Ammonia Slip - Biomass, No. 2 fuel oil, natural gas - 25 ppm (max)

Mercury Control System

The mercury control system is supplied by ABB Environmental Systems and Chemco, Inc. A volumetric feeder with integral supply hopper meters activated carbon for injection at a point in the ductwork between the ESP and the ID fan. This promotes turbulent mixing and provides adequate residence time. A blower system transports the carbon to the injection point. The ESP will effectively capture the activated carbon particles along with the boiler fly ash (which also contains some carbon). The system is designed to inject up to 13 lb/hr of carbon into the flue gases of each boiler.

Dust Control System

The cyclone dust collectors are supplied by Barron Industries, Model 460 Tube Base III 9K15-2023 AU. These are mechanical cyclone dust collectors which remove larger size particulate matter prior to the ESP. There are 460 cyclone tubes in all.

ATTACHMENT OC-EU5-I4

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT OC-EU5-I4

PROCEDURES FOR STARTUP AND SHUTDOWN
NHPP COGENERATION BOILERS

There exists the potential for excess emissions to occur from the cogeneration boilers during startup and shutdown. New Hope Power Partnership (NHPP) implements startup and shutdown procedures to minimize the duration and magnitude of such emissions. Procedures which minimize excess emissions include, but are not limited to, the following:

Startup Procedures

- Electrostatic precipitator (ESP) air flushing system and heater are in service eight hours prior to boiler light off.
- The boiler is started up on natural gas or very low sulfur No. 2 fuel oil, prior to energizing the ESP.
- Once the operating temperature recommended by the ESP manufacturer is maintained (approximately 340 to 350°F), the ESP is placed on-line.
- Manual controls are employed to ensure optimum air/fuel ratios during the startup period.
- No. 2 fuel oil firing is reduced gradually while the biomass firing rate is increased.

Shutdown Procedures

- Manual controls are employed to ensure optimum air/fuel ratios during the shutdown period.
- For shutdown, the ESP is not deactivated until the fuel feed to the furnace is stopped.

ATTACHMENT OC-EU5-I5

OPERATION AND MAINTENANCE PLAN

ATTACHMENT OC-EU5-I5

OPERATION AND MAINTENANCE PLAN FOR NEW HOPE POWER PARTNERSHIP

New Hope Power Partnership (NHPP) is required, by Specific Condition No. 8 of Permit No. 0990332-017-AC/PSD-FL-196P, to develop an Operation and Maintenance (O&M) plan for the cogeneration Boilers A, B, and C and for the air pollution control equipment. The air pollution control equipment consists of electrostatic precipitators (ESPs), the selective non-catalytic reduction (SNCR) system, the activated carbon injection system, the fly ash silo fabric filter, mechanical dust collectors, and precautions to prevent fugitive dust emissions. The O&M plan that has been developed is attached.

ATTACHMENT OC-EU5-I5

OPERATION AND MAINTENANCE PLAN FOR NEW HOPE POWER PARTNERSHIP

New Hope Power Partnership (NHPP) is required, by Specific Condition No. 8 of Permit No. 0990332-017-AC/PSD-FL-196P, to develop an Operation and Maintenance (O&M) plan for the cogeneration Boilers A, B, and C and for the air pollution control equipment. The air pollution control equipment consists of electrostatic precipitators (ESPs), the selective non-catalytic reduction (SNCR) system, the activated carbon injection system, the fly ash silo fabric filter, mechanical dust collectors, and precautions to prevent fugitive dust emissions. The O&M plan that has been developed is attached.

OPERATION AND MAINTENANCE PLAN

1.0 COGENERATION BOILERS A, B, AND C

CAPACITY

- Power Generation: The NHPP facility has a maximum generating capacity of 74.9 megawatts (MW) (net).
- Steam Production: Each cogeneration boiler has a maximum steam production rate of 506,100 pounds per hour (lb/hr) at 1500 psig and 975°F.
- Maximum Heat Input: Each cogeneration boiler has a maximum heat input rate of 760 million British thermal units per hour (MMBtu/hr) when combusting biomass, 605 MMBtu/hr when combusting natural gas, and 490 MMBtu/hr when combusting very low sulfur distillate fuel oil.

DESIGN EFFICIENCY

Design combustion efficiency for biomass is 68 percent, and for No. 2 fuel oil and natural gas is 85 percent.

POLLUTANT EMISSION RATES

The maximum potential controlled annual emission rates [tons per year (TPY)] for all three cogeneration boilers combined are as follows:

Pollutant	Emission Rate (TPY)
PM	260
PM_{10}	260
SO_2	599
NO_x	1,498
CO	3,495
VOC	499
Mercury	0.054
Sulfuric Acid Mist	36.5

GENERAL OPERATIONAL DESCRIPTION OF EQUIPMENT

The facility combusts biomass (bagasse and wood), No. 2 fuel oil, and natural gas in three steam boilers to generate steam and electricity. Each boiler is currently permitted to produce an average of 506,100 lb/hr of steam. The cogeneration facility supplies the adjacent Okeelanta sugar mill with

process steam during the sugar cane grinding season, approximately October through March, and also supplies the associated Okeelanta sugar refinery with process steam year around. The fuel burned in the facility boilers to date has been primarily bagasse and wood. Only a relatively small amount of No. 2 fuel oil or natural gas has been combusted to date, since these fuels are used primarily as a backup fuel.

KEY DESIGN AND OPERATING PARAMETERS

The key design and operating parameters for the cogeneration boilers are the power generation rate, steam rate, heat input rate, and combustion efficiency. The design rates for these are provided above.

The DCS (Distributed Control System) is a computer operated system that continuously monitors the operation of key parameters for the boilers, mechanical collectors, ESPs and SNCR system on each boiler. In addition, this system monitors the continuous emissions monitors (CEMs), which measure the boiler flue gas for oxygen and the stack flue gas for sulfur dioxide (SO_2), nitrogen oxides (NO_x) and carbon monoxide (CO). The system will trigger an alarm if any operating conditions are outside of recommended or regulatory ranges.

GOOD OPERATING PRACTICES

NHPP minimizes CO and VOC emissions through proper furnace design and good combustion practices including:

- Control of combustion air (excess oxygen) and combustion temperature;
- Distribution of fuel on the combustion grate; and
- Controls over the furnace loads and transient conditions.

Particulate emissions are controlled from each boiler by mechanical collectors and an ESP. Mercury emissions are controlled, as needed, through a carbon injection system and the ESP.

STARTUP/SHUTDOWN PROCEDURES TO MINIMIZE EMISSIONS

Refer to Attachment OC-EU5-I4.

2.0 ELECTROSTATIC PRECIPITATORS (ESPs)

CAPACITY

The ESP's for the NHPP facility are manufactured by Flakt, Inc. Design specifications for the ESP (one per boiler) are provided below:

Chambers = 1

Collecting Plate = 12.30 ft L x 39.37 ft H

Fields/Chamber = 3

Specific Collection Area = 200 ft^2/1,000 acfm (minimum)

Gas Velocity = <4 ft/s

Pressure Drop = less than 2.8 inches H_2O

Operating Temperature = 350°F

Ash Handling = Trough hopper with screw conveyor

DESIGN EFFICIENCY

The ESP's have a design control efficiency of 99.2% or greater for particulate matter.

GENERAL OPERATIONAL DESCRIPTION OF EQUIPMENT

Each boiler is equipped with a single ABB Environmental System electrostatic precipitator (ESP) for particulate control. Each ESP consists of one (1) chamber with three (3) fields in the direction of flow. Each field has one bus section for a total of three (3) bus sections per chamber. Each bus section is electrically energized by one transformer/rectifier set mounted at the roof level.

KEY DESIGN AND OPERATING PARAMETERS AND GOOD OPERATING PRACTICES

The ESP is designed as a static piece of equipment employing a minimum of moving parts. The preventative maintenance plan for the ESP includes the following:

Daily

Each shift, an inspection of the ESP is conducted to check for any unusual conditions that may exist. An operations log sheet is used by plant personnel to record shift operational activities. The log sheet is reviewed daily by the plant operations manager. The following operational parameters are inspected each shift and any unusual conditions are logged:

- All electrical readings of the ESP and related equipment. In addition, any unusual conditions such as circuit breaker trip are recorded and investigated immediately.

- Process operating conditions, including firing rates, steam production (lb/hr), flue gas temperature, and flue gas composition. Any unusual operating conditions are investigated and corrected immediately.
- Gear motors and transformer/rectifiers are checked for oil leaks. Oil leaks are repaired immediately and oil levels are adjusted as necessary.
- Any unusual or excessive noises coming from motors, or control equipment. Any unusual conditions are corrected immediately.
- Inspection of doors / stuffing boxes to detect gas and air leaks.

In addition, as described above, continuous emission monitor (CEM) data is recorded continuously and is monitored by plant operators. All CEM data for all pollutants (NO_x, SO_2, CO, and opacity) are stored via electronic files. The ESP operating temperature and transformer/rectifier primary current and voltages are also monitored and recorded continuously. If unusual data is recorded, the source of the problem is investigated and corrected immediately.

In addition to the daily shift log completed above, the following additional inspections are made, and repairs performed as necessary, on a monthly, quarterly, semi-annual and annual schedule:

Monthly

- ESP Cold Roof – Clean and inspect.

Quarterly

- Stuffing boxes for rapper drives and dampers are adjusted for leaks and replaced if necessary.
- Rapping drive mechanisms are inspected for excessive noise and wear. If out-of-spec operating conditions exist the mechanisms are repaired or replaced.
- Visually check transformer/rectifier for oil level in tank. Oil is added if necessary.

Semi-annually

- Rapping drive gearmotor oil is sampled and changed, if contaminated.

Annually/During Shut Down

- All ESP internals are inspected.
- Insulators are cleaned and checked for dust, cracks, or evidence of current leakage.

- Transformers/Rectifiers are checked for proper liquid level, dielectric strengths and for formation of deposits.
- If any equipment is not operating within specifications the component will be replaced or repaired.

During annual ESP shutdown, a thorough inspection of all ESP components is performed. The checklist includes the following ESP equipment:

1. Transformer/Rectifier (T/R) Set
   a. Transformer Liquid
   b. Ground Connections
   c. High Tension Bus Duct
   d. Conduits
   e. Alarm Connections
   f. Ground Switch Operation
   g. High Voltage Connections
   h. Surge Arrestors
2. T/R Control Panel
   a. Wire Terminations
   b. Ground Connections
   c. Circuit Breakers Trip
   d. Mechanism
   e. Meter Terminations
   f. Air Filters, For Cleanliness
   g. Fans
3. Control Panels
   a. Indicator Lights
   b. Locked Cabinets
   c. Meters Recorded
4. Insulator Compartment System
   a. Bushing
   b. Sealings
5. Casing, Nozzles, & Inlet Duct
   a. Buildup
   b. Corrosion
6. Stacks
   a. Buildup
   b. Corrosion
7. Gas Distribution Plates
   a. Buildup
   b. Corrosion
8. Inspection Doors
   a. Gasket
   b. Locking Arrangement
   c. Corrosion
9. Through Hopper
   a. Build-up
   b. Corrosion
   c. Leaks
   d. Access Doors
10. Rappers
    a. Seals
    b. Bearings
    c. Clearance to Supports
    d. Shaft Alignment
    e. Free Rotation of Hammers
    f. Shaft Insulators
    g. Hammer/Anvil Alignment
    h. Inner Arm Wear
    i. Hammer Attached
11. Rapper Motors
    a. Motor/Lubrication
    b. Sequencing
    c. Noise
    a.
12. Discharge Electrodes
    b. Support Tubes and Insulators
    c. Electrodes
    d. Alignment
    e. Corrosion
    f. Build-up
13. Collecting Electrodes
    a. Supports
    b. Alignment
    c. Corrosion
    d. Buildup
14. Gas Sneakage Baffles
    a. Buildup
    b. Properly Located
15. Screw Conveyors
    a. Lubrication
    b. Gear Box Lubrication
    c. Condition of Screw
    d. Pluggage (Inlet & Outlet)
    e. Belt Tension
16. Rotary Air Locks
    a. Lubrication
    b. Gear Box Lubrication
    c. Condition of Rotor
    d. Pluggage (Inlet and Outlet)
    e. Belt Tension

Any equipment or component that is not operating properly or is excessively worn is replaced or repaired prior to ESP operation.

STARTUP/SHUTDOWN PROCEDURES TO MINIMIZE EMISSIONS

Refer to Attachment OC-EU5-I4.

3.0 SELECTIVE NON-CATALYTIC REDUCTION (SNCR) SYSTEM

CAPACITY

Specifications for the urea injection system to meet the NO_X emission rate of 0.15 lb/MMBtu when firing biomass or No. 2 fuel oil are provided below (on a per boiler basis):

- Urea injection rate 65 gal/hr (max)
- Ammonia Slip Biomass, No. 2 fuel oil, natural gas - 25 ppm (max)

DESIGN EFFICIENCY

The SNCR has a design removal efficiency for NO_x of 40%.

GENERAL OPERATIONAL DESCRIPTION OF EQUIPMENT

A urea injection system manufactured by Nalco-Fueltech is installed for NO_x control. The technology is a selective non-catalytic reduction (SNCR) process, which reduces NO_x emissions through chemical reactions with urea. In this process, urea is injected into the flue gas stream and reacts with nitrogen oxides to form nitrogen and water vapor. The NO_x control system includes the following major components: carrier air compressors, urea tank, urea/air flow controls, control panel, injection manifolds, injectors, valves and instrumentation.

A single urea storage tank system supplies urea to the boilers. Urea for injection into the boilers is drawn from the tank. Two injection zones are used to provide injection at full and part load conditions. The first zone has six injectors and the second zone has six injectors, for a total of twelve injectors per boiler. Zone switching valves direct the urea/carrier mixture to the appropriate injection zone.

KEY DESIGN AND OPERATING PARAMETERS AND GOOD OPERATING PRACTICES

Each shift, the plant operator completes an inspection of the urea injection system. The inspection includes the urea pressure, urea flow and air pressure for each injector. Once per shift, the air and chemical valves are closed simultaneously to check each injector for fouling. Pressures and flows are adjusted as necessary. At a minimum of once per week the injector nozzles are inspected and cleaned. Any unusual conditions are repaired and noted.

The urea metering module and urea circulation modules are also inspected once per shift. The operating conditions recorded on the metering module for each boiler include dilution water pressure, NO_x pump in service, NO_x gallons per minute, water pump flow, and water pump discharge pressure.

The urea circulation module parameters recorded on a shift basis include the urea tank level, circulation pump condition, and the strainer differential pressure. If any of the parameters listed above are not operating within the normal range, repairs are initiated and recorded in the logbook. The logbook is reviewed daily by the plant operations and maintenance manager.

Injectors

- The distribution module flows and pressures are inspected at least once per shift.
- The injectors are pulled from the boiler and cleaned of built up scale on a weekly schedule.
- During injector cleaning the chamber cap and automization chamber are removed and the orifices inspected and cleaned to assure that partial plugging has not occurred.

Mechanical Components

- Bi-annually a general inspection of mechanical components is performed to check for evidence of corrosion, loosening or shifting parts due to vibration or wear, or any evidence of overheating. Any component showing evidence of damage, breakage, or wear is replaced.

Circulation and Water Boost Pumps

- Visual inspections are performed on a daily basis looking for early signs of wear and/or failure of pump and seal components. If a defective part is discovered, the mechanical component is replaced.

Metering Pumps

- Visual inspections are performed on a daily basis looking for early signs of wear and/or failure of the metering pump and seal components. If a defective part is discovered, the mechanical component is replaced.
- The drive housing oil is changed when contaminated.
- The metering pump DC motor and DC drive are checked monthly.

Valves

- On at least a weekly basis each valve is exercised fully open and closed and checked for proper operability and leak tightness. Packing, seals, ball valves and other valve components are replaced if signs of wear are found.

Regulators

- Upon discovery of erratic regulator operations the regulators are cleaned. Erratic regulator operations are usually caused by dirt accumulation in the disk area.

Strainers

- Strainer baskets on the circulation module and metering module are replaced when wear becomes evident. The baskets are cleaned when the pressure differential across the strainer is greater than five (5) psig.

INSTRUMENTATION

Pressure and Temperature Indicators

- On each shift, the pressure indicator is inspected for soundness and validity. If the instrument is suspect, the equipment is either recalibrated or replaced as necessary.
- Each instrument is calibrated a regular basis. The pressure indicators have a root valve that can be closed to isolate the pressure indicator from the system. The indicator can then be removed for calibration without shutting the system down.

Flow Meters

- On each shift, the flowmeter is checked for soundness and validity. If the instrument calibration is suspect, the flow indicators are re-calibrated or replaced.
- Periodically, the electrical and mechanical fitting are inspected for looseness or separation. If an out-of-spec condition exists the problem is corrected or the component is replaced.

Metering Module Control Panels

- The panel is maintained free of dirt and cleaned periodically. Occasional blowing out with dry air is performed on the panels. All control panel devices (i.e., timer, relay, contactor, lamp or other device) are inspected and if found to be defective are replaced.

STARTUP/SHUTDOWN PROCEDURES TO MINIMIZE EMISSIONS

Refer to Attachment OC-EU5-I4.

ALTERNATE NO_X EMISSIONS CONTROL PLAN

This alternate NO_x control plan identifies the minimum urea injection rate that has demonstrated continuous compliance with the NO_x emissions limit at various load conditions. The purpose of this plan is to monitor compliance with the NO_x standards when the CEM for NO_x is not operating.

If a CEM for NO_x is out of service, NHPP will continue to inject urea at a rate consistent with the other operating boilers. This rate is generally in the range of 50 to 75 gal/hr of urea per boiler. If a monitor goes out of service, and no other boiler is operating, NHPP will continue to inject urea into the boiler at the injection rate that existed just prior to the monitor outage.

It is noted that historically, the NO_x monitors at NHPP have had downtimes of less than 1 percent. As a result, the alternative NO_x monitoring plan will likely be utilized very infrequently in the future.

4.0 ACTIVATED CARBON INJECTION (ACI)/MERCURY CONTROL SYSTEM

CAPACITY

The system is designed to inject up to 13 lb/hr of activated carbon into the flue gases of each boiler.

DESIGN EFFICIENCY

Due to the very low mercury emissions from the NHPP boilers, and the presence of unburned carbon in the flue gas of the boilers, it is not possible to establish a design removal efficiency for the mercury injection system.

GENERAL OPERATIONAL DESCRIPTION OF EQUIPMENT

The mercury control system consists of a volumetric feeder with an integral supply hopper that meters activated carbon for flue gas injection. The injection point is located between the boiler and the ESP. A blower system transports the carbon to the injection point. The ESP effectively captures the activated carbon particles along with boiler flyash (which contains some carbon). The system is designed to inject up to 13 lb/hr of activated carbon into the flue gases of each boiler.

The activated carbon is manufactured specifically for removal of heavy metals and mercury contaminants found in exhaust gases. It is also effective for adsorption of dioxins and other incomplete combustion byproducts. The activated carbon is a free flowing powdered carbon with minimal caking tendencies, which makes it ideal for automatic carbon injection systems. It is manufactured with a high ignition temperature to permit safe operations at elevated temperatures. The unique convoluted particle surface provides the maximum reaction surface for rapid removal of gaseous mercury vapors.

KEY DESIGN AND OPERATING PARAMETERS AND GOOD OPERATING PRACTICES

The carbon feed system consists of the following equipment: storage silo/hopper, feeder motor, feeder gear reducers, feeder vibrator, knifegate valves, educators, solenoid valves, pressure gages, an air line regulator and a strainer/filer. Listed below are operation and maintenance procedures for safe and effective operation of the mercury control system.

Normal Activated Carbon Filling Operations

- The hopper is visually inspected for leaks of activated carbon. If leakage occurs, a silicone sealant or stiff epoxy is applied to the area.
- The inside of the hoppers are inspected and any foreign matter present is removed.

- The flexible connector is replaced and the bands are inspected. The knifegate valves above the screw feeders are closed.
- The pressure-vacuum relief (PRV) valve is closed, and all coupling bolts on the pneumatic valves are inspected for tightness.
- The main panel disconnect is placed in the on position.
- The main control panel hopper low, intermediate, and high level light illumination is inspected.
- The fill line cap from any of the fill lines is removed to energize the dust collector blower. The blower should be running when loading carbon.
- The transfer pressure from truck loading is monitored and should not exceed 10 psig. If excessive pressure is required to load the hoppers the target boxes and fill lines are checked for an unacceptable accumulation of carbon and cleaned as required.

Blower Checks, Line Pressure, and Flow

- During each shift, the operator checks that the feeder/blower is in service and checks the % feed rate of activated carbon. If the equipment or % feed rate is out of specification, repairs and adjustments are made immediately. In addition, all blower discharge pressure gauges should read approximately 14 psig. If the pressure is less than 14 psig the blower shaft is adjusted and checked against the nameplate speed. More pressure is acceptable; the blower is protected by an inline relief valve. The relief valve is set to 15 psig.
- The flow of air at each line's termination point is checked. Velocities should be approximately 3000 ft/min and pressures close to atmospheric. If a low velocity is detected, all elements of the line are checked for debris and water.

Feeder Calibration

- The Chemco screw driver is designed to deliver a minimum of 1.5 pounds of carbon per hour and a maximum of 13 pounds. Periodically, samples of carbon from the feeder discharge spout are collected in order to calibrate the feeder. If necessary, the feeder is recalibrated and/or the malfunctioning equipment is replaced.

Hopper Fluidizing System Checks

- The fluidizing timers within the main control panel are set to a frequency range of 5 to 15 minutes depending on the rate of carbon fed. The higher the feed rate the more frequent the solenoids must be energized to pulse the hopper cones with air.

- The bypass valve must be cracked open and pressurized anytime carbon is in the hoppers.
- Carbon Educators.
- The capability of the educator to ingest solids is dependent upon the position of the nozzle relative to the throat of the educator. The nozzle tip should be pushed in so that it is near the center of the educator suction opening.
- Air admitted to the educator on the screw feed end (suction air) can be controlled using the valves located on the mixing funnel. There are no means provided for measuring the amount of air required for a given feed rate; however, there are two valves provided on the top of each funnel for the purposes of adjusting the suction air flow. The valves may need to be adjusted under certain plant specific operating conditions and both valves should be adjusted to the same setting to prevent an unsymmetrical air-flow into the funnel.

Reactivation Plan

- If two or more cogeneration boilers exceed the annual mercury emission limit, the carbon injection system will be activated for all three boilers within 30 days of the stack test report due date.

STARTUP/SHUTDOWN PROCEDURES TO MINIMIZE EMISSIONS

Refer to Attachment OC-EU5-I4.

5.0 MECHANICAL DUST COLLECTORS

CAPACITY

The mechanical dust collectors are designed for the following operation:

Flow Rate = 359,506 acfm

Temperature = 450°F

DESIGN EFFICIENCY

The mechanical dust collectors are designed for a control efficiency of 80% or greater for particulate matter.

POLLUTANT EMISSION RATES

Refer to the cogeneration boiler section (Section 1.0) above for maximum potential controlled emission rates.

GENERAL OPERATIONAL DESCRIPTION OF EQUIPMENT

The cyclone dust collectors were supplied by Barron Industries, Model 460 Tube Base III 9K15-2023AU. These are mechanical dust collectors which remove larger size PM prior to the ESP. There are 460 cyclone tubes in all.

KEY DESIGN AND OPERATING PARAMETERS AND GOOD OPERATING PRACTICES

The following parameters are monitored by the DCS for the mechanical dust collectors:

- Operation of ash hopper screw conveyors to monitor if any plugging has occurred.
- Amperage on elevating screw conveyor: if amperage is high, plugging may have occurred and is therefore checked.
- Pressure drop across collector: normal range is 4 to 5 inches of water.

In addition, during each outage of the boilers, the dust collector tubes are inspected for damage and wear. Tubes are replaced as necessary.

STARTUP/SHUTDOWN PROCEDURES TO MINIMIZE EMISSIONS

Refer to Attachment OC-EU5-I4.

6.0 PRECAUTIONS TO PREVENT FUGITIVE DUST EMISSIONS

The NHPP facility has the potential to emit unconfined particulate matter as a result of the operation of the cogeneration facility. Examples of fugitive particulate matter emissions include:

- Fugitive particulate matter from biomass fuel storage and handling,
- Fugitive dust from boiler ash removal and handling, and
- Fugitive dust from paved and unpaved roads.

The following measures are undertaken at the facility to minimize fugitive particulate matter emissions, in accordance with Rule 62-296.320(4)(c), F.A.C. These measures are described below:

- The use of covered conveyors on the biomass fuel handling systems,
- Water of the biomass storage piles as needed,
- The use of enclosed material transfer points where feasible,
- Minimization of the distance biomass fuel is dropped during handling,
- The use of windbreaks around the material handling equipment,
- The use of enclosed conveyors, a baghouse, and water to control boiler ash dust during handling; and
- Maintenance of paved areas as needed.

GOOD COMBUSTION PRACTICES
FOR NHPP COGENERATION BOILERS

Emissions of CO, PM/PM_{10}, and VOC shall be minimized by ensuring efficient combustion through the proper application of good combustion practices (GCPs). To provide reasonable assurance that GCPs are being employed, the control room operator shall:

1. Maintain the steam production rate at optimal rate by controlling feed of biomass fuel into the boiler. Sufficient combustion air shall be maintained to promote good combustion.
2. Periodically view the boiler control instrumentation to confirm that good combustion is taking place. If abnormal combustion is observed, the operator will immediately take corrective action. The control room operator will log the occurrence and duration of all such events in the boiler operation log, along with the corrective action taken.
3. Plant operators examine the boiler grates at least twice per shift for proper fuel distribution and make appropriate adjustments. Unusual observations shall be logged.
4. Plant operators perform a walk-around inspection of the boiler once per shift to check and repair the following: Fans, pumps, casing, ducting, control equipment, and monitoring equipment.
5. Plant operators inspect the fuel feeders once per shift and clean as necessary.

These actions may be performed by the operator or other personnel under the operations manager's supervision. The information collected shall be reported to the operations manager.

The following measures are also implemented to promote good combustion in the boilers:

1. Maintain rotary pocket-style wood feeders with efficient air seal to minimize intrusion of ambient air.
2. Maintain effective water level controls in bottom ash system to prevent intrusion of ambient air.
3. Mix biomass fuel to provide a consistent fuel blend.
4. Maintain the flue gas oxygen content to provide efficient combustion for the existing conditions.
5. When necessary to enhance poor combustion, reduce the biomass fee rate below the maximum rate.
6. When necessary to enhance poor combustion, co-fire natural gas or distillate oil.

7. Process monitors are installed to monitor the oxygen (O_2) content of the flue gases. The instrument readouts are located in the boiler control room to provide real time data to the control room operator, and display the instantaneous and the historical average. The control room operators are instructed in the use of the O_2 flue gas process monitor for combustion control and to ensure sufficient excess air levels. The control room operator periodically observes the process monitor and adjusts the boiler operation, consistent with GCPs. The CEMs are equipped with an alarm set to alarm whenever:
   - The point at which the measured NO_x (lb/MMBtu) emissions exceed the allowable emission rate (0.15 lb/MMBtu); or
   - The point at which the measured CO emissions exceed the allowable CO emission rate (0.50 lb/MMBtu as a 30-day rolling average and 0.35 lb/MMBtu as a 12-month rolling average).

At such time that an alarm on either monitor is activated, the control room operator shall take corrective action and adjust the boiler operation, consistent with good combustion practices. Corrective actions include, but are not limited to, adjusting the air-to-fuel ratio, adjusting the ratio of under-fire air to over-fire air, or firing some fuel oil or natural gas in place of biomass. Corrective actions continue until the O_2, NO_x, and/or CO flue gas levels are maintained at acceptable levels.

NO_x emissions are also to be optimized by the proper application of GCPs. However, the application of GCPs to minimize CO and VOC emissions may result in increased NO_x emissions. This is because factors that promote good combustion and result in lower CO and VOC emissions, such as higher excess air and higher combustion temperatures, result in higher NO_x emissions. This is the nature of the combustion process. Therefore, GCPs to optimize NO_x emissions is considered to be the same practices used to minimize CO and VOC emissions, as described above.

OKEELANTA COGENERATION FACILITY

OPERATING PROCEDURE FOR
OPERATION DURING INCLEMENT WEATHER

The purpose of this procedure is to provide guidelines for the safest and most efficient operation of the plant during inclement weather and at times when the fuel may be moist due to wet weather.

1. During short storms (such as summer thunderstorms), the fuel loader operators shall stop pushing the fuel from the top of the wood and bagasse piles.
2. Re-direct the fuel loader operators to feed the reclaimers with material from the sides of the piles, which maximizes the amount of dry fuel fed to the boilers.
3. Reduce boiler load as necessary to prevent excessive fuel piling on the grates.
4. Use the auxiliary fuel as an added heat source when necessary to achieve normal operating conditions, or minimize fuel piling on the grates, or correct unstable firing conditions in the furnace.
5. During very heavy rain storms, reduce the amount of bagasse fed into the boilers and replace the bagasse with wood from the north reclaimer, in order to use the fuel with the most Btu per pound and lowest moisture content.
6. If the plant is to remain online during a Hurricane that may pass near the site, it is up to the Shift Supervisor (with advice from the Operations and Plant Manager) to determine when conditions become unsafe for operators to be outside in the weather. At such time, all online boilers will be fired with auxiliary fuel only or shut down (if necessary), all fuel handling operations will cease, and all personnel will take cover from the weather.

ATTACHMENT OC-EU5-IV1

LIST OF APPLICABLE REGULATIONS

ATTACHMENT OC-EU5-IV1

EU ID 001 : Cogen Boiler A Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	
APPLICABLE	60 Subpart A	40CFR60.7	Notification and Record Keeping	
APPLICABLE	60Subpart A	40CFR60.8	Performance Testing	
APPLICABLE	60 Subpart A	40CFR60.11	Compliance with standards and maintenance requirements.	
APPLICABLE	60 Subpart A	40CFR60.12	Circumvention.	
APPLICABLE	60 Subpart A	40CFR60.13	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.19	General notification and reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.40a	Subpart Da - NSPS for Electric Utility Units for which construction commenced after Sept. 18, 1978.	
APPLICABLE	60 Subpart Da	40CFR60.42a	Standard for particulate matter	
APPLICABLE	60 Subpart Da	40CFR60.43a	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(a)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(b)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(d)(2)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(g)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(h)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.44a	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.44a(a)	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.44a(c)	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.46a	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(a)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(b)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(c)	Compliance provisions.	
NON-APPLICABLE	60 Subpart Da	40CFR60.46a(d)	Compliance provisions.	Cogen Boiler A does not have a flue gas desulfurization system.
APPLICABLE	60 Subpart Da	40CFR60.46a(e)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(f)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(g)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(h)	Compliance provisions.	
NON-APPLICABLE	60 Subpart Da	40CFR60.46a(i)	Compliance provisions.	Cogen Boiler A has not been modified after July 7, 1997.
APPLICABLE	60 Subpart Da	40CFR60.47a	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(a)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(b)(2)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(b)(3)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(c)(1)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(d)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(e)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(f)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(g)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(h)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(i)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(j)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.48a	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(a)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(b)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(c)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(d)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(e)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.49a	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(a)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(b)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(c)	Reporting requirements	

EU ID 001 : Cogen Boiler A Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart Da	40CFR60.49a(d)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(f)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(g)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(h)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(i)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(j)	Reporting requirements	
APPLICABLE	60 Subpart Ea	40CFR60.50a(d)	Standards of performance for municipal waste combustors	
APPLICABLE	60 Subpart Ea	40CFR60.50b(j)	Standards of performance for municipal waste combustors	
APPLICABLE	63 Subpart DDDDD	40CFR63.7480-7495	What this subpart covers	
APPLICABLE	63 Subpart DDDDD	40CFR63.7499-7500	Emission limits and work practice standards	
APPLICABLE	63 Subpart DDDDD	40CFR63.7505-7507	General compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7510-7530	Testing, fuel analysis, and initial compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7535-7541	Continuous compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7545-7560	Notifications, reports, and records	
APPLICABLE	63 Subpart DDDDD	40CFR63.7565-7575	Other requirements and information	
APPLICABLE	62-204	62-204.800(7)2.	NSPS Subpart Da adopted by reference.	
APPLICABLE	62-296 <	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296 <	62-296.405(2)	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	
NON-APPLICABLE	62-296 <	62-296.406	Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Em	Cogen Boiler A has a heat input of >250 MMBtu/hr.
NON-APPLICABLE	62-296 <	62-296.410	Carbonaceous Fuel Burning Equipment.	Not more stringent or different than NSPS.
APPLICABLE	62-296 >	62-296.500	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.500(2)(a)	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.500(2)(c)	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.570	Reasonably Available Control Technology (RACT) - Requirements for Major VOC- and NOx Emitting Facility	
APPLICABLE	62-296 >	62-296.570(1)	Applicability.	
APPLICABLE	62-296 >	62-296.570(1)(a)	Applicability.	
APPLICABLE	62-296 >	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296 >	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.620		
NON-APPLICABLE	62-296 >	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.702	Fossil Fuel Steam Generators.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.703	Carbonaceous Fuel Burners.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	

EU ID 001 : Cogen Boiler A Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.401(1)(a)	EPA Method 1 - Sample and Velocity Traverses for Stationary sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(10)	EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(12)	EPA Method 12 - Determination of Inorganic Lead Emissions from Stationary Sources - 40 CFR 60 Append	
APPLICABLE	62-297	62-297.401(13)	EPA Methods 13A and 13B.	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas Chromatography - 40 CFR 60	
APPLICABLE	62-297	62-297.401(19)	EPA Method 19 - Determination of Sulfur Dioxide Removal Efficiency and Particulate, Sulfur Dioxide a	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CF	
APPLICABLE	62-297	62-297.401(32)	EPA Method 101 - Determination of Particulate and Gaseous Mercury Emissions from Chlor-Alkali Plants	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(41)	EPA Method 201 - Determination of PM10 Emissions (Exhaust Gas Recycle Procedure) - 40 CFR 51 Appendix	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(6)	EPA Method 6 - Determination of Sulfur Dioxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(6)(c)	EPA Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE

New Hope Power Partnership
Okeelanta Cogeneration Plant
8001 U.S. Highway 27 South
South Bay, FL 33493

Authorized Representative:
Mr. Rodney Williams, Plant Manager

Air Permit No. PSD-FL-196(O)
Project No. 0990332-016-AC
Okeelanta Cogeneration Plant
SIC No. 4911
Palm Beach County

PROJECT AND LOCATION

The original PSD permit authorized the construction of a biomass and fossil fuel-fired 74.9 MW cogeneration plant adjacent to Okeelanta Corporation's sugar mill and refinery. The original PSD permit expired on July 1, 1996. The permittee obtained several previous permit modifications that extended some construction-related activities as well as revised specific conditions of the permit. This permit modification authorizes an increase in the hourly heat input rate from 715 to 760 MMBtu per hour per boiler and removes the previous limit on the annual heat input rate ($11.5 \times 10^{+06}$ MMBtu per year) for the three boilers combined. As a result of the changes, BACT determinations were required for emissions of carbon monoxide, fluorides, lead, nitrogen oxides, particulate matter, sulfur dioxide, sulfuric acid mist, and volatile organic compounds. In addition, Condition No. 15 was revised to simply require permanent shutdown of the existing Okeelanta sugar mill boilers, which were part of the netting analysis for the original project.

The cogeneration plant is located off U.S. Highway 27 approximately six miles south of South Bay in Palm Beach County, Florida. The UTM coordinates are Zone 17, 524.90 km East, and 2940.10 km North. The map coordinates are latitude 26° 35' 00" N and longitude 80° 45' 00" W.

STATEMENT OF BASIS

This PSD air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 52, Section 21 of the Code of Federal Regulations. Specifically, this permit is issued pursuant to the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality, Rule 62-212.400, F.A.C. The permittee is authorized to perform the proposed work and operate the installed equipment in accordance with the conditions of this permit, the conditions of the Title V operation permit, and as described in the application, approved drawings, plans, and other documents on file with the Department.

CONTENTS

Section I. General Information
Section II. Administrative Requirements
Section III. Emissions Units Specific Conditions
Section IV. Appendices

Michael G. Cooke, Director
Division of Air Resources Management

10/27/03
Effective Date

FACILITY DESCRIPTION

The facility consists of two adjacent plants. Okeelanta Corporation (ARMS ID No. 0990005) operates a sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062) including packaging and transshipment activities. New Hope Power Partnership (ARMS ID No. 0990332) operates a 74.9 net MW cogeneration plant that provides process steam for the sugar mill/refinery and generates electricity for sale to the power grid (SIC 4911). The cogeneration plant, sugar mill, and sugar refinery are all considered a single facility for purposes of the PSD and Title V regulatory programs. This permit addresses the cogeneration plant, which consists of the following emissions units.

ID	Emission Unit Description
001	Cogeneration Boiler A (760 MMBtu per hour)
002	Cogeneration Boiler B (760 MMBtu per hour)
003	Cogeneration Boiler C (760 MMBtu per hour)
004	Material handling and storage

REGULATORY CLASSIFICATION

Title III: The existing facility is a potential major source of hazardous air pollutants (HAPs).

Title IV: The existing facility does not operate any units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD major source of air pollution with respect to Rule 62-212.400, F.A.C.

PPSC: The existing facility is not subject to Chapter 62-17, F.A.C. for Power Plant Site Certification because it produces less than 75 MW of steam-generated electrical power.

NSPS: The existing facility operates units subject to the New Source Performance Standards in 40 CFR 60, including Subparts Da and Db (boilers) and Subpart Kb (fuel storage tanks).

PERMITTING AUTHORITY

All documents related to PSD applications for permits to construct or modify shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate the cogeneration plant shall be submitted to the Air Resource Section of the Department's South District Office at P.O. Box 2549, Fort Myers, Florida 33902-2549. Copies of all such documents shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29, West Palm Beach, Florida 33402-0029.

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29, West Palm Beach, Florida 33402-0029. Copies of all such documents shall be submitted to the Air Resources Section at the South District Office of the Florida Department of Environmental Protection (DEP) at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Air Permit No. PSD-FL-196 issued September 27, 1993 and all subsequent modifications.
- Permit application received on September 6, 2002 and all related correspondence to make complete.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A. Citation Format
Appendix B. General Conditions
Appendix C. Standard Requirements
Appendix D. Final BACT Determinations
Appendix E. Continuous Monitor Requirements

CITATION FORMAT

Appendix A of this permit describes the format used to cite applicable rules, regulations, and permitting actions.

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. General Conditions: The permittee is subject to, and shall operate under, the attached General Conditions listed in Appendix B of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

2. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of each subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, and 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

3. Permit Expiration: The original expiration date for the construction of this plant was July 1, 1996. Construction of the cogeneration plant is complete and commercial operation has commenced. This revised permit does not authorize any additional construction. The expiration date of this revised permit is September 1, 2004 strictly for the purpose of processing a Title V air permit revision to incorporate these changes. All physical construction is complete. [Rule 62-4.210(2), F.A.C.]

4. Effective Date: The effective date of the modified PSD permit is specified on the placard page (page 1).

5. Relaxations of Restrictions on Pollutant Emitting Capacity: If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it. [Rule 62-212.400(2)(g), F.A.C.]

6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

8. Title V Permit Revision: Pursuant to Rule 62-213.420(1)(a)2, F.A.C., the permittee shall submit an application for a revised Title V air operation permit at least ninety (90) days before the expiration of this permit, but no later than 180 days after commencing operation. In accordance with Rule 62-213.412(2), F.A.C., the permittee may immediately implement the changes authorized by this air construction permit after submitting the application for a revised Title V air operation permit to the Permitting Authority and providing copies of the application to EPA Region 4 and each Compliance Authority. To apply for a revised Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. As necessary, the application shall include a Compliance Assurance Monitoring Plan. The application shall be submitted to the Department's South District Office with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, 62-213.412, and 62-213.420, F.A.C.]

This section of the permit addresses the following emissions units.

Emissions Units 001, 002, and 003: Cogeneration Boilers A, B, and C

Description: Each unit is a biomass-fired spreader stoker steam boiler manufactured by Zurn and designed to produce approximately 506,100 pounds per hour of steam at 1500 psig and 975° F.

Fuels and Capacity: The primary fuel is biomass (760 MMBtu per hour), which includes bagasse from the adjacent sugar mill and clean wood material delivered to the plant by area subcontractors. Auxiliary fuels include natural gas (605 MMBtu per hour) and very low sulfur distillate oil (490 MMBtu per hour).

Controls: Pollution control equipment includes low-NOx burners for gas firing, a selective non-catalytic reduction system to reduce nitrogen oxides emissions, mechanical dust collectors and an electrostatic precipitator to reduce particulate matter emissions, and an activated carbon injection system to reduce potential mercury emissions. Good operating practices and the efficient combustion of clean, low-sulfur fuels minimizes emissions of carbon monoxide, sulfuric acid mist, sulfur dioxide, and volatile organic compounds.

Stack Parameters: Exhaust gases exit a 10 feet diameter stack that is at least 199 feet tall and with a volumetric flow rate of approximately 319,000 acfm at 352° F.

Emissions Unit 004: Material handling and storage including unloading operations, stockpiles, transfer operations, conveyors, screens, crushers, hoppers, silos, and storage tanks.

CONSTRUCTION DETAILS

1. Generating Capacity: Construction of the proposed cogeneration plant shall reasonably conform to the plans described in the application. The plant shall be designed, constructed, and operated such that the generating capacity does not exceed 74.9 net megawatt (MW) based on a 1-hour average. The owner or operator shall not modify the cogeneration plant in any way that would cause the plant to exceed the limit on maximum net generating capacity. The hourly average net generation rate shall be recorded and retained for at least 5 years.

2. Boiler Design: The cogeneration boilers shall consist of spreader stoker units designed to fire biomass as the primary fuel with pipeline natural gas and distillate oil as auxiliary fuels. Natural gas and distillate oil are fired at startup and shutdown, when necessary to ensure good combustion, to supplement biomass fuel, and for periods when the biomass fuel supply is interrupted. No other fuels are authorized. *{Permitting Note: Each boiler was originally designed to fire low sulfur coal as an emergency backup fuel, but no transfer, crushing, or storage systems were ever installed. The permittee shall obtain a permit modification before firing any other fuel (including coal) not specifically authorized by this permit.}*

3. Stack: Each boiler shall have an individual stack that is at least 199 feet tall. The permanent stack sampling facilities for each stack must comply with Rule 62-297.345, F.A.C.

4. Process Monitors: Each boiler shall be equipped with instruments to measure the fuel feed rate, heat input, steam production, steam pressure, and steam temperature. Appendix E identifies minimum requirements for monitoring equipment.

5. Control Equipment: Each boiler shall be equipped with:
   - Low-NOx natural gas burners rated for no more than 0.15 pounds of NOx per MMBtu of heat input. Four burners are installed with one in each corner of the boiler. The maximum heat input rate from all four burners is 605 MMBtu per hour.
   - Mechanical dust collectors consisting of four, large diameter, multi-tube modules with airfoil vanes or equivalent equipment. The mechanical dust collectors shall be installed and maintained as pre-control devices prior to each electrostatic precipitator and designed for a removal efficiency of at least 85% of the particulate matter greater than 10 microns in size (assuming a specific gravity of 2.00).
   - An electrostatic precipitator (ESP) designed for at least 98 percent removal of particulate matter.

- A selective non-catalytic reduction (SNCR) system designed for at least 40 percent removal of NOx.
- A carbon injection system (or equivalent) for potential control of mercury emissions.

6. Continuous Monitors: For each cogeneration boiler, the permittee shall install, calibrate, maintain, and operate continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS) to measure and record emissions of carbon monoxide (CO), nitrogen oxides (NOx), opacity, oxygen (O_2), and sulfur dioxide (SO_2) in a manner sufficient to demonstrate compliance with the standards of this permit. The opacity monitor shall be placed in the ductwork between the electrostatic precipitator and the stack or in the stack. Appendix E identifies minimum requirements for monitoring systems.

7. Good Combustion Practices: An oxygen meter shall be installed for each unit to continuously monitor a representative sample of the flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously optimize air/fuel ratio parameters. Depending on the fuel quality and existing combustion conditions, the operator shall provide sufficient excess air to ensure good combustion within the boiler. The application to revise the Title V operation permit shall identify "good combustion practices" for the cogeneration boilers to minimize pollutant emissions during startup, operation, and shutdown. The document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" shall be used as a guide. Good combustion controls shall also include the following:

   - Maintain improved combustion controls to provide efficient tuning of air/fuel control instrumentation.
   - Maintain rotary pocket-style wood feeders with efficient air seal to minimize intrusion of ambient air.
   - Maintain effective water level controls in bottom ash system to prevent intrusion of ambient air.
   - Mix biomass fuel to provide a consistent fuel blend.
   - Maintain the flue gas oxygen content to provide efficient combustion for the existing conditions.
   - When necessary to enhance poor combustion, reduce the biomass feed rate below the maximum rate.
   - When necessary to enhance poor combustion, co-fire natural gas or distillate oil.

8. O&M Plans: The application to revise the Title V operation permit shall include an operation and maintenance plan consisting of at least the following items.

   a. For the cogeneration boilers, electrostatic precipitators (ESP), selective non-catalytic reduction (SNCR) systems, activated carbon injection (ACI) mercury control systems, and silo fabric filters, identify: the capacities, design efficiencies, pollutant emission rates, general operational description of equipment, key design and operating parameters, expected operating range of each key parameter, monitoring of key parameters, frequency of monitoring (instantaneous, continual, or continuous), and actions taken to return key parameters to within the expected operating ranges. The plan shall also specify good operating practices to promote efficient boiler combustion, startup and shutdown procedures for the boilers and control systems to minimize emissions, and precautions to prevent fugitive particulate matter emissions. *{Permitting Note: Operation outside of the specified operating range for any monitored parameter would not be a violation by itself. However, continued operation outside of a specified operating range without corrective action may be considered circumvention of the air pollution control equipment or methods.}*

   b. For the selective non-catalytic reduction (SNCR) systems identify an alternate NOx emissions control plan based on previous monitoring data that shall be implemented in case the NOx monitoring system is down. The plan shall identify the minimum urea injection rate that has demonstrated continuous compliance with the NOx emissions standard at various load conditions.

9. Materials Handling Controls: For the fly ash handling and mercury control system reactant storage systems:

   a. The particulate matter filter control system for the storage silos shall be designed to achieve an outlet dust loading of no greater than 0.01 grains per actual cubic feet of exhaust.

   b. The fly ash handling system (including transfer points and storage bin) shall be enclosed. The ash shall

be wetted in the ash conditioner to minimize fugitive dust prior to discharging to the disposal bin.

OPERATIONAL RESTRICTIONS

10. Permitted Capacity: The cogeneration boilers shall be constructed and operated in accordance with the capabilities and specifications described in the application. The maximum heat input rate to each cogeneration boiler shall not exceed 760 MMBtu/hr when burning 100 percent biomass, 605 MMBtu/hr when burning 100 percent natural gas, and 490 MMBtu/hr when burning 100 percent very low sulfur distillate oil. The steam production of each boiler shall not exceed an average of 506,100 pounds per hour at 1,500 psig and 975°F. The operating hours of the cogeneration boilers are not restricted (8760 hours per year).

11. Primary Fuel: The primary fuel for the plant shall be biomass, which shall consist of bagasse and authorized wood material. Bagasse is the fibrous vegetative residue remaining after the sugarcane milling process. Authorized wood material is clean construction and demolition wood debris, yard trash, land clearing debris, and other clean cellulose and vegetative matter. Each cogeneration boiler shall combust no more than 30% by weight yard waste (yard trash) on a calendar quarter basis that is defined as a municipal solid waste (MSW) in 40 CFR 60.51a. The biomass fuel used at the cogeneration plant shall not contain hazardous substances, hazardous wastes, biomedical wastes, or garbage. The fuel used at the cogeneration plant shall not contain special wastes, except wood, lumber, trees, tree remains, bagasse, cane tops and leaves, and other clean vegetative and cellulose matter. The permittee shall perform a daily visual inspection of any wood material or similar vegetative matter that has been delivered to the plant for use as fuel. Any shipment observed to contain prohibited materials shall not be used as fuel, unless such materials can be readily segregated and removed from the wood material and vegetative matter.

    The permittee shall design and implement a management and testing program for the wood material and other materials delivered to the plant for fuel. The program shall be designed to keep painted and chemically treated wood, household garbage, toxic or hazardous non-biomass and non-combustible waste material, from being burned at this plant. The program shall provide for the routine inspection and/or testing of the fuel at the originating wood yard sites as well as at the cogeneration site, to ensure that the quantities of painted or chemically treated wood in the fuel are minimized. Based on the analysis of a composite sample, wood material containing more than 70.7 ppm arsenic or 83.3 ppm chromium or 62.8 ppm copper shall not be burned. Fuel scheduled for burning shall be inspected daily. At a minimum, the fuel management program shall include the following sampling and analyses:

    a. At least twice each month, the permittee shall have separate analyses conducted on an as-fired wood sample and an as-fired bagasse sample for the following: heating value (modified ASTM D3286, Btu/lb, dry), carbon content (modified ASTM D5373, percent by weight, dry), sulfur content (modified ASTM D4239 Method C, percent by weight, dry), and moisture content (modified ASTM D3173, percent by weight). In addition the wood sample shall be analyzed for copper, chromium, and arsenic in accordance with Methods 3050/6010 (EPA Method SW-846) and reported in ppm by weight, dry. Samples shall be taken at least two weeks apart.

    b. At least once each month, the permittee shall have an analysis conducted on a composite sample of fly ash and bottom ash for arsenic, copper, and chromium in accordance with the procedures described in EPA Method SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (40 CFR 261, Appendix III). The analytical results from ash testing shall be used in conjunction with those from the as-fired wood samples to evaluate the effectiveness of the fuel management program in removing chemically treated wood from the biomass fuel. The permittee shall dispose of all ash generated on site in accordance with the applicable state and federal regulations.

    c. Analytical results of the as-fired biomass fuels and ash sampling shall be summarized and provided in the quarterly report to the Compliance Authority.

    The ash and fuel management program shall become part of the Title V operation permit.

12. Auxiliary Fuel: The cogeneration boilers shall fire only distillate oil and pipeline natural gas as auxiliary fuels. Distillate oil shall be new No. 2 oil with a maximum sulfur content of 0.05 percent sulfur by weight as determined by the appropriate test method listed in 40 CFR 60.17. "New" oil is oil that has been refined from crude oil and that has not been used in any manner that may contaminate it. Each boiler may startup solely on pipeline natural gas or distillate oil.

13. Fossil Fuel Limitation: The firing of fossil fuels (distillate oil and natural gas) shall be less than 25 percent of the total heat input to each cogeneration boiler during any calendar quarter.

14. Fuel Records: The permittee shall maintain a daily log of the amounts and types of fuels used. The amount, heating value, and sulfur content of each fuel oil delivery shall be kept in a log for at least five years. For each calendar month, the actual monthly SO_2 emissions and the 12-month rolling total SO_2 emissions shall be determined and kept in a log.

15. Permanent Shutdown: Sugar mill boiler Nos. 4, 5, 6, 10, 11, 12, 14, and 15 shall remain permanently shutdown and rendered incapable of operation. *{Permitting Note: Okeelanta Corporation's Boiler No. 16 may operate in accordance with modified Permit No. PSD-FL-169(A).}* [Rule 62-212.400, F.A.C.]

EMISSIONS LIMITING STANDARDS

16. Emissions Standards: Based on the maximum permitted heat input to each cogeneration boiler, stack emissions shall not exceed the standards specified in the following table:

Pollutant	Averaging Period	Emissions Standards per Boiler[1]	
		lb/MMBtu	lb/hr
Carbon Monoxide (CO) [a]	30-day rolling CEMS avg.	0.50	380.0
	12-month rolling CEMS avg.	0.35	
Nitrogen Oxides (NOx) [b]	30-day rolling CEMS avg.	0.15	114.0
Sulfur Dioxide (SO_2) [c]	24-hour rolling CEMS avg.	0.20	152.0
	30-day rolling CEMS avg.	0.10	
	12-month rolling CEMS avg.	0.06	
Stack Opacity [d]	6-minute block COMS avg. (Alternative: EPA Method 9)	≤ 20% opacity, except for one 6-minute block per hour that is ≤ 27% opacity	
Particulate Matter (PM/PM10) [e]	3-run test avg.	0.026	19.8
Volatile Organic Compounds (VOC) [f]	3-run test avg.	0.05	38.0
Mercury [g]	3-run test avg.	5.4×10^{-06}	NA
Lead and Fluorides[h]	The BACT determination for lead and fluoride emissions is the use of fuels containing low levels of these compounds (bagasse, wood, distillate oil, and natural gas) and prospective removal with the fly ash by the mechanical dust collectors and electrostatic precipitators.		

a. Compliance shall be determined by data collected from the required CO CEMS in terms of "lb/MMBtu of heat input". The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler operating days and be consistent with the NOx monitoring requirements below. Compliance with the 12-month standard shall be based on the rolling average for each consecutive 12-month period. In addition, the CO CEMS shall record CO emissions in terms of "ppmvd corrected to 3% oxygen" for each 1-hour block average and each 24-hour block average (daily average). *{Permitting Note: CO emissions data recorded and reported in terms of "ppmvd corrected to 3% oxygen" are for informational purposes only.}*

b. Compliance shall be determined by data collected from the required NOx CEMS in terms of "lb/MMBtu of heat input". The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler operating days and the requirements of 40 CFR 60.13, 60.44a, 60.46a, 60.47a, 60.48a, and 60.49a. A boiler-operating day is any day in which any authorized fuel is fired.

c. Compliance with the SO_2 standards shall be determined by data collected from the required SO_2 CEMS in terms of "lb/MMBtu of heat input". The 24-hour average shall be determined by calculating the arithmetic average of all valid hourly emission rates for 24 successive boiler-operating hours. The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler-operating days and the requirements of 40 CFR 60.13, 60.43a, 60.46a, 60.47a, 60.48a, and 60.49a. Compliance with the 12-month standard shall be based on the rolling average for each consecutive 12-month period. Valid SO_2 hourly averages shall not be excluded from any compliance average. *{Permitting Note: Potential emissions of sulfuric acid mist are minimized by the effective control of SO_2 emissions with the firing of low sulfur fuels. For reporting purposes, sulfuric acid mist emissions shall be estimated as 6% of the total measured SO_2 emissions.}*

d. Continuous compliance with the opacity standard shall be determined by data collected from the required COMS in terms of "percent opacity" based on 6-minute block averages. Alternatively, compliance may also be determined by conducting EPA Method 9 observations.

e. Compliance with the particulate matter standards shall be determined by the average of three test runs conducted in accordance with EPA Method 5. For purposes of reporting PM_{10} emissions, it shall be assumed that all particulate matter emitted is PM_{10}.

f. Compliance with the VOC standards shall be determined by the average of three test runs conducted in accordance with EPA Method 25A based on propane. In addition, the permittee may choose to conduct EPA Method 18 concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. Otherwise, all emissions measured by EPA Method 25A shall be considered "volatile organic compounds".

g. Compliance with the mercury standards shall be determined by the average of three test runs conducted in accordance with EPA Method 101A or 29. Emissions in excess of this standard shall be a violation of the permit. In addition, if two or more cogeneration boilers exceed the annual mercury emission limit, the permittee shall reactivate the carbon injection system for all three units within 30 days of the stack test report due date. The minimum carbon injection rate shall be at least 7 pounds per hour. Within 60 days of the stack test report due date, the permittee shall submit to the permitting and compliance authorities a mercury testing protocol designed to establish an effective carbon injection rate to control mercury emissions. Within 60 days of receiving approval for the mercury testing protocol by the permitting authority, the permittee shall begin the approved testing program. At a minimum, the permittee shall submit a full engineering report summarizing the uncontrolled emissions, controlled emissions, fuels, operating capacities, and recommending a minimum activated carbon injection rate to control mercury emissions.

h. The particulate matter standard is also a surrogate standard for lead emissions. *{Permitting Note: For reporting purposes, average lead emissions are expected to be 2.6×10^{-05} lb/MMBtu and average fluoride emissions are expected to be 1.9×10^{-04} lb/MMBtu when firing bagasse/wood.}*

i. Each boiler shall comply with the standards when firing any combination of authorized fuels. The "lb/hour" rates are based on the highest emission standard shown for that pollutant. Required compliance tests shall be performed in accordance with the requirements of Condition No. 19. The cogeneration boilers are also subject to the new source performance standards (NSPS Subpart Da) for new electric utility steam generating units. These requirements include the general provisions of Subpart A in 40 CFR 60, as well as the following source-specific applicable requirements: 60.40a

(Applicability and Designation of Affected Facility); 60.41a (Definitions); 60.42a (Standards for Particulate Matter); 60.43a (Standard for Sulfur Dioxide); 60.44a (Standard for Nitrogen Oxides); 60.46a (Compliance Provisions); 60.47a (Emissions Monitoring); 60.48a (Compliance Determination Procedures and Methods); and 60.49a (Reporting Requirements). The cogeneration boilers are also subject to Rule 62-296.405(2), F.A.C. (Fossil Fuel Steam Generators with more than 250 MMBtu per Hour of Heat Input), Rule 62-296.410, F.A.C. (Carbonaceous Fuel Burning Equipment), and Rule 62-296.570, F.A.C. (Reasonably Available Control Technology Requirements for Major VOC and NOx Facilities).

{Permitting Note: Appendix D identifies the final BACT determinations for the cogeneration boilers.}

17. Material Handling: The following conditions apply to the biomass, ash, and activated carbon handling facilities.

    a. All conveyors and conveyor transfer points shall be enclosed to preclude PM emissions (except those directly associated with the stacker/reclaimer, for which enclosure is operationally infeasible).

    b. Water sprays, chemical wetting agents, and/or stabilizers shall be applied to storage piles, handling equipment, unenclosed transfer points, etc. during dry periods and as necessary to prevent visible emissions. When adding, moving or removing material from the storage pile, visible emissions of no more than 20% opacity are allowed.

    c. The mercury control system reactant storage silos shall be maintained at a negative pressure while operating with the exhaust vented to a filter control system. Visible emissions from any storage silo shall not exceed 5 percent opacity based on a 6-minute block average. A visible emissions test (EPA Method 9) shall be performed at least annually for each silo that is loaded with carbon during the federal fiscal year.

STARTUP, SHUTDOWN, AND MALFUNCTION

18. Startup, Shutdown, and Malfunction Requirements: The permittee shall comply with the following requirements regarding periods of startup, shutdown, and malfunction for each cogeneration boiler.

    a. *Definitions*

        1) Excess emissions are emissions of pollutants in excess of those allowed by any applicable air pollution rule of the Department, or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions that occur during startup, shutdown, or malfunction. [Rule 62-210.200(106), F.A.C.]

        2) Startup is the commencement of operation of a boiler which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which may result in excess emissions. Periods of startup for each boiler shall end once steam generation reaches 150,000 pounds per hour. A cold startup is a startup after the boiler has been shutdown for 24 hours or more. A warm startup is a startup after the boiler has been shutdown for less than 24 hours.

        3) Shutdown is the cessation of the operation of a boiler for any purpose after steam generation drops below 150,000 pounds per hour.

        4) Malfunction is any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(160), F.A.C.]

    b. *Prohibition*: Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. Emissions data recorded during such preventable periods shall be included in the compliance averages. [Rule 62-210.700(4), F.A.C.]

c. *Monitoring Data Exclusion*: Each continuous monitoring system shall operate and record data during all periods of operation (including startup, shutdown, and malfunction) except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. Provided the operators implement best operational practices to minimize the amount and duration of emissions, the following conditions apply. Pursuant to Rules 62-210.700(1) and (5), F.A.C., these conditions consider the variations in operation of the cogeneration boilers.

1) Natural gas or distillate oil shall be fired during startup prior to energizing the electrostatic precipitator (ESP). Once the operating temperature recommended by the ESP manufacturer is maintained (approximately 340° F to 350 ° F), it shall be placed on line and the boiler shall comply with the opacity standard specified in Condition No. 16. The ESP shall be on line and functioning properly before firing any biomass. The opacity limit does not apply when the ESP is off line due to warm startup, cold startup, or shutdown. No more than twenty 6-minute block averages of opacity monitoring data shall be excluded in a 24-hour period due to documented malfunctions.

2) Hourly CO and NOx emission rate values collected during startup, shutdown, or documented malfunction may be excluded from the 30-day and/or 12-month compliance averages. No more than six hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a cold startup. No more than three hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a warm startup. No more than two hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a malfunction. No more than two hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a shutdown. For each cogeneration boiler, no more than 183 hourly emission rate values shall be excluded during any calendar quarter.

3) All valid hourly SO_2 emission rate values shall be included in all of the compliance averages. [40 CFR 60.46a and 60.49a]

4) To "document" a malfunction, the operator shall notify the Compliance Authority within one working day of the malfunction by phone, facsimile, or electronic mail. The notification shall include the date and time of malfunction, a description of the malfunction and probable cause, steps to taken to minimize emissions, and actions taken to correct the problem. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

d. *Reporting*: In conjunction with the annual operating report, the permittee shall identify the number of startups, the number of shutdowns, and the number of malfunctions that occurred during the year for each boiler. For each boiler's CO and NOx monitors, the report shall identify the annual hours of emission data excluded from the compliance determination due to each type of incident (startups; shutdowns; and documented malfunctions).

[Rule 62-210.700, F.A.C.; Rule 62-4.070(3), F.A.C.; 40 CFR 60.8; and 40 CFR 60.46a]

COMPLIANCE METHODS AND REPORTING

19. Stack Test Requirements

a. *Initial Tests*: Initial tests were initially required for emissions of mercury, particulate matter, and volatile organic compounds. The Department may require these initial tests to be repeated if major physical or operational changes are made that affect main components such as the boiler, fuels, and/or pollution control equipment.

b. *Annual Tests*: At least once during each federal fiscal year, the permittee shall conduct compliance tests for emissions of mercury, particulate matter, and volatile organic compounds.

c. *Renewal Tests*: Within the 12-month period prior to submitting an application to renew the Title V air operation permit, the permittee shall conduct compliance tests for emissions of, mercury, particulate matter, and volatile organic compounds. Tests shall be conducted at five-year intervals.

d. *Test Procedures*: The emission compliance tests shall be conducted in accordance with the provisions of Chapter 62-297, F.A.C., 40 CFR 60.46a (NSPS Subpart Da), and as summarized in Appendix C of this permit. The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. The biomass fuel feed for each test run shall consist of at least 45% wood materials by weight. Testing of emissions shall be conducted with each cogeneration boiler operating at permitted capacity, which is defined as a heat input rate between 684 and 760 MMBtu/hour and firing 100% biomass. If it is impracticable to test at permitted capacity, a cogeneration boiler may be tested at less than the maximum permitted capacity; in this case, subsequent operation is limited to 110 percent of the test rate until a new test is conducted. Within three days of completing a test below permitted capacity, the permittee shall provide written notification of the restricted operational capacity to the Compliance Authority. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(7)(a)9, F.A.C. and 40 CFR 60.7, 60.8]

e. *Test Methods*: Compliance with the emission limits specified in this permit shall be demonstrated using EPA Methods, as contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

EPA Method	Description
1	Selection of sample site and velocity traverses
2	Stack gas flow rate when converting concentrations to or from mass emission limits
3A	Gas analysis when needed for calculation of molecular weight or percent O2
4	Moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits
5	Particulate matter emissions
6 or 6C	Sulfur dioxide emissions
7 or 7E	Nitrogen oxide emissions
9	Visible emissions determination of opacity *{Permitting Note: Although each unit is required to monitor opacity with a COMS, visible observations may also be used to demonstrate compliance.}*
10	Carbon monoxide emissions
12	Inorganic lead emissions
19	Calculation of sulfur dioxide and nitrogen oxide emission rates
25A	Volatile organic compounds emissions *{Permitting Note: EPA Method 18 may be conducted concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. Otherwise, all emissions measured by EPA Method 25A shall be considered "volatile organic compounds".*
29	Multiple metals emissions
101A	Particulate and gaseous mercury emissions

No other methods may be used to demonstrate compliance unless prior written approval is received from the Department. Other applicable testing requirements are included in Appendix C of the permit. The permittee shall use CEMS and COMS data to demonstrate compliance with the emissions standards for CO, NOx, opacity, and SO2. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

20. Continuous Monitor Requirements: The permittee shall demonstrate compliance with the emissions standards for CO, NOx, opacity, and SO2 based on data collected from the continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS) required for each cogeneration boiler.

Appendix E specifies the minimum requirements for monitoring equipment.

21. Quarterly Reports: For each cogeneration boiler, the permittee shall submit a quarterly report for each required continuous emissions and opacity monitoring system in accordance with the requirements specified in Appendix E of this permit. The permittee shall also submit a quarterly summary of the fuel analyses, fuel usage, and equipment malfunctions. For each malfunction, the report shall identify the cause (if known), and corrective actions taken. The quarterly reports and summaries shall be submitted to the Compliance Authority no later than 30 days following each calendar quarter.

22. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. Along with this report, the permittee shall also submit a summary of CO emissions from each cogeneration boiler in terms of "ppmvd corrected to 3% oxygen based on a 24-hour average (day)" for each operational day. [Rule 62-210.370(2), F.A.C.]

CONTENTS

Appendix A. Citation Format
Appendix B. General Conditions
Appendix C. Standard Requirements
Appendix D. Final BACT Determinations
Appendix E. Continuous Monitor Requirements

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit
"AO" identifies the permit as an Air Operation Permit
"123456" identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located
"2222" represents the specific facility ID number
"001"identifies the specific permit project
"AC" identifies the permit as an air construction permit
"AF" identifies the permit as a minor federally enforceable state operation permit
"AO" identifies the permit as a minor source air operation permit
"AV" identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the Prevention of Significant Deterioration of Air Quality
"FL" means that the permit was issued by the State of Florida
"317" identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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 and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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 or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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

   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 Sections 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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (X);
    b. Determination of Prevention of Significant Deterioration (X); and
    c. Compliance with New Source Performance Standards (X).

14. The permittee shall comply with the following:

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

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

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

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.

{Permitting Note: Unless otherwise specified by permit, the following conditions are generally applicable to all emissions units.}

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
4. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
5. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
6. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
7. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
8. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

9. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]
10. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
11. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.
    a. *Required Sampling Time.* Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.

b. *Minimum Sample Volume.* Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

[Rule 62-297.310(4), F.A.C.]

12. Determination of Process Variables

a. *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

13. Sampling Facilities: The permittee shall provide stack testing facilities and sampling locations in accordance with Rule 62-297.310(6), F.A.C.

14. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9, F.A.C. and 40 CFR 60.7, 60.8]

15. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

RECORDS AND REPORTS

16. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

17. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

18. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to each Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

PSD Applicability

The existing facility is located in Palm Beach County, an area that is in attainment with (or designated as unclassifiable for) all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). The cogeneration plant is classified as a fossil fuel-fired steam electric plant, which is one of the 28 PSD Major Facility Categories identified in Table 62-212.400-1, F.A.C. Potential emissions from the plant are greater than 100 tons per year for at least one regulated pollutant. As such, the facility is "major" with respect to the Prevention of Significant Deterioration (PSD) of Air Quality. The proposed project will result in net emissions increases that are greater than the PSD significant emission rates identified in Table 62-212.400-2, F.A.C. for the following pollutants: carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, volatile organic compounds, lead, fluorides, and sulfuric acid mist. Therefore, the project is subject to PSD preconstruction review and the Department makes the following determinations of Best Available Control Technology (BACT) for these pollutants.

Final BACT Determinations

In accordance with Rule 62-212.400, F.A.C., the Department determines that the following standards represent the Best Available Control Technology (BACT) for the existing biomass-fired cogeneration boilers.

Pollutant	BACT Standards for Each Cogeneration Boiler		
	Averaging Period	lb/MMBtu	lb/hr
Carbon Monoxide (CO) *Based on "good combustion practices".*	30-day rolling CEMS avg.	0.50	380.0
	12-month rolling CEMS avg.	0.35	
Nitrogen Oxides (NOx) *Based on the application of SNCR.*	30-day rolling CEMS avg.	0.15	114.0
Sulfur Dioxide (SO_2) *Based on "low sulfur fuels". The SO_2 standards are also surrogate standards for sulfuric acid mist (SAM) emissions.*	24-hour rolling CEMS avg.	0.20	152.0
	30-day rolling CEMS avg.	0.10	
	12-month rolling CEMS avg.	0.06	
Opacity *Based on application of mechanical dust collectors and electrostatic precipitator.*	6-minute block COMS avg. (Alternative: EPA Method 9)	≤ 20% opacity, except for one 6-minute block per hour that is ≤ 27% opacity	
Particulate Matter (PM) *Based on application of mechanical dust collectors and electrostatic precipitator.*	3-run test avg.	0.026	19.8
Volatile Organic Compounds (VOC) *Based on "good combustion practices".*	3-run test avg.	0.05	38.0
Lead (Pb) and Fluorides (Fl) *Based on "low lead/fluoride fuels".*	BACT is the use of fuels containing low levels of these compounds (bagasse, wood, distillate oil, and natural gas) and prospective removal with the fly ash by the mechanical dust collectors and electrostatic precipitators. The particulate matter standard shall also serve as a surrogate standard for lead.		

The Department's technical review and rationale for the BACT determinations are presented in Technical Evaluation and Preliminary Determination issued concurrently with the draft permit for this project.

Determination By:

Jeffrey J. Koerner — 10-22-03

Jeff Koerner, P.E., Project Engineer (Date)
New Source Review Section

Recommended By:

Trina L Vielhauer — 10/27/03

Trina Vielhauer, Chief (Date)
Bureau of Air Regulation

Approved By:

Michael G. Cooke — 10/27/03

Michael G. Cooke, Director (Date)
Division of Air Resources Management

{Permitting Note: The following summarizes the basic monitoring requirements for the cogeneration boilers.}

1. Process and Control Parameters: The permittee shall install, calibrate, maintain, and operate continuous monitoring systems to measure and record the following process and control equipment parameters:

   a. *Power Output.* The net power generation (MW) delivered for sale to the electrical power grid shall be continuously monitored and recorded in 1-hour block averages.

   b. *Fuel Feed Rate.* Fuel flow meters equipped with totalizers are required to monitor and record the fuel feed rates for distillate oil (gallons) and natural gas (million cubic feet). Biomass feed rates (tons of bagasse and tons of wood) shall be calculated and recorded based on actual fuel flows. The permittee shall continuously monitor the fuel throughput rates based on the fuel flow monitors and calculate the actual heat input rates (24 hour average) for each fuel during each day of operation.

   c. *Steam Parameters.* Each cogeneration boiler shall be equipped with monitors to measure and record the steam temperature (° F), steam pressure (psig), and steam production (pounds).

   d. *Urea Injection Rate (SNCR System).* The urea injection rate shall be continuously monitored and recorded for each cogeneration boiler. The urea injection rate shall be compared to actual NOx emissions data recorded by the CEMS. The permittee shall identify minimum urea injection rates for various load conditions that ensure compliance with the NOx standards. Should the NOx CEMS be unavailable, the urea injection rate shall be maintained at an appropriate minimum level.

   e. *Activated Carbon Injection Rate (Mercury Control System).* If the mercury injection system is reactivated, the carbon injection rate shall be continuously monitored and recorded. Based on the testing required in this permit, the permittee shall identify and maintain minimum carbon injection rates to ensure effective control of mercury emissions.

   The permittee shall maintain written procedures for inspecting, calibrating, and maintaining the process and control monitoring equipment. [Rules 62-4.070 and 62-212.400(BACT), F.A.C.]

2. CEMS and COMS: For each cogeneration boiler, the permittee shall install, calibrate, maintain, and operate continuous emissions monitors (CEMS) and continuous opacity monitors (COMS) to measure and record emissions of carbon monoxide (CO), nitrogen oxides (NOx), oxygen (O_2), sulfur dioxide (SO_2), and opacity in a manner sufficient to demonstrate compliance with the standards of this permit.

   a. *Performance Specifications.* Each monitor shall be located in the ductwork between the electrostatic precipitator and the stack (or in the stack) to obtain emissions measurements representative of actual stack emissions. Each CEMS and COMS shall comply with the corresponding performance specifications that identify location, installation, design, performance, and reporting requirements.

      (1) Opacity shall comply with Performance Specification 1 in Appendix B of 40 CFR 60.

      (2) NOx and SO_2 CEMS shall comply with Performance Specification 2 in Appendix B of 40 CFR 60. The SO_2 reference method for the annual RATA shall be EPA Method 6 (or 6C) in Appendix A of 40 CFR 60. The NOx reference method for the annual RATA shall be EPA Method 7 (or 7E) in Appendix A of 40 CFR 60.

      (3) O_2 CEMS shall comply with Performance Specification 3 in Appendix B of 40 CFR 60. The O_2 reference method for the annual RATA shall be EPA Method 3A Appendix A of 40 CFR 60.

      (4) CO CEMS shall meet Performance Specification 4 or 4A in Appendix B of 40 CFR 60. The CO reference method for the annual RATA shall be EPA Method 10 in Appendix A of 40 CFR 60.

   b. *Data Collection.* Each CEMS and COMS shall record emissions data at all times including episodes of startup, shutdown, and malfunction. Emissions data recorded during periods of startup, shutdown, or malfunction may only be excluded from the compliance averages in accordance with the requirements specified in Section III of this permit. To the extent practicable, the permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions.

   Each CEMS shall be designed and operated to sample, analyze, and record emissions data evenly spaced over a 1-hour period. Each 1-hour average shall be computed using at least one data point in each fifteen minute quadrant

of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. CO, NOx, and SO_2 CEMS shall express the 1-hour emission averages in terms of "lb/MMBtu of heat input". O_2 CEMS shall express the 1-hour emission average in terms of "percent by volume". A 30-day rolling emission average shall be the average of all valid 1-hour emission averages collected during the 30-day period. A 12-month rolling emission average shall be the average of all valid 1-hour emission averages collected during the 12-month period. NOx and SO_2 CEMS shall comply with NSPS Subpart Da in 40 CFR 60.

Each COMS shall be designed and operated to complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. Opacity shall be recorded in 6-minute block averages.

c. *Quality Assurance Procedures.* Each CEMS shall comply with the applicable quality assurance procedures specified in Appendix F of 40 CFR 60. These procedures include methods such as calibration, calibration drift, data recording, accuracy assessment, calculations, audit procedures, preventive maintenance, corrective actions, and reporting.

d. *Monitor Availability.* Monitor availability shall not be less than 95% in any calendar quarter. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

e. *Other Applicable Requirements*: Each CEMS shall comply with the following applicable requirements Rules 62-204.800 and 62-297.520, F.A.C. (Continuous Monitor Performance Specifications); 40 CFR 60.13 (Subpart A - Monitoring Requirements); 40 CFR 60.47a (Subpart Da - Emissions Monitoring); 40 CFR 60.48a (Subpart Da - Compliance Determination Procedures and Methods); 60.49a (Subpart Da - Reporting Requirements).

f. *Quarterly Reports*: For each cogeneration boiler, the permittee shall submit the report on the following page to summarize each required continuous emissions and opacity monitoring system. The authorized representative shall certify that the information provided in each quarterly report is true, accurate, and complete to the best of his/her knowledge. Each quarterly report is due no later than 30 days following the calendar quarter.

ATTACHMENT OC-EU5-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT OC-EU5-IV3

ALTERNATIVE METHODS OF OPERATION

Each cogeneration boiler can burn biomass, No. 2 fuel oil, and natural gas. Each cogen boiler can operate at full capacity; 8,760 hours per year.

ATTACHMENT OC-EU5-ARC

ASH AND FUEL INSPECTION AND TESTING PLAN

ATTACHMENT OC-EU5-ARC

NEW HOPE POWER PARTNERSHIP
OKEELANTA COGENERATION PLANT

WOOD, BAGASSE, AND ASH INSPECTION AND TESTING PLAN

Introduction

The New Hope Power Partnership (NHPP) operates a bagasse/wood-fired cogeneration plant adjacent to the Okeelanta Corporation Sugar Mill. The NHPP is located approximately six miles south of South Bay in Palm Beach County, Florida.

As a provision of the NHPP's Florida Department of Environmental Protection (FDEP) Air Permit [PSD-FL-196(P)], the plant is required to implement inspection and testing procedures for the wood and bagasse fuels used at the facility. The primary function of these procedures is to keep painted and chemically-treated wood, household garbage, toxic or hazardous non-biomass, and non-combustible waste material from being burned at the plant. In addition, the FDEP Air Permit also requires the sampling and analysis of the biomass ash. This Wood, Bagasse, and Ash Inspection and Testing Plan describes the implementation of these procedures during operation of the NHPP to ensure compliance with the sampling and analysis provisions outlined in the air permit.

Facility Information

The NHPP is a 74.9-MW (net) bagasse and wood-fired cogeneration plant located in South Bay, Florida. The plant is designed to supply high and low pressure steam to the bagasse and wood as the primary fuel. During the non-grinding season, the NHPP is designed to provide low pressure steam to the sugar refinery. Steam generation is accomplished by means of bagasse and wood-fired non-reheat boilers. Electrical power generation is provided by means of an extraction-condensing turbine generator and is used to meet in-house loads and for sale to other utilities.

The major components of the plant include:

1. Three balanced draft bagasse/wood-fired boilers with membrane wall construction;
2. Three electrostatic precipitators (one per boiler) with integral stacks;
3. An extraction-condensing turbine generator;
4. Material storage and handling systems (e.g., wood, bagasse, ash); and
5. Ancillary plant equipment.

Process Descriptions

The following subsections describe the NHPP wood, bagasse, and ash handling systems from a "process flow" standpoint.

Wood Handling System

Wood fuel is delivered to NHPP by 20-ton trucks (typical) at an approximate design rate of 2,000 tons per day. The trucks are unloaded at the NHPP utilizing two hydraulically operated truck dumpers. A third unloading area is also provided to accommodate any self-unloading trucks that may be available for fuel transportation.

When unloading from the trucks, the wood fuel is discharged into receiving hoppers equipped with live bottom chain conveyors that transfer the wood material to the 48-inch Unloading Conveyor. The Unloading Conveyor, which is equipped with a belt scale, conveys the wood fuel to the Hog Tower at a design rate of up to 300 tons per hour (tph).

The Hog Tower is an open facility consisting of a disc screen and a motor-driven, size-reducing hog. The wood fuel is discharged onto the disc screen which acts to separate material sized less than 3 inches from any oversized material. The oversized material is discharged to the Hog, which reduces the wood pieces to less than 3 inches in size, suitable for feeding into the boiler.

The sized wood fuel is transferred from the Hog Tower via the Storage Conveyor to the Radial Stacker Conveyor which deposits the sized wood fuel into the wood storage area.

Sized wood fuel is reclaimed from the wood storage area at a design rate of up to 175 tph through the use of two under-pile chain reclaimers. The reclaimers transfer the sized wood material to the Boiler Feed Conveyor that deposits the fuel on to one of two chain distribution conveyors for delivery into the boilers.

Bagasse Handling System

The bagasse is transferred from the mill to the bagasse transfer conveyor from two pickup points located at the existing sugar mill tandems. The 72-inch wide bagasse transfer conveyor will convey the fuel to the boiler building at a rate 270 tph. The conveyor is equipped with a belt scale to record the rate of bagasse delivered to the NHPP.

At the boiler building, the bagasse is diverted to the recycle conveyor which can transfer the bagasse to the chain distribution conveyors and ultimately to the rotary drum feeders for delivery to the boiler, or send the material to the bagasse storage area.

Ash Handling System

The ash handling systems at the NHPP comprises equipment from two distinct systems: 1) the handling of bottom ash from the boilers; and 2) the handling of fly ash collected in the electrostatic precipitators (ESP) and the dust collector hoppers.

Bottom Ash Handling

Bottom ash is continuously discharged from the boilers into three water-submerged drag chain conveyors. Each conveyor consists of a wet compartment and a dry compartment. The upper compartment is a water-tight steel trough designed to contain the water required for quenching and cooling the bottom ash.

The dewatered ash from the dewatering inclined ramp of the chain conveyor is discharged onto the mixed ash conveyor belt through the diverter gate. The mixed ash conveyor belt deposits the ash into the mixed ash bunker.

Fly Ash Handling

Fly ash at the NHPP includes ash collected from the dust collectors and the ESP hoppers. The fly ash handling system encompasses the removal and transport of fly ash from the hoppers to the mixed ash bunker, using screw and belt conveyors. All of the screw conveyors and the belt conveyor are enclosed.

The fly ash leaves the ESP through a double dump valve and is deposited onto the #1 transfer screw conveyor which empties onto the #2 transfer screw conveyor. The #2 transfer screw conveyor discharges into the fly ash conveyor which also accepts the ash from the dust collector hoppers. The fly ash and dust collector ash is then emptied onto the #1 incline screw conveyor which discharges to the #2 incline screw conveyor, and finally to the mixing screw conveyor that deposits the ash onto the mixed ash belt conveyor that discharges into the mixed ash bunker for transport and disposal.

Inspection and Analysis of Wood, Bagasse, and Ash

The FDEP air permit for the NHPP requires that inspection, sampling, and analysis of the wood burned, and sampling and analysis of the ash generated at the plant, be performed to demonstrate that contaminants, principally copper, chromium, and arsenic, in the wood fuel are minimized. Minor analysis of the bagasse is also required.

Wood Fuel Supply Sites

As stipulated in the NHPP fuel supply contracts with the wood fuel suppliers, the delivered wood fuel must be substantially free of plastics, rubber, glass, and painted wood, and contain only incidental amounts of chemically treated wood.

To help ensure that wood fuel delivered to the NHPP meets the provisions of the air permit, as well as other fuel quality specifications, the wood fuel suppliers perform inspection and material segregation operations on each load of feedstock received at their facilities. Although NHPP obtains wood fuel from several different suppliers with a variety of sources for their unprocessed feedstock, the following description of the inspection and material segregation operations are typical of those operations performed at wood yards supplying NHPP.

The bulk material feedstock at the originating wood yards first undergo a "gross" material separation by removing the bulk wood fuel from other mixed wastes (e.g., plastics, non-wood debris, scrap metal, and concrete) through the use of heavy equipment, magnetic separation, and mechanical screening. Trained personnel are involved in the oversight at this level of material segregation such that the majority of prohibited materials are removed from the bulk wood fuel. After this operation, the wood fuel is further visually inspected and manually sorted (when applicable) to remove unauthorized materials. The sorted wood fuel is then mechanically sized and screened prior to delivery to the NHPP site.

As a quality assurance measure, the Fuel Manager periodically visits the fuel supplier's yards to review the operations to ensure that the inspection and segregation efforts remain at acceptable levels.

Wood Fuel Storage Area

In accordance with the FDEP Air Permit, the wood fuel is sampled and analyzed on a bi-monthly basis. Upon delivery of the wood fuel to the NHPP, each load is visually inspected by the fuel-receiving personnel. Loads which contain unacceptable amounts of unauthorized materials are

rejected and prevented from discharging into the NHPP wood storage area. If the delivered load is acceptable, based upon the visual inspection, the truck is staged for unloading.

Sampling of the wood fuel occurs at the NHPP wood storage yard. A representative grab sample is collected on a bi-monthly basis from the wood fuel that is scheduled for burning. Analysis is conducted on the as-fired wood sample for the following: heating value (modified ASTM D3286, Btu/lb, dry), carbon content (modified ASTM D5373, percent by weight, dry), sulfur content (modified ASTM D4239 Method C, percent by weight, dry), and moisture content (modified ASTM D3173, percent by weight). In addition, the wood fuel is also analyzed for copper, chromium, and arsenic in accordance with Methods 3050/6010 (EPA Method SW-846) and reported in ppm by weight, dry. Samples are collected at least two weeks apart.

Any results which indicate contamination of the wood fuel by copper, chromium, and/or arsenic in concentrations that exceed the air permit-specified limits (i.e., 62.8 ppm copper, 83.3 ppm chromium, and 70.7 ppm arsenic) will be investigated by the Environmental and Safety Manager. If necessary, additional sampling and testing will be performed to determine the extent of contaminated wood fuel in the material scheduled for immediate use.

Bagasse Fuel Storage Area

In accordance with the FDEP Air Permit, the bagasse fuel is sampled and analyzed on a bi-monthly basis. Historically, bagasse is considered a clean, uncontaminated biomass fuel, and therefore not subject to the stringent inspection and testing protocols associated with the wood fuel.

Sampling of the bagasse fuel occurs at the NHPP bagasse storage yard. A representative sample is collected on a bi-monthly basis and analyzed for the following: heating value (modified ASTM D3286, Btu/lb, dry), carbon content (modified ASTM D5373, percent by weight, dry), sulfur content (modified ASTM D4239 Method C, percent by weight, dry), and moisture content (modified ASTM D3173, percent by weight).

Mixed Ash

Mixed ash is a combination of bottom ash, fly ash, and dust collector ash. In accordance with the FDEP Air Permit, the mixed ash is sampled and analyzed on a monthly basis for arsenic, chromium, and copper. In addition, the facility analyzes the ash for barium, cadmium, lead, selenium, silver, and mercury to satisfy the Solid Waste Regulations. The mixed ash is analyzed by EPA Method SW-846,

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (40 CFR 216, Appendix III). The analytical results from ash testing are used in conjunction with those from the wood fuel samples to evaluate the effectiveness of the fuel management program in removing chemically-treated wood from the biomass fuel. The ash is disposed of in accordance with Florida and federal regulations.

Recordkeeping

Results from the bi-monthly wood and bagasse analysis, and the monthly ash analysis are submitted to the FDEP South District Office and the Palm Beach County Health Department on a quarterly basis. In addition, these records are maintained on-site for review by the regulatory agencies.

Fire Protection

The wood and bagasse fuel storage areas are designed to provide adequate fire protection and to ensure access by emergency vehicles in the event of a fire.

The wood fuel storage area is accessible by paved roads on the north, east, and south sides, and by a gravel road on the west side. The wood fuel storage area is encircled by the facility's main fire hydrant loop. In addition, a water cannon, rated at 750 gpm, is mounted at the end of the radial stacker located near the center of the wood fuel storage area. There is also a second water cannon, rated at 750 gpm, mounted on the unloading conveyor located on the southwest side of the wood fuel storage area. The wood fuel storage area also has a perimeter ditch on the north, east, and south sides which can be used as a source of fire water.

The bagasse fuel storage area is accessible by a rock road on the north, east, and south sides, and by a paved road on the west side. A fire water canal is located on the east, south, and west sides of the storage area. A portable diesel-powered irrigation pump and rainbird are generally located on the east side of the bagasse fuel storage area, and utilize the fire water canal for makeup water. A water cannon, rated at 750 gpm, is mounted at the end of the bagasse fuel recycle conveyor, which is situated on the north side of the bagasse fuel storage area. In addition, an auxiliary fire water storage tank and diesel pump are located on the northwest corner of the bagasse storage area that feeds a fire hydrant located in the same area.

A facility-wide fire inspection is conducted by Palm Beach County Fire Rescue on an annual basis.

EMISSION UNIT 6

COGEN BOILER B

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ 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.

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).

☐ 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. Description of Emissions Unit Addressed in this Section:
Cogen Boiler B fired by Biomass/No. 2 Fuel Oil/Natural Gas

3. Emissions Unit Identification Number: **002**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**49**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
74.9 MW net generating capacity for entire facility. Approval currently sought to increase the facility capacity to 140 MW net.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

ESP - Electrostatic Precipitator - High Efficiency

Selective Non-catalytic Reduction for NO_x

Multiple Cyclone without Fly Ash Reinjection

Activated Carbon Injection System

2. Control Device or Method Code(s): **010, 107, 076, 048**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: **760** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **Maximum heat input rates:** **Biomass - 760 MMBtu/hr** **No. 2 Fuel Oil - 490 MMBtu/hr** **Natural Gas - 605 MMBtu/hr**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **BLR B**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **199** feet	7. Exit Diameter: **10.0** feet
8. Exit Temperature: **352** °F	9. Actual Volumetric Flow Rate: **324,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: **10** feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Stack parameters based on biomass firing. See Attachment OC-EU5-C15 for all boiler stack data.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Bagasse**		
2. Source Classification Code (SCC): **1-01-011-01**	3. SCC Units: **Tons Burned (all solid fuels)**	
4. Maximum Hourly Rate: **105.56**	5. Maximum Annual Rate: **924,667**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **7.2**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Wood-fired Boiler**		
2. Source Classification Code (SCC): **1-01-009-03**	3. SCC Units: **Tons Burned (all solid fuels)**	
4. Maximum Hourly Rate: **84.44**	5. Maximum Annual Rate: **739,733**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.3**	8. Maximum % Ash: **9.0**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **3.551**	5. Maximum Annual Rate: **12,013**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Natural Gas**		
2. Source Classification Code (SCC): **1-01-006-01**	3. SCC Units: **Million Standard Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.605**	5. Maximum Annual Rate: **1,658**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	076	010	EL
PM_{10}	076	010	EL
SO_2			EL
NO_x	107		EL
CO			EL
VOC			EL
Mercury Compounds (H114)	048		EL
Hydrochloric Acid (H106)			NS
Total Hazardous Air Pollutants (HAPs)			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **19.8** lb/hour **86.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.026 lb/MMBtu** Reference: **Permit Limit (0990332-016-AC)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.026 lb/MMBtu x 760 MMBtu/hr = 19.8 lb/hr** **19.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 86.7 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **19.8** lb/hour **86.7** tons/year
5. Method of Compliance: **Annual Stack testing using EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **12.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on No. 2 fuel oil firing.** **Hourly: 0.026 lb/MMBtu x 490 MMBtu/hr = 12.7 lb/hr** **Annual: 0.026 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **15.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Good combustion practices and limit natural gas burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on natural gas firing.** **Hourly: 0.026 lb/MMBtu x 605 MMBtu/hr = 15.7 lb/hr** **Annual: 0.026 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **19.8** lb/hour **86.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.026 lb/MMBtu** Reference: **Permit Limit (0990332-016-AC)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.026 lb/MMBtu x 760 MMBtu/hr = 19.8 lb/hr** **19.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 86.7 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **19.8** lb/hour **86.7** tons/year
5. Method of Compliance: **Annual Stack testing using EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **12.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on No. 2 fuel oil firing.** **Hourly: 0.026 lb/MMBtu x 490 MMBtu/hr = 12.7 lb/hr** **Annual: 0.026 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **15.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Good combustion practices and limit natural gas burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on natural gas firing.** **Hourly: 0.026 lb/MMBtu x 605 MMBtu/hr = 15.7 lb/hr** **Annual: 0.026 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **228.0** lb/hour **199.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.30 lb/MMBtu (3-hr max)** Reference: **CEM data**	7. Emissions Method Code: **1**

8. Calculation of Emissions:

3-hour maximum: 0.30 lb/MMBtu x 760 MMBtu/hr = 228 lb/hr

24-hr rolling CEMS average: 0.20 lb/MMBtu x 760 MMBtu/hr = 152 lb/hr

12-month rolling CEMS average: 0.06 lb/hr x 760 MMBtu/hr = 45.6 lb/hr

Annual: 0.06 lb/hr x 760 MMBtu/hr x 8,760 hr/yr x 1 ton/2,000 lb = 199.7 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.20 lb/MMBtu (24-hour average)**	4. Equivalent Allowable Emissions: **152.0** lb/hour **199.7** tons/year
5. Method of Compliance: **Continuous SO_2 monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions = 0.20 lb/MMBtu, 24-hour average; 0.06 lb/MMBtu, 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.10 lb/MMBtu (30-day average)**	4. Equivalent Allowable Emissions: **76.0** lb/hour **199.7** tons/year
5. Method of Compliance: **Continuous SO_2 monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions = 0.10 lb/MMBtu, 30-day average; 0.06 lb/MMBtu, 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** lb/hour **41.4** tons/year
5. Method of Compliance: **Fuel Analysis and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on No. 2 fuel oil firing and BACT.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **152.0** lb/hour **499.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.20 lb/MMBtu (3-hr max)** Reference: **CEM data**	7. Emissions Method Code: **1**

8. Calculation of Emissions:

3-hour maximum: 0.20 lb/MMBtu x 760 MMBtu/hr = 152 lb/hr

30-day rolling average: 0.15 lb/MMBtu x 760 MMBtu/hr = 114.0 lb/hr

Annual: 0.15 lb/MMBtu x 760 MMBtu/hr x 8,760 hr/yr x 1 ton/2,000 lb = 499.3 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **114.0** lb/hour **499.3** tons/year
5. Method of Compliance: **Continuous NO_x monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing as 30-day rolling average.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **73.5** lb/hour **124.3** tons/year
5. Method of Compliance: **Continuous NO_x monitor and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: NSPS. Based on No. 2 fuel oil firing as a 30-day rolling average.** **Hourly: 0.15 lb/MMBtu x 490 MMBtu/hr = 73.5 lb/hr** **Annually: 0.15 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lbs = 124.3 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **90.8** lb/hour **124.4** tons/year
5. Method of Compliance: **Continuous NO_x monitor and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: NSPS. Based on natural gas firing as a 30-day rolling average.** **Hourly: 0.15 lb/MMBtu x 605 MMBtu/hr = 90.8 lb/hr** **Annually: 0.15 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lbs = 124.4 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1,462.5** lb/hour **1,165.1** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.5 lb/MMBtu (1-hr max)** Reference: **CEM data**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Cold start-up: 225 MMBtu/hr x 6.5 lb/MMBtu = 1,462.5 lb/hr** **30-day rolling average: 0.50 lb/MMBtu x 760 MMBtu/hr = 380.0 lb/hr** **12-month rolling average: 0.35 lb/MMBtu x 760 MMBtu/hr = 266.0 lb/hr** **Annual: 0.35 lb/MMBtu x 760 MMBtu/hr x 8,760 x 1 ton/2,000 lb = 1,165.1 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Maximum emissions occur under cold start-up conditions. Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.50 lb/MMBtu**	4. Equivalent Allowable Emissions: **380.0** lb/hour tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.50 lb/MMBtu limit based on a 30-day rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.35 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour **1,165.1** tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.35 lb/MMBtu limit based on a 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.35 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour **290.1** tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.35 lb/MMBtu limit based on a 12-month rolling average. Based on No. 2 fuel oil or natural gas firing.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **38.0** lb/hour **166.4** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05 lb/MMBtu** Reference: **Permit Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.05 lb/MMBtu x 760 MMBtu/hr = 38.0 lb/hr** **38.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 166.4 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **38.0** lb/hour **166.4** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 25A/18.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing @ 760 MMBtu/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** lb/hour **41.4** tons/year
5. Method of Compliance: **Limit No. 2 Fuel Oil burning to 490 MMBtu/hr and 24.9 percent heat input.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on No. 2 fuel oil firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **30.25** lb/hour **41.4** tons/year
5. Method of Compliance: **Limit natural gas burning to 605 MMBtu/hr and 24.9 percent heat input.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on natural gas firing.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **Mercury - H114**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.0041** lb/hour **0.018** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.4 x 10^{-6} lb/MMBtu** Reference: **Permit Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **5.4 x 10^{-6} lb/MMBtu x 760 MMBtu/hr = 0.0041 lb/hr** **0.0041 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 0.018 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **5.4 x 10^{-6} lb/MMBtu**	4. Equivalent Allowable Emissions: **0.0041** lb/hour **0.018** tons/year
5. Method of Compliance: **Stack test using EPA Method 29, once every 5 years.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **27** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **Continuous opacity monitor, or EPA Method 9.**	
5. Visible Emissions Comment: **40 CFR 60, Subpart Da and Permit No. 0990332-016-AC/PSD-FL-196(0p)**	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **5**

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Durag** Model Number: **D-R281-31-V**	Serial Number: **31019**
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

Continuous Monitoring System: Continuous Monitor **2** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **42D**	Serial Number: **42D-52618-292**
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **3** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement: ☐ Rule ☒ Other	
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **43B** Serial Number: **43B-51400-292**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor **4** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement: ☐ Rule ☐ Other	
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **48** Serial Number: **48-45334-273**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **5** of **5**

1. Parameter Code:	2. Pollutant(s): O_2
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Yokogowa** Model Number: **ZA8C**	Serial Number: **JJ113MA345**
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I4** ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I5** ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU6-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

See Attachment OC-EU5-ARC for ash and fuel inspection and testing plan.

ATTACHMENT OC-EU6-IV1

LIST OF APPLICABLE REGULATIONS

ATTACHMENT OC-EU6-IV1

EU ID 002 : Cogen Boiler B Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	
APPLICABLE	60 Subpart A	40CFR60.7	Notification and Record Keeping	
APPLICABLE	60Subpart A	40CFR60.8	Performance Testing	
APPLICABLE	60 Subpart A	40CFR60.11	Compliance with standards and maintenance requirements.	
APPLICABLE	60 Subpart A	40CFR60.12	Circumvention.	
APPLICABLE	60 Subpart A	40CFR60.13	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.19	General notification and reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.40a	Subpart Da - NSPS for Electric Utility Units for which construction commenced after Sept. 18, 1978.	
APPLICABLE	60 Subpart Da	40CFR60.42a	Standard for particulate matter	
APPLICABLE	60 Subpart Da	40CFR60.43a	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(a)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(b)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(d)(2)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(g)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(h)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.44a	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.44a(a)	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.44a(c)	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.46a	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(a)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(b)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(c)	Compliance provisions.	
NON-APPLICABLE	60 Subpart Da	40CFR60.46a(d)	Compliance provisions.	Cogen Boiler B does not have a flue gas desulfurization system.
APPLICABLE	60 Subpart Da	40CFR60.46a(e)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(f)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(g)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(h)	Compliance provisions.	
NON-APPLICABLE	60 Subpart Da	40CFR60.46a(i)	Compliance provisions.	Cogen Boiler B has not been modified after July 7, 1997.
APPLICABLE	60 Subpart Da	40CFR60.47a	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(a)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(b)(2)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(b)(3)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(c)(1)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(d)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(e)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(f)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(g)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(h)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(i)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(j)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.48a	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(a)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(b)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(c)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(d)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(e)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.49a	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(a)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(b)	Reporting requirements	

EU ID 002 : Cogen Boiler B Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart Da	40CFR60.49a(c)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(d)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(f)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(g)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(h)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(i)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(j)	Reporting requirements	
APPLICABLE	60 Subpart Ea	40CFR60.50a(d)	Standards of performance for municipal waste combustors	
APPLICABLE	60 Subpart Ea	40CFR60.50b(j)	Standards of performance for municipal waste combustors	
APPLICABLE	63 Subpart DDDDD	40CFR63.7480-7495	What this subpart covers	
APPLICABLE	63 Subpart DDDDD	40CFR63.7499-7500	Emission limits and work practice standards	
APPLICABLE	63 Subpart DDDDD	40CFR63.7505-7507	General compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7510-7530	Testing, fuel analysis, and initial compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7535-7541	Continuous compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7545-7560	Notifications, reports, and records	
APPLICABLE	63 Subpart DDDDD	40CFR63.7565-7575	Other requirements and information	
APPLICABLE	62-204	62-204.800(7)2.	NSPS Subpart Da adopted by reference.	
APPLICABLE	62-296 <	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296 <	62-296.405(2)	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	
NON-APPLICABLE	62-296 <	62-296.406	Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Em	Cogen Boiler B has a heat input of >250 MMBtu/hr.
NON-APPLICABLE	62-296 <	62-296.410	Carbonaceous Fuel Burning Equipment.	Not more stringent or different than NSPS.
APPLICABLE	62-296 >	62-296.500	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.500(2)(a)	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.500(2)(c)	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.570	Reasonably Available Control Technology (RACT) - Requirements for Major VOC- and NOx-Emitting Facility	
APPLICABLE	62-296 >	62-296.570(1)	Applicability.	
APPLICABLE	62-296 >	62-296.570(1)(a)	Applicability.	
APPLICABLE	62-296 >	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296 >	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.620		
NON-APPLICABLE	62-296 >	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	New Hope Power Partnership is located in Palm Beacb County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.702	Fossil Fuel Steam Generators.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.703	Carbonaceous Fuel Burners.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	

EU ID 002 : Cogen Boiler B Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)(a)	EPA Method 1 - Sample and Velocity Traverses for Stationary sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(10)	EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(12)	EPA Method 12 - Determination of Inorganic Lead Emissions from Stationary Sources - 40 CFR 60 Append	
APPLICABLE	62-297	62-297.401(13)	EPA Methods 13A and 13B.	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas Chromatography - 40 CFR 60	
APPLICABLE	62-297	62-297.401(19)	EPA Method 19 - Determination of Sulfur Dioxide Removal Efficiency and Particulate, Sulfur Dioxide a	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CF	
APPLICABLE	62-297	62-297.401(32)	EPA Method 101 - Determination of Particulate and Gaseous Mercury Emissions from Chlor-Alkali Plants	
APPLICABLE	62-297	62-297.401(35)	EPA Method 104 - Determination of Beryllium Emissions from Stationary Sources - 40 CFR 61 Appendix B	
APPLICABLE	62-297	62-297.401(39)	EPA Method 108 - Determination of Particulate and Gaseous Arsenic Emissions - 40 CFR 61 Appendix B.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(41)	EPA Method 201 - Determination of PM10 Emissions (Exhaust Gas Recycle Procedure) - 40 CFR 51 Appendix	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(6)	EPA Method 6 - Determination of Sulfur Dioxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(6)(c)	EPA Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(8)	EPA Method 8 - Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sour	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	

EMISSION UNIT 7

COGEN BOILER C

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ 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.

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).

   ☐ 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. Description of Emissions Unit Addressed in this Section:
   Cogen Boiler C fired by Biomass/No. 2 Fuel Oil/Natural Gas

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**49**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    74.9 MW net generating capacity for entire facility. Approval currently sought to increase the facility capacity to 140 MW net.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

ESP - Electrostatic Precipitator - High Efficiency

Selective Non-catalytic Reduction for NO_x

Multiple Cyclone without Fly Ash Reinjection

Activated Carbon Injection System

2. Control Device or Method Code(s): **010, 107, 076, 048**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: **760** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **Maximum heat input rates:** **Biomass - 760 MMBtu/hr** **No. 2 Fuel Oil - 490 MMBtu/hr** **Natural Gas - 605 MMBtu/hr**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **BLR C**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **199** feet	7. Exit Diameter: **10.0** feet
8. Exit Temperature: **352** °F	9. Actual Volumetric Flow Rate: **324,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: **10** feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **Stack parameters based on biomass firing. See Attachment OC-EU5-C15 for all boiler stack data.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Bagasse**		
2. Source Classification Code (SCC): **1-01-011-01**	3. SCC Units: **Tons Burned (all solid fuels)**	
4. Maximum Hourly Rate: **105.56**	5. Maximum Annual Rate: **924,667**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash: **1.0**	9. Million Btu per SCC Unit: **7.2**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Wood-fired Boiler**		
2. Source Classification Code (SCC): **1-01-009-03**	3. SCC Units: **Tons Burned (all solid fuels)**	
4. Maximum Hourly Rate: **84.44**	5. Maximum Annual Rate: **739,733**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.3**	8. Maximum % Ash: **9.0**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **1-01-005-01**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **3.551**	5. Maximum Annual Rate: **12,013**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): **Electric Utility Boiler - Natural Gas**		
2. Source Classification Code (SCC): **1-01-006-01**	3. SCC Units: **Million Standard Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.605**	5. Maximum Annual Rate: **1,658**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment: **See Attachment OC-EU5-D10.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	076	010	EL
PM_{10}	076	010	EL
SO_2			EL
NO_x	107		EL
CO			EL
VOC			EL
Mercury Compounds (H114)	048		EL
Hydrochloric Acid (H106)			NS
Total Hazardous Air Pollutants (HAPs)			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **19.8** lb/hour **86.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.026 lb/MMBtu** Reference: **Permit Limit (0990332-016-AC)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.026 lb/MMBtu x 760 MMBtu/hr = 19.8 lb/hr** **19.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 86.7 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **19.8** lb/hour **86.7** tons/year
5. Method of Compliance: **Annual Stack testing using EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **12.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on No. 2 fuel oil firing.** **Hourly: 0.026 lb/MMBtu x 490 MMBtu/hr = 12.7 lb/hr** **Annual: 0.026 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **15.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Good combustion practices and limit natural gas burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on natural gas firing.** **Hourly: 0.026 lb/MMBtu x 605 MMBtu/hr = 15.7 lb/hr** **Annual: 0.026 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **19.8** lb/hour **86.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.026 lb/MMBtu** Reference: **Permit Limit (0990332-016-AC)**	7. Emissions Method Code: **0**

8. Calculation of Emissions:

0.026 lb/MMBtu x 760 MMBtu/hr = 19.8 lb/hr

19.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 86.7 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **19.8** lb/hour **86.7** tons/year
5. Method of Compliance: **Annual Stack testing using EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **12.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Fuel Analysis**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on No. 2 fuel oil firing.** **Hourly: 0.026 lb/MMBtu x 490 MMBtu/hr = 12.7 lb/hr** **Annual: 0.026 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.026 lb/MMBtu**	4. Equivalent Allowable Emissions: **15.7** lb/hour **21.6** tons/year
5. Method of Compliance: **Good combustion practices and limit natural gas burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: BACT. Based on natural gas firing.** **Hourly: 0.026 lb/MMBtu x 605 MMBtu/hr = 15.7 lb/hr** **Annual: 0.026 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lb = 21.6 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **228.0** lb/hour **199.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.30 lb/MMBtu (3-hr max)** Reference: **CEM data**	7. Emissions Method Code: **1**

8. Calculation of Emissions:

3-hour maximum: 0.30 lb/MMBtu x 760 MMBtu/hr = 228 lb/hr

24-hr rolling CEMS average: 0.20 lb/MMBtu x 760 MMBtu/hr = 152 lb/hr

12-month rolling CEMS average: 0.06 lb/hr x 760 MMBtu/hr = 45.6 lb/hr

Annual: 0.06 lb/hr x 760 MMBtu/hr x 8,760 hr/yr x 1 ton/2,000 lb = 199.7 TPY

See Attachment OC-EU5-F1.8 for calculations.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on biomass firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.20 lb/MMBtu (24-hour average)**	4. Equivalent Allowable Emissions: **152.0** lb/hour **199.7** tons/year
5. Method of Compliance: **Continuous SO_2 monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions = 0.20 lb/MMBtu, 24-hour average; 0.06 lb/MMBtu, 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.10 lb/MMBtu (30-day average)**	4. Equivalent Allowable Emissions: **76.0** lb/hour **199.7** tons/year
5. Method of Compliance: **Continuous SO_2 monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable emissions = 0.10 lb/MMBtu, 30-day average; 0.06 lb/MMBtu, 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** lb/hour **41.4** tons/year
5. Method of Compliance: **Fuel Analysis and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on No. 2 fuel oil firing and BACT.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **152.0** lb/hour **499.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.20 lb/MMBtu (3-hr max)** Reference: **CEM data**	7. Emissions Method Code: **1**
8. Calculation of Emissions: **3-hour maximum: 0.20 lb/MMBtu x 760 MMBtu/hr = 152 lb/hr** **30-day rolling average: 0.15 lb/MMBtu x 760 MMBtu/hr = 114.0 lb/hr** **Annual: 0.15 lb/MMBtu x 760 MMBtu/hr x 8,760 hr/yr x 1 ton/2,000 lb = 499.3 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **114.0** lb/hour **499.3** tons/year
5. Method of Compliance: **Continuous NO_x monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing as 30-day rolling average.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **73.5** lb/hour **124.3** tons/year
5. Method of Compliance: **Continuous NO_x monitor and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: NSPS. Based on No. 2 fuel oil firing as a 30-day rolling average.** **Hourly: 0.15 lb/MMBtu x 490 MMBtu/hr = 73.5 lb/hr** **Annually: 0.15 lb/MMBtu x (12,013 x 138) MMBtu/yr x 1 ton/2,000 lbs = 124.3 TPY**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.15 lb/MMBtu, 30-day rolling average**	4. Equivalent Allowable Emissions: **90.8** lb/hour **124.4** tons/year
5. Method of Compliance: **Continuous NO_x monitor and limiting fuel oil burning to 24.9 percent.**	
6. Allowable Emissions Comment (Description of Operating Method): **Basis for Allowable Emissions Code: NSPS. Based on natural gas firing as a 30-day rolling average.** **Hourly: 0.15 lb/MMBtu x 605 MMBtu/hr = 90.8 lb/hr** **Annually: 0.15 lb/MMBtu x (1,658 x 1,000) MMBtu/yr x 1 ton/2,000 lbs = 124.4 TPY**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1,462.5** lb/hour **1,165.1** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **6.5 lb/MMBtu (1-hr max)** Reference: **CEM data**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Cold start-up: 225 MMBtu/hr x 6.5 lb/MMBtu = 1,462.5 lb/hr** **30-day rolling average: 0.50 lb/MMBtu x 760 MMBtu/hr = 380.0 lb/hr** **12-month rolling average: 0.35 lb/MMBtu x 760 MMBtu/hr = 266.0 lb/hr** **Annual: 0.35 lb/MMBtu x 760 MMBtu/hr x 8,760 x 1 ton/2,000 lb = 1,165.1 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Maximum emissions occur under cold start-up conditions. Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.50 lb/MMBtu**	4. Equivalent Allowable Emissions: **380.0** lb/hour tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.50 lb/MMBtu limit based on a 30-day rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.35 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour **1,165.1** tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.35 lb/MMBtu limit based on a 12-month rolling average. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.35 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour **290.1** tons/year
5. Method of Compliance: **Continuous CO monitor.**	
6. Allowable Emissions Comment (Description of Operating Method): **0.35 lb/MMBtu limit based on a 12-month rolling average. Based on No. 2 fuel oil or natural gas firing.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **38.0** lb/hour **166.4** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.05 lb/MMBtu** Reference: **Permit Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.05 lb/MMBtu x 760 MMBtu/hr = 38.0 lb/hr** **38.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 166.4 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **38.0** lb/hour **166.4** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 25A/18.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing @ 760 MMBtu/hr.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** lb/hour **41.4** tons/year
5. Method of Compliance: **Limit No. 2 Fuel Oil burning to 490 MMBtu/hr and 24.9 percent heat input.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on No. 2 fuel oil firing.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **30.25** lb/hour **41.4** tons/year
5. Method of Compliance: **Limit natural gas burning to 605 MMBtu/hr and 24.9 percent heat input.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on natural gas firing.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **Mercury - H114**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.0041** lb/hour **0.018** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.4 x 10^{-6} lb/MMBtu** Reference: **Permit Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **5.4 x 10^{-6} lb/MMBtu x 760 MMBtu/hr = 0.0041 lb/hr** **0.0041 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 0.018 TPY** **See Attachment OC-EU5-F1.8 for calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Based on biomass firing.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **5.4 x 10^{-6} lb/MMBtu**	4. Equivalent Allowable Emissions: **0.0041** lb/hour **0.018** tons/year
5. Method of Compliance: **Stack test using EPA Method 29, once every 5 years.**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on biomass firing.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **27** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **Continuous opacity monitor, or EPA Method 9.**	
5. Visible Emissions Comment: **40 CFR 60, Subpart Da and Permit No. 0990332-016-AC/PSD-FL-196(0p)**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **5**

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Durag** Model Number: **D-R281-31-V** Serial Number: **31019**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

Continuous Monitoring System: Continuous Monitor **2** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **42D** Serial Number: **42D-52618-292**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **3** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **43B** Serial Number: **43B-51400-292**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor **4** of **5**

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: **Thermo Environmental Instruments** Model Number: **48** Serial Number: **48-45334-273**	
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **5** of **5**

1. Parameter Code:	2. Pollutant(s): O_2
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Yokogowa** Model Number: **ZA8C**	Serial Number: **JJ113MA345**
5. Installation Date: **01 OCT 1995**	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 60, Subpart Da.**	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I4** ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU5-I5** ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU7-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID: _____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☒ Not Applicable

Additional Requirements Comment

See Attachment OC-EU5-ARC for ash and fuel inspection and testing plan.

ATTACHMENT OC-EU7-IV1

LIST OF APPLICABLE REGULATIONS

ATTACHMENT OC-EU7-IV1

EU ID 003 : Cogen Boiler C Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	
APPLICABLE	60 Subpart A	40CFR60.7	Notification and Record Keeping	
APPLICABLE	60Subpart A	40CFR60.8	Performance Testing	
APPLICABLE	60 Subpart A	40CFR60.11	Compliance with standards and maintenance requirements.	
APPLICABLE	60 Subpart A	40CFR60.12	Circumvention.	
APPLICABLE	60 Subpart A	40CFR60.13	Monitoring requirements.	
APPLICABLE	60 Subpart A	40CFR60.19	General notification and reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.40a	Subpart Da - NSPS for Electric Utility Units for which construction commenced after Sept. 18, 1978.	
APPLICABLE	60 Subpart Da	40CFR60.42a	Standard for particulate matter	
APPLICABLE	60 Subpart Da	40CFR60.43a	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(a)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(b)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(d)(2)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(g)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.43a(h)	Standard for sulfur dioxide.	
APPLICABLE	60 Subpart Da	40CFR60.44a	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.44a(a)	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.44a(c)	Standard for nitrogen oxides	
APPLICABLE	60 Subpart Da	40CFR60.46a	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(a)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(b)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(c)	Compliance provisions.	
NON-APPLICABLE	60 Subpart Da	40CFR60.46a(d)	Compliance provisions.	Cogen Boiler C does not have a flue gas desulfurization system.
APPLICABLE	60 Subpart Da	40CFR60.46a(e)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(f)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(g)	Compliance provisions.	
APPLICABLE	60 Subpart Da	40CFR60.46a(h)	Compliance provisions.	
NON-APPLICABLE	60 Subpart Da	40CFR60.46a(i)	Compliance provisions.	Cogen Boiler C has not been modified after July 7, 1997.
APPLICABLE	60 Subpart Da	40CFR60.47a	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(a)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(b)(2)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(b)(3)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(c)(1)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(d)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(e)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(f)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(g)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(h)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(i)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.47a(j)	Emission monitoring	
APPLICABLE	60 Subpart Da	40CFR60.48a	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(a)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(b)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(c)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(d)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.48a(e)	Compliance determination procedures and methods.	
APPLICABLE	60 Subpart Da	40CFR60.49a	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(a)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(b)	Reporting requirements	

EU ID 003 : Cogen Boiler C Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	60 Subpart Da	40CFR60.49a(c)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(d)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(f)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(g)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(h)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(i)	Reporting requirements	
APPLICABLE	60 Subpart Da	40CFR60.49a(j)	Reporting requirements	
APPLICABLE	60 Subpart Ea	40CFR60.50a(d)	Standards of performance for municipal waste combustors	
APPLICABLE	60 Subpart Ea	40CFR60.50b(j)	Standards of performance for municipal waste combustors	
APPLICABLE	63 Subpart DDDDD	40CFR63.7480-7495	What this subpart covers	
APPLICABLE	63 Subpart DDDDD	40CFR63.7499-7500	Emission limits and work practice standards	
APPLICABLE	63 Subpart DDDDD	40CFR63.7505-7507	General compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7510-7530	Testing, fuel analysis, and initial compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7535-7541	Continuous compliance requirements	
APPLICABLE	63 Subpart DDDDD	40CFR63.7545-7560	Notifications, reports, and records	
APPLICABLE	63 Subpart DDDDD	40CFR63.7565-7575	Other requirements and information	
APPLICABLE	62-204	62-204.800(7)2.	NSPS Subpart Da adopted by reference.	
APPLICABLE	62-296 <	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296 <	62-296.405(2)	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	
NON-APPLICABLE	62-296 <	62-296.406	Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Em	Cogen Boiler C has a heat input of >250 MMBtu/hr.
NON-APPLICABLE	62-296 <	62-296.410	Carbonaceous Fuel Burning Equipment.	Not more stringent or different than NSPS.
APPLICABLE	62-296 >	62-296.500	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.500(2)(a)	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.500(2)(c)	Reasonably Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide	
APPLICABLE	62-296 >	62-296.570	Reasonably Available Control Technology (RACT) - Requirements for Major VOC- and NOx-Emitting Facility	
APPLICABLE	62-296 >	62-296.570(1)	Applicability.	
APPLICABLE	62-296 >	62-296.570(1)(a)	Applicability.	
APPLICABLE	62-296 >	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296 >	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-296 >	62-296.620		
NON-APPLICABLE	62-296 >	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.702	Fossil Fuel Steam Generators.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296 >	62-296.703	Carbonaceous Fuel Burners.	New Hope Power Partnership is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	

EU ID 003 : Cogen Boiler C Rule Applicability for New Hope Power Partnership

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)(a)	EPA Method 1 - Sample and Velocity Traverses for Stationary sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(10)	EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(12)	EPA Method 12 - Determination of Inorganic Lead Emissions from Stationary Sources - 40 CFR 60 Append	
APPLICABLE	62-297	62-297.401(13)	EPA Methods 13A and 13B.	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas Chromatography - 40 CFR 60	
APPLICABLE	62-297	62-297.401(19)	EPA Method 19 - Determination of Sulfur Dioxide Removal Efficiency and Particulate, Sulfur Dioxide a	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CF	
APPLICABLE	62-297	62-297.401(32)	EPA Method 101 - Determination of Particulate and Gaseous Mercury Emissions from Chlor-Alkali Plants	
APPLICABLE	62-297	62-297.401(35)	EPA Method 104 - Determination of Beryllium Emissions from Stationary Sources - 40 CFR 61 Appendix B	
APPLICABLE	62-297	62-297.401(39)	EPA Method 108 - Determination of Particulate and Gaseous Arsenic Emissions - 40 CFR 61 Appendix B.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(41)	EPA Method 201 - Determination of PM10 Emissions (Exhaust Gas Recycle Procedure) - 40 CFR 51 Appendix	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(6)	EPA Method 6 - Determination of Sulfur Dioxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(6)(c)	EPA Method 6C - Determination of Sulfur Dioxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix	
APPLICABLE	62-297	62-297.401(8)	EPA Method 8 - Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sour	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	

EMISSION UNIT 8

MATERIALS HANDLING
AND STORAGE OPERATIONS

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ 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.

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).

☒ 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. Description of Emissions Unit Addressed in this Section:
Biomass/ash handling system at New Hope Power Partnership

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**49**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouse and Enclosures

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **3,761,731 TPY**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	
1,063,162 TPY woodwaste; 1,444,659 TPY bagasse; plus 50 percent additional for yearly variability. See Attachment OC-EU8-F1.8.	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Material Handling System**		2. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Fly Ash Silo** **Conveyor Transfer Points** **Hogger** **Biomass Storage Pile**		
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: **10** feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **Fugitive emissions**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Bulk materials open stockpiles: Biomass**		
2. Source Classification Code (SCC): **3-02-103-99**	3. SCC Units: **Tons used**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **3,761,731**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment represents biomass handling and storage operations.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			WP
PM_{10}			WP

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour **9.07** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **3**
8. Calculation of Emissions: **Refer to Attachment OC-EU8-F1.8 for the calculation of emissions in TPY.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour **3.50** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **3**
8. Calculation of Emissions: **Refer to Attachment OC-EU8-F1.8 for the calculation of emissions in TPY.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **VE test using EPA Method 9**	
5. Visible Emissions Comment: **Rule 62-296-320(4)(b), F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be 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:	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU8-I1** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **OC-EU8-I5** ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: **OC-EU8-IV1** ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☒ Attached, Document ID: **CAM Plan** ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID: _____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-EU8-F1.8

CALCULATION OF EMISSIONS

Attachment OC-EU8-F1.8. New Hope Power Partnership Facility Maximum Annual Fugitive Dust Emissions

SOURCE	TYPE OF OPERATION	M MOISTURE CONTENT (%)	U WIND SPEED (MPH)	UNCONTROLLED PM EMISSION FACTOR (LB/TON) [a]	UNCONTROLLED PM_{10} EMISSION FACTOR (LB/TON) [a]	CONTROL	CONTROL EFFICIENCY (%)	CONTROLLED PM EMISSION FACTOR (LB/TON)	CONTROLLED PM_{10} EMISSION FACTOR (LB/TON)	ACTIVITY FACTOR	MAXIMUM ANNUAL PM(TSP) EMISSIONS (TONS/YR)	MAXIMUM ANNUAL PM_{10} EMISSIONS (TONS/YR)
BIOMASS HANDLING												
TRUCK DUMPS (2)	BATCH DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
CHAIN CONVEYORS-TO-UNLOADING CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
UNLOADING CONVEYOR-TO-SCREEN	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
SCREEN	CONTINUOUS DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
SCREEN-TO-HOGGER	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
HOGGER	CRUSHING	--	--	0.02	0.01	ENCLOSED	95	0.00100	0.00047	3,761,731 TPY [g]	1.881	0.8896
HOGGER-TO-STORAGE CONVEYOR	BATCH DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
SCREEN-TO-STORAGE CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
SCREEN-TO-BOILER FEED CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
STORAGE CONVEYOR-TO-RADIAL STACKER	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
RADIAL STACKER-TO-BIOMASS STORAGE PILE	CONTINUOUS DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
UNDERPILE RECLAIMERS (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSED	90	0.00001	0.00000	3,761,731 TPY [g]	0.017	0.0081
RECLAIMERS-TO-BOILER FEED CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
BOILER FEED CONVEYOR-TO-CHAIN DIST. CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
CHAIN DIST. CONVEYOR -TO-BOILER METER BINS (4)	BATCH DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
BAGASSE CONVEYOR-TO-CHAIN DIST CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
BAGASSE CONVEYOR-TO-RECYCLE CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
CHAIN DIST. CONVEYORS-TO-RECYLE CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	376,173 TPY [f]	0.017	0.0081
RECYCLE CONVEYOR-TO-STORAGE CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	376,173 TPY [f]	0.017	0.0081
BIOMASS STORAGE PILES (2)	WIND EROSION	--	--	--		NONE	0	--		--	0.175 [d]	0.0000 [d]
BIOMASS STORAGE PILE MAINTENANCE	VEHICULAR TRAFFIC	--	--	0.75	0.23 lb/VMT [b]	WATERING	50	0.38	0.11 lb/VMT [b]	21,900 VMT [c]	4.110 [d]	1.2330 [d]
FLY ASH HANDLING												
FLY ASH SILO FILTER	--	--	--	--	--	BAGHOUSE	99	0.01	0.0047 gr/acf	2,500 acfm	0.94	0.44
FLY ASH TRANSFER-TO-TRUCK	CONTINUOUS DROP	5.0	9.4	0.00149	0.00071	WETTING	50	0.00075	0.00035	110,131 TPY [e]	0.04	0.02
TOTAL											9.07	3.50

Notes/References:

[a] Batch Drop and Continuous Drop Emission Factors are computed from AP-42 (USEPA, 1995) Section 13.2.4:

E= k x 0.0032 x (U/5)^1.3 / (M/2)^1.4 lb/ton, where k = 0.74 for PM and 0.35 for PM_{10}.

[b] Pound per Vehicle Mile Traveled (lb/VMT), estmated for Pile Maintenance Front-end Loader using 5% surface material silt content, 5% surface material moisture content, average vehicle weight of 18 tons, average vehicle speed of 5 mph, and 120 days of precipitation in the year, AP-42, Section 13.2.2, Unpaved Roads, Sept. 1998.

[c] Based on vehicle operating 12 hrs/day, 365 days/yr @ 5 mph.

[d] Refer to Appendix B for derivation.

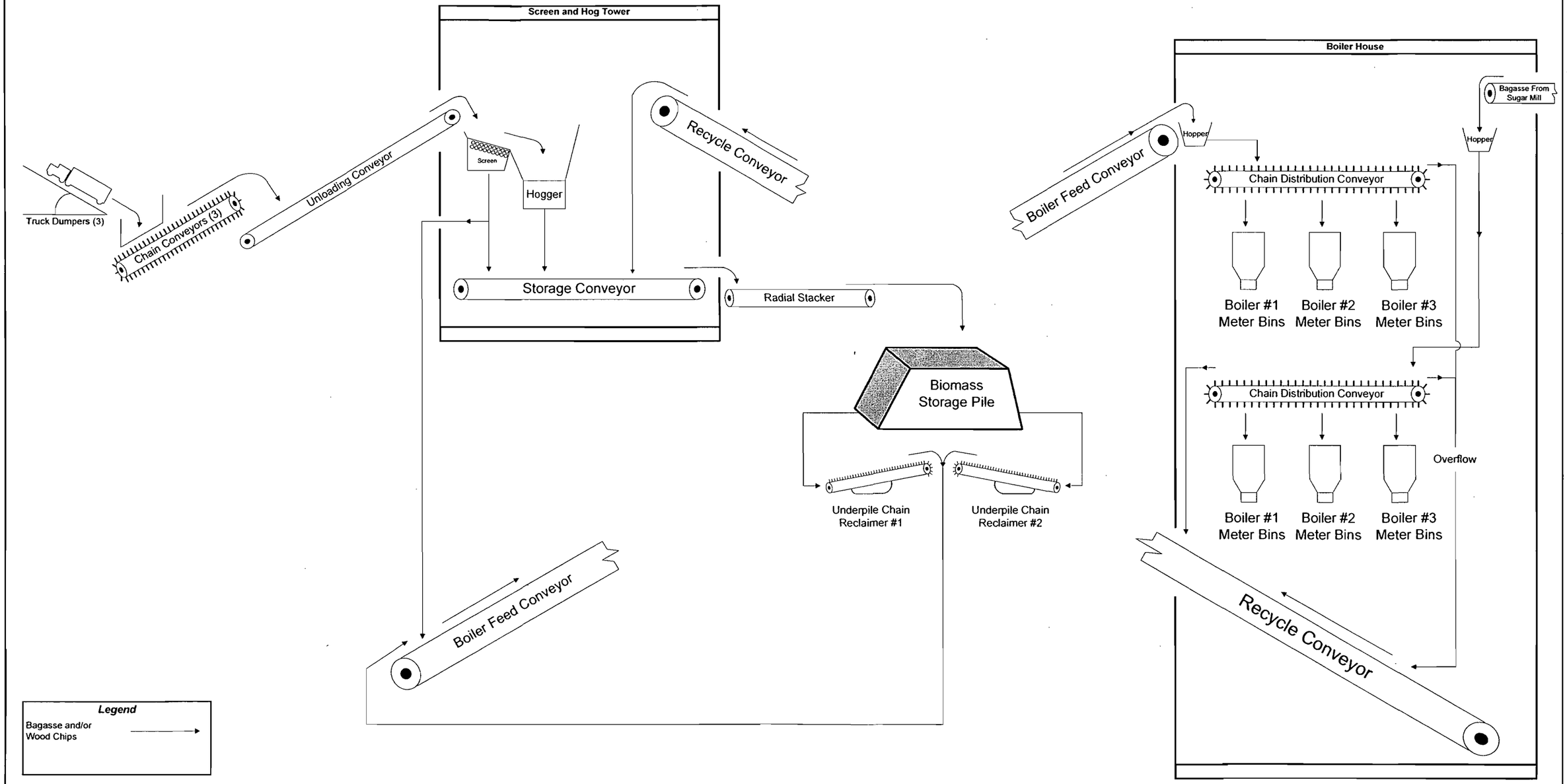
[e] Based on 19.97×10^{12} Btu/yr of total heat input for cogen boilers A, B, and C. 52.1% bagasse usage at 1% ash, 47.9% woodwaste usage at 9% ash, and 20% of total ash is fly ash.

[f] Assuming 10% of biomass is overfeed and is returned to biomass storage pile.

[g] Activity Factor based on 19.97×10^{12} Btu/yr; 47.9% is from wood (4,500 Btu/lb) and the remaining 52.1% is from bagasse (3,600 Btu/lb) = 2,507,821 TPY; an additional 50% was added to account for year-to-year variations.

ATTACHMENT OC-EU8-I1

PROCESS FLOW DIAGRAM



Attachment OC-EU8-I1. Materials Handling System

New Hope Power Partnership - South Bay, Florida

Golder Associates

ATTACHMENT OC-EU8-I5

OPERATION AND MAINTENANCE PLAN

NEW HOPE POWER PARTNERSHIP
COGENERATION PLANT

WOOD, BAGASSE, AND ASH HANDLING AND STORAGE OPERATIONS

The New Hope Power Partnership (NHPP) is a 74.9-MW (net) bagasse and wood-fired cogeneration plant located in South Bay, Florida. The plant is designed to supply high and low pressure steam to the bagasse and wood as the primary fuel. During the non-grinding season, the NHPP plant is designed to provide low-pressure steam to the sugar refinery. Steam generation is accomplished by means of bagasse and wood-fired non-reheat boilers. Electrical power generation is provided by means of an extraction-condensing turbine generator and is used to meet in-house loads and for sale.

The following subsections describe the NHPP wood, bagasse, and ash handling systems from a "process flow" standpoint.

Wood Handling System

Wood fuel is delivered to NHPP by 20-ton trucks (typical) at an approximate design rate of 2,000 tons per day. The trucks are unloaded at NHPP utilizing two hydraulically operated truck dumpers. A third unloading area is also provided to accommodate any self-unloading trucks that may be available for fuel transportation.

When unloading from the trucks, the wood fuel is discharged into receiving hoppers equipped with live bottom chain conveyors that transfer the wood material to the 48-inch Unloading Conveyor. The Unloading Conveyor, which is equipped with a belt scale, conveys the wood fuel to the Hog Tower at a design rate of up to 300 tons per hour (tph).

The Hog Tower is an open facility consisting of a disc screen and a motor-driven, size-reducing hog. The wood fuel is discharged onto the disc screen which acts to separate material sized less than 3 inches from any oversized material. The oversized material is discharged to the Hog, which reduces the wood pieces to less than 3 inches in size, suitable for feeding into the boiler.

The sized wood fuel is transferred from the Hog Tower via the Storage Conveyor to the Radial Stacker Conveyor which deposits the sized wood fuel into the wood storage area.

Sized wood fuel is reclaimed from the wood storage area at a design rate of up to 175 tph through the use of two under-pile chain reclaimers. The reclaimers transfer the sized wood material to the Boiler Feed Conveyor that deposits the fuel on to one of two chain distribution conveyors for delivery into the boilers.

Bagasse Handling System

The bagasse is transferred from the mill to the bagasse transfer conveyor from two pickup points located at the existing sugar mill tandems. The 72-inch wide bagasse transfer conveyor conveys the fuel to the boiler building at a rate 270 tph. The conveyor is equipped with a belt scale to record the rate of bagasse delivered to NHPP.

At the boiler building, the bagasse is diverted to the recycle conveyor which can transfer the bagasse to the chain distribution conveyors and ultimately to the rotary drum feeders for delivery to the boiler, or send the material to the bagasse storage area.

Ash Handling System

The ash handling systems at NHPP comprises equipment from two distinct systems: 1) the handling of bottom ash from the boilers; and 2) the handling of fly ash collected in the electrostatic precipitators (ESP) and the dust collector hoppers.

Bottom Ash Handling

Bottom ash continuously discharged from the boilers into three water-submerged drag chain conveyors. Each conveyor consists of a wet compartment and a dry compartment. The upper compartment is a water-tight steel trough designed to contain the water required for quenching and cooling the bottom ash.

The dewatered ash from the dewatering inclined ramp of the chain conveyor is discharged onto the mixed ash conveyor belt through the diverter gate. The mixed ash conveyor belt deposits the ash into the mixed ash bunker.

Fly Ash Handling

Fly ash at NHPP includes ash collected from the dust collectors and the ESP hoppers. The fly ash handling system encompasses the removal and transport of fly ash from the hoppers to the mixed ash

bunker, using screw and belt conveyors. All of the screw conveyors and the belt conveyor are enclosed.

The fly ash leaves the ESP through a double dump valve and is deposited onto the #1 transfer screw conveyor which empties onto the #2 transfer screw conveyor. The #2 transfer screw conveyor discharges into the fly ash conveyor which also accepts the ash from the dust collector hoppers. The fly ash and dust collector ash is then emptied onto the #1 incline screw conveyor which discharges to the #2 incline screw conveyor, and finally to the mixing screw conveyor that deposits the ash onto the mixed ash belt conveyor that discharges into the mixed ash bunker for transport and disposal.

ATTACHMENT OC-EU8-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT OC-EU8-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

62-296.320(4)(b)

62-296.320(4)(c)

EMISSION UNIT 9

FACILITY-WIDE UNREGULATED EMISSIONS

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ 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.

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).

☐ 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. Description of Emissions Unit Addressed in this Section:
Facility-wide Unregulated Emissions

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**20**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
This emission unit contains other unregualted sources at this facility that contribute to the facility-wide emissions not addressed in any other emission unit in this application. See the list of unregulated emission units in Attachment OC-FI-CV1 for a list of sources contained in this emission unit. See Attachment OC-EU9-A11 for the sugar mill lime silo baghouse control equipment parameters.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Baghouse on Lime Silo operational during silo loading.

2. Control Device or Method Code(s): **018**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	million Btu/hr
4. Maximum Incineration Rate:	pounds/hr tons/day
5. Requested Maximum Operating Schedule:	
	hours/day — days/week
	weeks/year — hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

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

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Petroleum Product Storage - Fugitive Emissions**		
2. Source Classification Code (SCC): **4-03-888-01**	3. SCC Units: **Thousand Gallons Stored**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **674.0**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to combined storage capacity of various petroleum product storage tanks contained in this emission unit.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Petroleum Product Storage - Fugitive Emissions**		
2. Source Classification Code (SCC): **4-03-999-99**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **4,442.0**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to combined average throughput of various petroleum product storage tanks contained in this emission unit at the time of permit application submittal.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			NS
PM_{10}			NS
SO_2			NS
NO_x			NS
VOC			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions:	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be 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:	

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:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Not Applicable

Additional Requirements Comment

ATTACHMENT OC-EU9-A11

CONTROL EQUIPMENT PARAMETERS

ATTACHMENT OC-EU9-A11

CONTROL EQUIPMENT PARAMETERS FOR THE LIME SILO BAGHOUSE AT OKEELANTA CORPORATION SUGAR MILL

Lime Silo Baghouse		
Manufacturer and Model No.	Flex-Kleen Model 84BVBS25	
Outlet Gas Temp (F)		77
Outlet Gas Flow Rate (ACFM)		1500
Exhaust Gas Moisture Content (%)		10
Cleaning Method	Reverse Clean Air	
Number of Bags		25
Total Area of Filter Media (sq. ft)		265
Pressure Drop Across Device (inches of H2O)		6
Air to Cloth Ratio		5.66
Control Efficiency (%)		98

Note: Parameters based on maufacturers design specifications.
Gas temperature and moisture content based on typical ambient conditions.
Control efficiency is based on typical baghouse design efficiency.

COMPLIANCE ASSURANCE
MONITORING PLAN

TO BE PROVIDED