

March 22, 2001

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BUREAU OF AIR REGULATION

Mr. Al Linero, P.E.
Administrator, New Source Review Section
Division of Air Resources Management

E L E C T R Flôrida Department of Environmental Protection
2600 Blair Stone Road, MS # 5505

W A T E R Tallahassee, FL 32399-2400

Subject: Northside Repowering Project

Proposed Changes to the Design of the Ash Handling Systems

Air Construction Permit 0310045-003-AC, PSD-FL-265

Dear Mr. Linero:

SEWER

This letter is to inform you of proposed changes to the design of the fly and bed ash handling systems at the Northside Repowering Project, and to request the appropriate permit modifications to facilitate the construction of these changes. Simply stated, the proposed change to the ash handling systems will allow boiler ash byproducts to be slurried and then pumped to the byproduct storage area (BSA) as a dense slurry. The proposed changes will cause a net decrease in the particulate emissions from the fly and bed ash handling systems currently permitted, and will meet the permitted BACT limits already established for the process.

The following sections present a brief description of the fly and bed ash handling systems as they are currently permitted, as well as a description of the changes that are proposed. Additionally, an estimate of the particulate matter emission decreases associated with the proposed changes to the ash handling systems and the applicable air permit application forms are included with this letter.

#### **Description of the Permitted Ash Handling System**

The Northside Repowering Project consists of two new Circulating Fluidized Bed (CFB) boilers (EU026 and EU027) designed to repower the existing steam turbines for Units 1 and 2. As permitted, the ash system for these units includes a fly and bed ash handling system for each CFB boiler. Each boiler consists of two trains of ash handling - one for fly ash and one for bed ash. A process flow diagram of the permitted fly and bed ash handling systems is presented in Figure 1 of Attachment A.

#### Permitted Fly ash Handling System

On a per boiler basis, the permitted fly ash handling system consists of a particulate air quality control system that discharges into two (2) fly ash filter separators. Particulate emissions from the ash separators are controlled with fabric filters (EU036). The fly ash is then transferred into a fly ash silo. Particulate emissions from the fly ash silo are also controlled with a fabric filter (EU037). The dry fly ash from the fly ash silo is then either transferred into four hydrators located beneath the silo, or transported directly to enclosed tanker trucks for further processing and handling offsite. Particulate emissions resulting from the transfer of the dry fly ash into the hydrators are controlled using venturi scrubbers (EU039). Particulate emissions resulting from the transfer of the dry fly ash directly into the tanker trucks are controlled with fabric filters (EU041). Hydrated fly ash is transferred directly into dump trucks and transported to the BSA. Particulate emissions resulting from the transfer of the hydrated fly ash into the dump trucks are permitted as fugitive sources (EU028r). An identical fly ash handling system is permitted for the other boiler.

#### Permitted Bed Ash Handling System

On a per boiler basis, the permitted bed ash handling system transfers bed ash from the boiler to the bed ash silo. Particulate emissions resulting from the transfer are controlled with fabric filters (EU038). The bed ash is then either transferred into two (2) hydrators located beneath the bed ash silo, or transported directly to enclosed tanker trucks for further processing and handling offsite. Particulate emissions resulting from the transfer of the dry bed ash into the hydrators are controlled using venturi scrubbers (EU039). Particulate emissions resulting from the transfer of the dry bed ash directly into the tanker trucks are controlled with fabric filters (EU040). Hydrated bed ash is transferred directly into dump trucks and transported to the BSA. Particulate emissions resulting from the transfer of the hydrated bed ash into the dump trucks are permitted as fugitive sources (EU028r). An identical bed ash handling system is permitted for the other boiler.

#### Proposed Modification to the Ash Handling System

The following sections present a description of the proposed changes to the ash handling systems. A process flow diagram of the proposed ash handling system design is presented in Figure 2 of Attachment A.

#### Proposed Fly Ash Handling System Modifications

The proposed modification to the fly ash handling system design includes the removal of all four (4) fly ash hydrators and associated control equipment (EU039), as well as the fly ash hydrated truck load out systems (EU028r) for each boiler. In place of the hydrators, fly ash pre-mixer tanks will be installed (one per fly ash silo) to slurry the fly ash. Particulate emissions resulting from the pre-mixer will be controlled using wet scrubber and fabric filter controls (EU051). After hydration in the pre-mixer, the fly ash will be pumped (fully enclosed) to the main ash mixing tanks located under each bed ash silo. The main ash mixers, or bed ash silo mixers, replace the bed ash silo hydrators in the original design. In the bed ash silo mixers, the fly ash will be formulated into a dense slurry with the bed ash. The resulting dense slurry ash will then be fed to a dense slurry pumping system that will pump the ash slurry to the BSA in a 4 inch pipeline.

While the aforementioned dense slurry ash system and pipeline feed to the BSA will be the primary conveyance of fly ash, a dry fly ash truck load out capability, similar to the one already permitted, will be necessary to allow for the offsite transport and handling of dry fly ash. However, unlike the currently permitted dry fly ash truck load out system and associated fabric filter emission point (EU041), the modified dry fly ash truck load out system will use a telescopic chute designed to collect the displaced air from the truck load out system and return it to the fly ash silo, thereby eliminating EU041. In the event of an emergency (i.e., complete malfunction and failure of the dense slurry ash handling system) dry fly ash can be trucked to the BSA and hydrated for BSA application using a jet ring.

#### Proposed Bed Ash Handling System Modifications

The proposed modification to the bed ash handling system design includes the removal of the two (2) bed ash hydrators and associated control equipment (EU039), as well as the bed ash hydrated truck load out systems (EU028r) for each boiler. A surge bin with fabric filter control was added between the boiler and the silo. In place of the mixers, a double roll crusher and a mix tank were added to prepare the ash for mixing, combine it with the fly ash slurry and mix it into the dense slurry. As previously discussed, the resulting dense slurry ash will be fed to a dense slurry pumping system that will pump the ash slurry to the BSA in a 4 inch pipeline. The particulate emissions resulting from the bed ash double roll crushers and the bed ash dry surge hopper waste bins will be collected and returned to the bed ash silos. Particulate emissions resulting from the operation of the bed ash silo mixer will be controlled with a wet scrubber followed by a fabric filter (EU052). Particulate emissions from the surge bin are controlled with a fabric filter (EU053).

Like the fly ash system, a dry bed ash truck load out capability, similar to the one already permitted, will be necessary to allow for offsite transport and handling of bed ash. However, unlike the currently permitted bed ash truck load out system and associated fabric filter emission point (EU040), the modified dry bed ash truck load out system will use a telescopic chute designed to collect the displaced air from the truck load out system and return it to the bed ash silo, thereby eliminating EU040. In the event of an emergency (i.e., complete malfunction and failure of the dense slurry ash handling system) dry bed ash can be trucked to the BSA and hydrated for BSA application using a jet ring.

#### **Summary of Proposed Modifications**

The proposed modifications to the ash handling system design will result in the elimination of several permitted particulate emission units. In their place, three new emission units are proposed to support the dense slurry ash handling system design. The new emission units EU051 and EU052 will use wet scrubber and fabric filter technology and EU053 will use fabric filter technology to control particulate emissions to the BACT limit of 5 percent. The following is a summary of the permitted emission units that will be eliminated from the design, and the new emission units that would be required as a result of the aforementioned modifications to the ash handling systems.

### Permitted Emission Units to be Eliminated from the Ash Handling System Design

- Eight (8) Fly Ash Hydrators (4 per Fly Ash Silo) EU039
- Four (4) Bed Ash Hydrators (2 per Bed Ash Silo) EU039
- Four (4) Dry Fly and Bed Ash Truck Load Out Systems (1 per Silo) EU041 and EU040
- Four (4) Hydrated Ash Truck Load Out Systems (1 per Silo) EU028r
- Hydrated Ash Truck Hauling Fugitive Particulate Emissions EU028f

### New Emission Units to be added to the Ash Handling System Design

- Two (2) Fly Ash Silo Pre-Mixers (1 per Fly Ash Silo) EU051
- Two (2) Bed Ash Silo Mixers (1 per Bed Ash Silo)- EU052
- Two (2) Bed Ash Surge Hoppers (1 per Boiler) EU053

The new ash handling system design will result in a net decrease of particulate emissions when compared to the permitted ash handling system design. Tables 1 and 2 in Attachment B present particulate emission estimates for the permitted fly and bed ash handling systems and the proposed modifications to the fly and bed ash handling systems, respectively. The particulate emission estimates are based on the emission factors and assumptions used in the original air permit application. As presented in the Tables 1 and 2, the dense slurry ash handling system will result in a net decrease of approximately 7.8 tons per year of particulate matter and approximately 1 ton per year of PM<sub>10</sub>. The specific parameters and details of the new emission units (EU051, EU052 and EU053) are included in the applicable permit application forms in Attachment, and the proposed modifications to the permit are included in attachment D.

In summary, the dense slurry ash handling system design will not only meet the BACT limit of 5 percent opacity establish for the process, but will also result in a net decrease in particulate emissions. Consequently, JEA believes the proposed changes represent a minor modification to the air construction permit, and in accordance with Administrative Condition 13 of the permit, JEA requests permission to modify the permitted fly and bed ash handling system design and construct the dense slurry ash handling system as described.

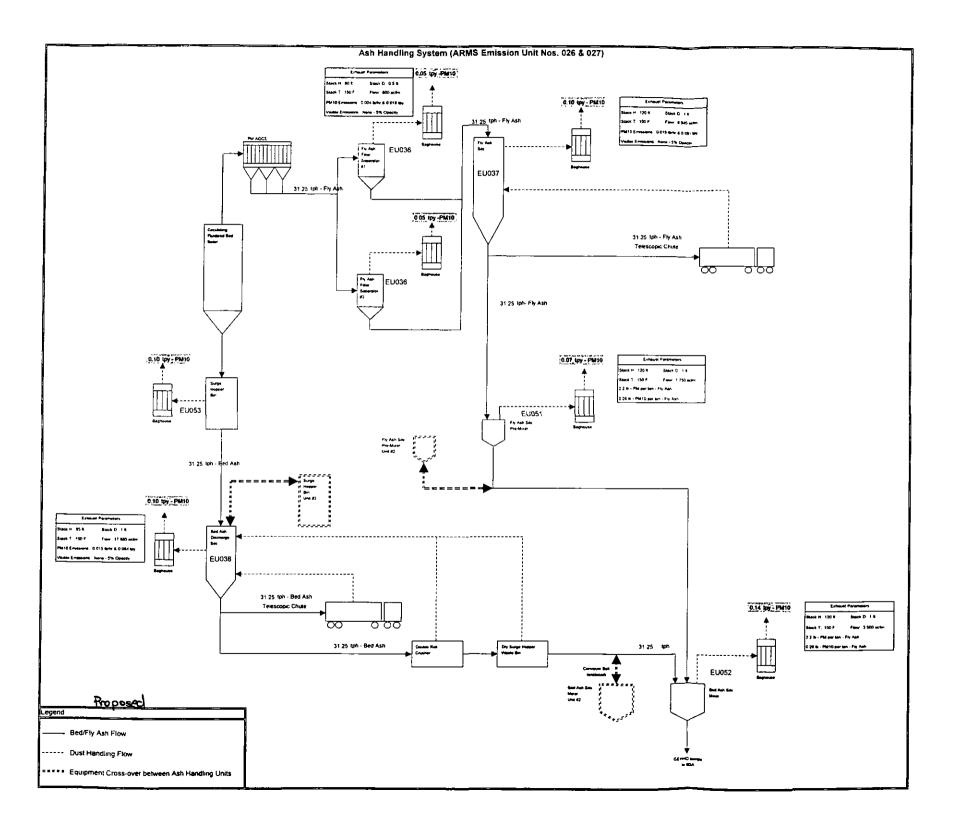
If you have any questions or need any additional information, please call me at (904)665-6247.

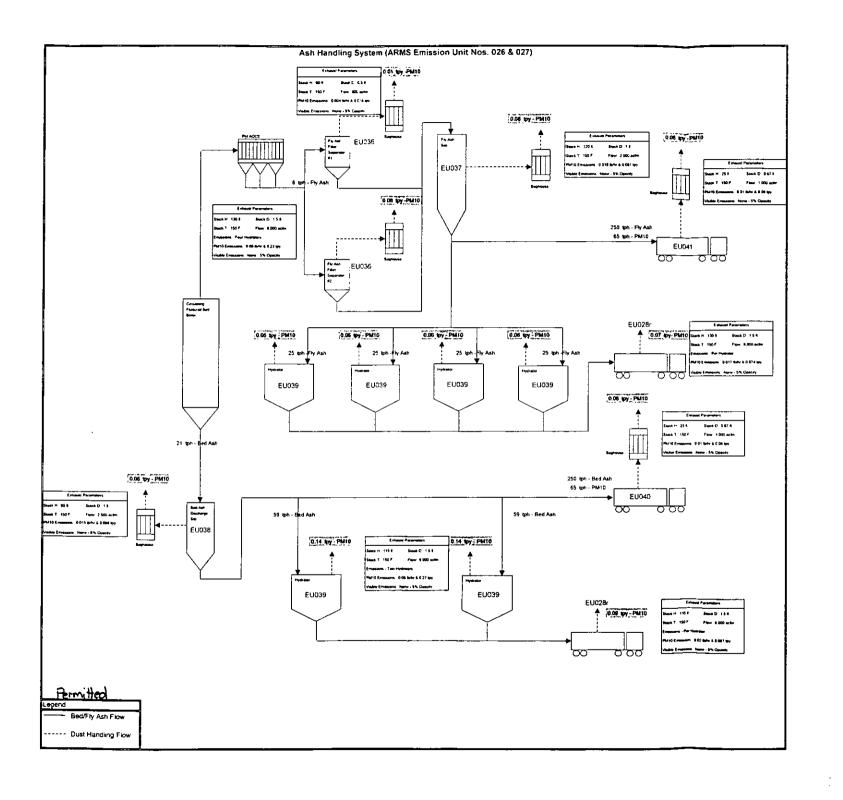
Sincerely,

N. Bert Gianazza, P.E. Environmental Permitting

& Compliance

cc: Syed Arif, P.E., FDEP Robert S. Pace, P.E., RESD Attachment A
Process Flow Diagrams for the Permitted and Proposed Ash Handling
Systems







Attachment B Emission Estimates for the Permitted and Proposed Ash Handling System

# Table 1 Northside Generating Station Units #1 & #2 Repowering Project Ash Handling Operations - Permitted PM and PM<sub>10</sub> Potential to Emit Calculations

	Em	ission Unit ID	Control	Emission	Emission
			Efficiency	Estimates	Estimates
Equipment/Activity	ARMS	Permit	%	PM	PM10
		Application		(tpy)	(tpy)
Point Source Emissions					
Fly Ash Wast Bin Unit #1	036	FA-F-204-T1	99.50	0.035	0.018
Fly Ash Waste Bin Unit #2	036	FA-F-204-T2	99.50	0.035	0.018
Fly Ash Transfer & Storage System Unit #1	037	FA-F-405-T1	99.50	0.160	0.081
Fly Ash Transfer & Storage System Unit #2	037	FA-F-405-T2	99.50	0.160	0.081
Fly Ash Silo Hydrators Unit #1	039	FA-M-403-T1	99.98	1.927	0.231
Fly Ash Silo Hydrators Unit #2	039	FA-M-403-T2	99.98	1.927	0.231
Fly Ash Truck Loadout System Unit #1	041	FA-F-406-T1	99.98	0.482	0.058
Fly Ash Truck Loadout System Unit #2	041	FA-F-406-T2	99.98	0.482	0.058
Bed Ash Transfer & Storage System Unit #1	038	BA-F-401-T1	99.50	0.124	0.063
Bed Ash Transfer & Storage System Unit #2	038	BA-F-401-T2	99.50	0.124	0.063
Bed Ash Silo Hydrators Unit #1	039	BA-M-401-T1	99.80	2.274	0.273
Bed Ash Silo Hydrators Unit #2	039	BA-M-401-T2	99.80	2.274	0.273
Bed Ash Truck Loadout System Unit #1	040	BA-F-402-T1	99.98	0.482	0.058
Bed Ash Truck Loadout System Unit #2	040	BA-F-402-T2	99.98 · .	0.482	0.058
Point Source Emissions (tpy)			(*tre)	5.10.968	1:564
Fugitive Emissions			1.374		
Fly Ash Silo Unit #1 Unloading - Hydrators		FA-M-403-T1	0.00.	0.156	0.074
Fly Ash Silo Unit #2 Unloading - Hydrators		FA-M-403-T2	0.00	· 0.156	0.074
Bed Ash Silo Unit #1 Unloading - Hydrators		BA-M-401-T1	0.00	' 0.184	0.087
Bed Ash Silo Unit #2 Unloading - Hydrators		BA-M-401-T2	0.003.4.4	0:184	0.087
Unpaved Road, By-Product Transport			75.00	2.55	0.680
Fugitive Emissions (tpy)			<u> </u>	3.230	1.002
Total Emissions (tpy)				14.198	2.566

# Table 2 Northside Generating Station Units #1 & #2 Repowering Project Ash Handling Operations - Proposed PM10 Potential to Emit Calculations

Emission Unit ID Control Emission Emission					
	ARMS	Permit	Efficiency	Estimates	Estimates
Equipment/Activity	ARMS	Application	%	PM (tpy)	PM10 (tpy)
Fly Ash Filter Separator #1 Unit #1	036	FA-F-204-T1	99.50	0.092	0.048
Fly Ash Filter Separator #2 Unit #1	036	FA-F-204-T1	99.50	0.092	0.048
Fly Ash Filter Separator #1 Unit #2	036	FA-F-204-T2	99.50	0.092	0.048
Fly Ash Filter Separator #2 Unit #2	036	FA-F-204-T2	99.50	0.092	0.048
Fly Ash Transfer & Storage System Unit #1	037	FA-F-405-T1	99.50	0.184	0.096
Fly Ash Transfer & Storage System Unit #2	037	FA-F-405-T2	99.50	0.184	0.096
Fly Ash Silo Pre-Mixer Vent Unit #1 1	051		99.80	0.604	0.070
Fly Ash Silo Pre-Mixer Vent Unit #2 1	051		99.80	0.604	0.070
Bed Ash Transfer & Storage System Unit #1	038	BA-F-401-T1	99.50	0.184	0.096
Bed Ash Transfer & Storage System Unit #2	038	BA-F-401-T2	99.50	0.184	0.096
Bed Ash Silo Mixer Vent Unit #1	052		99.80	1.205	0.145
Bed Ash Silo Mixer Vent Unit #2 <sup>1</sup>	052		99.80	1.205	0.145
Bed Ash Surge Hopper Bin Unit #1	053		99.50	0.184	0.096
Bed Ash Surge Hopper Bin Unit #2	053		99.50	0.184	0.096
Point Source Emissions (tpy)			· ·	5.090	1.200
Fugitive Emissions					
Unpaved Road, By-Product Transport			75.00 * *		0.340
Fugitive Emissions (tpy)			1.	1.275	0.340
Total Emissions (tpy)				6.365	1.540
	-				

#### Notes

The pre-mixer and mixer units were assumed to be similar in operation to the old hydrator units. The PM emission factor was 2.2 lb/ton, PM10 emission factor was 0.26 lb/ton, and the control efficiency on the unit was 99.80%.

The Unpaved Road fugitive emissions were assumed to be half of the previously permitted emissions since only four trucks will be hauling ash instead of eight trucks.

Attachment C
Permit Application forms for Proposed New Units EU051, EU052 and
EU053

### **Professional Engineer Certification**

1. Professional Engineer Name: Lloyd W.Sherrill

Registration Number: 29138

2. Professional Engineer Mailing Address:

Organization/Firm: Black & Veatch Corporation

Street Address 8400 Ward Parkway

City: State:Zip Code: Kansas City, MO 64114

3. Professional Engineer Telephone Numbers:

Telephone: (913) 458 - 7244 Fax: (913) 458 - 2934

DEP Form No. 62-210.900(1) - Form

Effective: 2/11/99

5

### 4. Professional Engineer Statement:

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

- (1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and
- (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

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

If the purpose of this application is to obtain an air construction permit for one or more of 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 of designed or examined by me or individuals under my direct supervision and found to be inconformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

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

Signature Da

Signature (Sept.)

Da

Attach any exception to certification statement.

Effective: 2/11/99 6

Emissions	<b>Unit Information Section</b>	of
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#### III. EMISSIONS UNIT INFORMATION

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

### A. GENERAL EMISSIONS UNIT INFORMATION

(All Emissions Units)

### **Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in Th	is Section: (Check one)			
[ ] This Emissions Unit Information Section process or production unit, or activity, which has at least one definable emissions.	which produces one or more a	•		
[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.				
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.				
2. Regulated or Unregulated Emissions Unit? (Check one)				
[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.				
[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.				
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):				
NGS – Fly Ash Silo Pre-Mixer Vent (EU051)				
4. Emissions Unit Identification Number:		[ ] No ID		
ID: 051		[ ] ID Unknown		
5. Emissions Unit   6. Initial Startup	7. Emissions Unit Major	8. Acid Rain Unit?		
Status Code: Date:	Group SIC Code:	[ ]		
C	49			

9. Emissions Unit Comment: (Limit to 500 Characters)
Emission Unit consists of two (2) fly ash silo pre-mixer units. Each pre-mixer services a CFB boiler.
The emissions unit includes two emission points.

Emissions Unit Information Section \_\_\_\_\_\_of\_\_\_\_

Emissions Unit Control Equipment	Emissions Unit Control Equipment					
1. Control Equipment/Method Description (Limit to 200 char	racters per device or method):					
2. Control Device or Method Code(s): 017						
Emissions Unit Details						
1. Package Unit:						
Manufacturer: Model Number:	.,					
2. Generator Nameplate Rating:						
3. Incinerator Information: N/A						
Dwell Temperature:  Dwell Time:	°F					
Dwell Time.	seconds					

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Emissions Unit Information Section \_\_\_\_\_\_of\_\_\_\_

Incinerator Afterburner Temperature:

Emissions Unit Information Section of
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# B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

# **Emissions Unit Operating Capacity and Schedule**

1.	Maximum Heat Input Rate: 1	N/A		
2.	Maximum Incineration Rate:	N/A	lb/hr	tons/day
3.	Maximum Process or Through	put Rate:	N/A	
4.	Maximum Production Rate:	N/A		
5.	Requested Maximum Operating	ng Schedule		
6.	Operating Capacity/Schedule	Comment (	limit to 200 characte	rs):
Fly	Ash Silo Pre-Mixer receives a	sh at 31.25	TPH and 273,750 T	PΥ

	<b>Emissions</b>	Unit Information Section	of
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# C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

# List of Applicable Regulations

40 CFR 60, Subpart A- General Provisions	Emission unit applicable regulations hereby incorporates by reference the Title V Core List of Applicable Regulations that all Title V sources are presumptively subject.
62-297.520, Stationary Sources- Emissions Monitoring	
Ordinance Code, City of Jacksonville (JOC), Title X, Chapter 376, Odor Control	
Jacksonville Environmental Protection Board (JEPB), Rule 2 Part IX, General Pollutant	
Ordinance Code, City of Jacksonville (JOC), Title V, Chapter 362, Air and Water Pollution	
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<b>Emissions Unit Information Section</b>	of
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# D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

## **Emission Point Description and Type**

1.	Identification of Point on Pl Flow Diagram?	ot Plan or	1. Emission Po	oint Type Code:			
	EU051			3			
2.	2. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):						
	Two (2) Fly Ash Silo Pre-Mixer Vents						
3.	ID Numbers or Descriptions	s of Emission Ur	nits with this Emi	ission Point in Common:			
	•						
4.	Discharge Type Code:	6. Stack Heigh	ht:	7. Exit Diameter:			
	V	120	feet	1.0 feet			
8.	. Exit Temperature: 9. Actual Volumetric Flow 10. Water Vapor:						
	150 °F	Rate:		N/A			
		1,750 act	fm				
11. Maximum Dry Standard Flow Rate: 12. Nonstack Emission Point Height:							
	N/A N/A						
13. Emission Point UTM Coordinates:							
Zone: 17 East (km): 446.700 North (km): 3,365.100							
14. Emission Point Comment (limit to 200 characters):							

Emissions Unit Information Section of
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# E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Rate: Segment \_ 1 \_ of \_ 2 5. Segment Description (Process/Fuel Type) (limit to 500 characters): Fly Ash Silo Pre-Mixers for EU026 and EU027 6. Source Classification Code (SCC): 3. SCC Units: 30501222 Tons Transferred or Handled 4. Maximum Hourly Rate: 5. Maximum Annual Rate: 6. Estimated Annual Activity 273,750.00 31.25 Factor: 7. Maximum % Sulfur: 8. Maximum % Ash: 9. Million Btu per SCC Unit: 10. Segment Comment (limit to 200 characters): Segment Description and Rate: Segment 2 of 2 1. Segment Description (Process/Fuel Type) (limit to 500 characters): 2. Source Classification Code (SCC): 3. SCC Units: 4. Maximum Hourly Rate: 5. Maximum Annual Rate: 6. Estimated Annual Activity Factor: 7. Maximum % Sulfur: 8. Maximum % Ash: 9. Million Btu per SCC Unit: 10. Segment Comment (limit to 200 characters):

# F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	Primary Control     Device Code	3. Secondary Control Device Code	Pollutant     Regulatory Code
РМ	017		EL
PM10	017		EL
1			

<b>Emissions Unit Information Section</b>	of
Pollutant Detail Information Page	of

# G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

# Emissions-Limited and Preconstruction Review Pollutants Only)

## **Potential/Fugitive Emissions**

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99.80%		
3. Potential Emissions:	4. Synthetically		
	tons/yr Limited? [ ]		
0.130 10/11	Enmed. [ ]		
5. Range of Estimated Fugitive Emissions:			
	totons/year		
6. Emission Factor:	7. Emissions		
2.2 lb/ton (Reference: AP-42)	Method Code:		
2.2 10/1011 (Reference: AF-42)	3		
8. Calculation of Emissions (limit to 600 char	acters):		
Short Term Emissions:	Start Committee		
(31.25 tons/hr) * (2.2 lb/ton) * (1 - 0.998) =	= 0.138 lb/hr		
Long Term Emissions:			
(0.138 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/	(1b) = 0.604  tons/yr		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			
Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.			
Allowable Emissions 1 of 1			
Basis for Allowable Emissions Code:     RULE	2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:		
5.00 percent opacity	0.276 lb/hour 1.208 tons/year		
5. Method of Compliance (limit to 60 character	s):		
Stack Test Waiver Requested Rule 62-297.310	(7)(c), F.A.C.		
•			
6 Allowable Emissions Comment (Desert of C	Proporting Mathed (limit to 200 -hourston)		
6. Allowable Emissions Comment (Desc. of C	perating Method) (fiffit to 200 characters):		
BACT was evaluated as 0.01 gr/dscf or less in addition to a no visible emissions limitation (5% opacity).			
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<b>Emissions Unit Information Section</b>	of
Pollutant Detail Information Page	of

### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

## **Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions			
1. Pollutant Emitted: PM10	2. Total Percent Efficie 99.80	•	
3. Potential Emissions: 0.016 lb/hr 0.070	tons/yr	4. Synthetically Limited? [ ]	
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	to tons	s/year	
6. Emission Factor: 0.26 lb/ton (Reference: AP-42)		7. Emissions Method Code: 3	
10. Calculation of Emissions (limit to 600 chara	acters):		
Short Term Emissions: (31.25 tons/hr) * (0.26 lb/ton) * (1 - 0.998)	en e		
Long Term Emissions: (0.016 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 0.070 tons/yr			
11. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emissions per Fly Ash Silo.			
Allowable Emissions 1 of 1			
Basis for Allowable Emissions Code:     RULE	2. Future Effective Da Emissions: N/A	te of Allowable	
4. Requested Allowable Emissions and Units: 4. Equivalent Allowa		ole Emissions:	
5.00 percent opacity	0.032 lb/hour 0	.140 tons/year	
5. Method of Compliance (limit to 60 characters): Stack Test Waiver Requested Rule 62-297.310(7)(c), F.A.C.			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			
BACT was evaluated as 0.01 gr/dscf or less in addition to a no visible emissions limitation (5% opacity).			

Emissions	<b>Unit Information Section</b>	of
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# H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity:		
	[X] Rule	[ ] Other	
3. Requested Allowable Opacity:			
Normal Conditions: 5 % Ex	cceptional Conditions:	100 %	
Maximum Period of Excess Opacity Allowed:		6 min/hour	
4. Method of Compliance:		, <u>.</u>	
Stack testing (USEPA Method 9 Visual Determination of Opacity)			
5. Visible Emissions Comment (limit to 200 characters):			
Florida Air Regulation: Rule 62.296			

Emissions	<b>Unit Information Section</b>	of

#### III. EMISSIONS UNIT INFORMATION

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

#### A. GENERAL EMISSIONS UNIT INFORMATION

(All Emissions Units)

### **Emissions Unit Description and Status**

1.	1. Type of Emissions Unit Addressed in This Section: (Check one)					
[	] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).					
[ X	[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.					
[	[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.					
2.	Regulated or Unr	egulated Emissions Unit	? (Check one)	. :		
[ X	[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.					
[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.						
4.	4. Description of Emissions Unit Addressed in This Section (limit to 60 characters):					
	NGS – Bed Ash Silo Mixer Vent (EU052)					
4.	Emissions Unit Id	dentification Number:		[ ] No ID		
	ID: 052			[ ] ID Unknown		
5.	Emissions Unit	6. Initial Startup	7. Emissions Unit Major	8. Acid Rain Unit?		
	Status Code:	Date:	Group SIC Code:	[ ]		
			49			

Emissions Unit Information Section \_\_\_\_\_of\_\_\_

Emissions Unit Information Sectionof			
Emissions Unit Control Equipment			
2. Control Equipment/Method Description (Limit to 200 characters per device or method):			
·			
·			
·			
2. Control Device or Method Code(s): 017			
Emissions Unit Details			
1. Package Unit:			
Manufacturer: Model Number:			
2. Generator Nameplate Rating:			
3. Incinerator Information: N/A			
Dwell Temperature: °F			

Dwell Time:

Incinerator Afterburner Temperature:

seconds

٥F

<b>Emissions Unit Information Section</b>	of	
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# B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

## **Emissions Unit Operating Capacity and Schedule**

1.	Maximum Heat Input Rate: N/A	A		
2.	Maximum Incineration Rate:	N/A	lb/hr	tons/day
3.	Maximum Process or Throughpo	ut Rate: N/A		
4.	Maximum Production Rate: N/A	A		
5.	Requested Maximum Operating	Schedule:		
	Operating Capacity/Schedule Co			

<b>Emissions Unit Information Section</b>	of
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# C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

# List of Applicable Regulations

40 CFR 60, Subpart A- General Provisions	Emission unit applicable regulations hereby
	incorporates by reference the Title V Core
	List of Applicable Regulations that all Title V
	sources are presumptively subject.
Ordinance Code, City of Jacksonville (JOC),	
Title X, Chapter 376, Odor Control	
1,	
Jacksonville Environmental Protection Board	
(JEPB), Rule 2 Part IX, General Pollutant	
Ordinance Code, City of Jacksonville (JOC),	
Title V, Chapter 362, Air and Water Pollution	
62-297.520, Stationary Sources- Emissions	
Monitoring	

Emissions unit information section of	<b>Emissions</b>	SUnit Information Section	of
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# D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

# **Emission Point Description and Type**

3.	Identification of Point on Pl Flow Diagram?	ot Plan or	7. Emission Po	oint Type Code:	
	EU052	ı	3		
8.	Descriptions of Emission Po	oints Comprising	g this Emissions I	Unit for VE Tracking (limit to	
	100 characters per point):				
	Two (2) Bed Ash Silo Mixe	er Vents			
9.	ID Numbers or Descriptions	s of Emission Ur	nits with this Emi	ssion Point in Common:	
10.	Discharge Type Code:	6. Stack Heig	ht:	7. Exit Diameter:	
	V	120	feet	1.0 feet	
8.	Exit Temperature:	9. Actual Vol	umetric Flow	10. Water Vapor:	
	150 °F	Rate: 3,500 act	fm	N/A	
11. Maximum Dry Standard Flow Rate: 12. Nonstack Emission Point Height:			nission Point Height:		
	N/A			N/A	
13.	13. Emission Point UTM Coordinates:				
	Zone: 17 E	ast (km): 446.70	00 North	h (km): 3,365.100	
14.	Emission Point Comment (1	imit to 200 chara	acters):		

<b>Emissions Unit Information Section</b>	of

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

Segment Description and Rate: Segment 1 of 2					
11. Segment Description (Pro	cess/Fuel Type)	(limit to 500 ch	aracters):		
Bed Ash Silo Mixer for E	Bed Ash Silo Mixer for EU026 and EU027				
			•		
12. Source Classification Cod	e (SCC):	3. SCC Units:			
30501222		Tons Transfer	rred or Handled		
4. Maximum Hourly Rate: 62.50	5. Maximum <i>A</i> 547,	Annual Rate:	6. Estimated Annual Activity Factor:		
7. Maximum % Sulfur:	9. Maximum 9	% Ash:	9. Million Btu per SCC Unit:		
11. Segment Comment (limit	to 200 characters	):			
_		•			
Segment Description and Rate: Segment 2 of 2					
Segment Description and Ra	ite: Segment _ 2	of2	rigge reflection my trice		
Segment Description and Ra  1. Segment Description (Production)			·		
-			·		
1. Segment Description (Pro	cess/Fuel Type )	(limit to 500 ch	naracters):		
-	cess/Fuel Type )		naracters):		
Segment Description (Prod     Source Classification Cod     Maximum Hourly Rate:	cess/Fuel Type )	(limit to 500 ch	naracters):		
Segment Description (Prod     Source Classification Cod	cess/Fuel Type ) e (SCC):	(limit to 500 ch	s:  6. Estimated Annual Activity		
Segment Description (Prod     Source Classification Cod     Maximum Hourly Rate:	e (SCC):  5. Maximum A	(limit to 500 ch 3. SCC Unit Annual Rate:	s:  6. Estimated Annual Activity Factor:		
<ol> <li>Segment Description (Prod</li> <li>Source Classification Cod</li> <li>Maximum Hourly Rate:</li> <li>Maximum % Sulfur:</li> </ol>	e (SCC):  5. Maximum A	(limit to 500 ch 3. SCC Unit Annual Rate:	s:  6. Estimated Annual Activity Factor:		
<ol> <li>Segment Description (Prod</li> <li>Source Classification Cod</li> <li>Maximum Hourly Rate:</li> <li>Maximum % Sulfur:</li> </ol>	e (SCC):  5. Maximum A	(limit to 500 ch 3. SCC Unit Annual Rate:	s:  6. Estimated Annual Activity Factor:		
<ol> <li>Segment Description (Prod</li> <li>Source Classification Cod</li> <li>Maximum Hourly Rate:</li> <li>Maximum % Sulfur:</li> </ol>	e (SCC):  5. Maximum A	(limit to 500 ch 3. SCC Unit Annual Rate:	s:  6. Estimated Annual Activity Factor:		

Emissions Unit Information Section	of	
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# F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
PM	017		EL
PM10	017		EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)  Potential/Fugitive Emissions  1. Pollutant Emitted: PM 2. Total Percent Efficiency of Control: 99.80%  3. Potential Emissions: 0.275 lb/hr 1.205 tons/yr 4. Synthetically Limited? [ ]  5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 to	Emissions Unit Information Sectionof	<del></del>			
Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)   Potential/Fugitive Emissions					
Potential/Fugitive Emissions   2. Total Percent Efficiency of Control: 99.80%   3. Potential Emissions: 0.275 lb/hr   1.205 tons/yr   4. Synthetically Limited? [ ]   5. Range of Estimated Fugitive Emissions:					
Potential/Fugitive Emissions  1. Pollutant Emitted: PM  2. Total Percent Efficiency of Control: 99.80%  3. Potential Emissions: 4. Synthetically Limited? [ ]  5. Range of Estimated Fugitive Emissions: 7. Emissions Method Code: 3  6. Emission Factor: 7. Emissions Method Code: 3  12. Calculation of Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (62.50 tons/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo: 4. Allowable Emissions 1 of 1					
1. Pollutant Emitted: PM  2. Total Percent Efficiency of Control: 99.80%  3. Potential Emissions: 4. Synthetically Limited? [ ]  5. Range of Estimated Fugitive Emissions: 7. Emissions Method Code: 3  6. Emission Factor: 7. Emissions Method Code: 3  12. Calculation of Emissions (limit to 600 characters):  Short Term Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): 8  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo. 8  Allowable Emissions Allowable Emissions 1 of 1	Emissions-Limited and Preconstruct	ion Review Pollutants Only)			
3. Potential Emissions:  0.275 lb/hr  1.205 tons/yr  4. Synthetically Limited? [ ]  5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3 to tons/year  6. Emission Factor:  2.2 lb/ton (Reference: AP-42)  7. Emissions Method Code: 3  12. Calculation of Emissions (limit to 600 characters):  Short Term Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Allowable Emissions Allowable Emissions  1 of 1	Potential/Fugitive Emissions				
0.275 lb/hr 1.205 tons/yr Limited? [ ]  5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3 to	1. Pollutant Emitted: PM 2. 7	•			
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	3. Potential Emissions:	4. Synthetically			
[ ] 1 [ ] 2 [ ] 3	0.275 lb/hr 1.205 tons/y	, , , , , , , , , , , , , , , , , , , ,			
[ ] 1 [ ] 2 [ ] 3					
[ ] 1 [ ] 2 [ ] 3	5. Range of Estimated Fugitive Emissions:				
2.2 lb/ton (Reference: AP-42)  Method Code: 3  12. Calculation of Emissions (limit to 600 characters):  Short Term Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo. **  Allowable Emissions Allowable Emissions 1 of 1		to tons/year			
2.2 lb/ton (Reference: AP-42)  12. Calculation of Emissions (limit to 600 characters):  Short Term Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.  Allowable Emissions Allowable Emissions 1 of 1	6. Emission Factor:	7. Emissions			
12. Calculation of Emissions (limit to 600 characters):  Short Term Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.  Allowable Emissions Allowable Emissions 1 of 1	2.2 ID/ION (Reference: AP-42)				
Short Term Emissions: (62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.  Allowable Emissions Allowable Emissions 1 of 1					
(62.50 tons/hr) * (2.2 lb/ton) * (1 - 0.998) = 0.275 lb/hr  Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.  Allowable Emissions Allowable Emissions 1 of 1	12. Calculation of Emissions (mint to 600 characters).				
Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.  Allowable Emissions Allowable Emissions 1 of 1	Short Term Emissions:				
(0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):   Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.:   Allowable Emissions Allowable Emissions 1 of 1					
(0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 1.205 tons/yr  13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):   Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.:   Allowable Emissions Allowable Emissions 1 of 1					
13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.  Allowable Emissions Allowable Emissions 1 of 1					
Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.:  Allowable Emissions Allowable Emissions 1 of 1	(0.275  lb/hr) + (8,760  hr/yr) + (1/2,000  ton/lb) = 1.205  tons/yr				
Allowable Emissions Allowable Emissions 1 of 1	13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):				
	Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.				
1 Designation Allowable Emissions Codes 2 Entres Effective Date of Allowable	Allowable Emissions I of I				
1. Basis for Aflowable Emissions Code: 2. Future Effective Date of Aflowable	1. Basis for Allowable Emissions Code: 2.	Future Effective Date of Allowable			
RULE Emissions: N/A		Emissions: N/A			

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	·	
Basis for Allowable Emissions Code:     RULE	2. Future Effective Date of Allowable Emissions: N/A	
5. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:	
5.00 percent opacity	0.550 lb/hour 2.410 tons/year	
5. Method of Compliance (limit to 60 characters	):	
Stack testing (USEPA Method 9 Visual Determi	nation of Opacity)	
6. Allowable Emissions Comment (Desc. of Op	perating Method) (limit to 200 characters):	
BACT was evaluated as 0.01 gr/dscf or less in ac (5% opacity).	ddition to a no visible emissions limitation	

<b>Emissions Unit Information Section</b>	of
Pollutant Detail Information Page	of

# G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

## Emissions-Limited and Preconstruction Review Pollutants Only)

### **Potential/Fugitive Emissions**

1. Pollutant Emitted: PM10	2. Total Percent Efficiency of Control: 99.80%	
3. Potential Emissions: 0.033 lb/hr 0.145 to	ons/yr 4. Synthetically Limited? [ ]	
5. Range of Estimated Fugitive Emissions:	***	
[ ] 1 [ ] 2 [ ] 3 6. Emission Factor:	tototons/year7. Emissions	
0.26 lb/ton (Reference: AP-42)	Method Code:	
14. Calculation of Emissions (limit to 600 charac	ters):	
Short Term Emissions: (62.50 tons/hr) * (0.26 lb/ton) * (1 - 0.998) =	0.033 lb/hr	
Long Term Emissions: (0.033 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb	,	
15. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.		
Allowable Emissions Allowable Emissions 1	of1	
Basis for Allowable Emissions Code:     RULE	2. Future Effective Date of Allowable Emissions: N/A	
6. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:	
5.00 percent opacity	0.066 lb/hour	
5. Method of Compliance (limit to 60 characters): Stack testing (USEPA Method 9 Visual Determination of Opacity)		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):		
BACT was evaluated as 0.01 gr/dscf or less in addition to a no visible emissions limitation (5% opacity).		

En	Emissions Unit Information Sectionof				
	H. VISIBLE EMISSION (Only Regulated Emissions Units				
<u>Vi</u>	Visible Emissions Limitation: Visible Emissions	Limitation1	of <u>1</u>		
1. Visible Emissions Subtype: VE05 2. Basis for A		Basis for Allowab	le Opacity:		
		[X] Rule	[ ] Other		
3.	. Requested Allowable Opacity:		<u> </u>		
	Normal Conditions: 5 % Excep	otional Conditions:	100 %		
	Maximum Period of Excess Opacity Allowed:		6 min/hour		
<del>4</del> .	. Method of Compliance:				
Sta	tack testing (USEPA Method 9 Visual Determina	tion of Opacity)			

5. Visible Emissions Comment (limit to 200 characters):

Florida Air Regulation: Rule 62.296

Emissions	<b>Unit Information Section</b>	of
	Chit initial mation Section	

### III. EMISSIONS UNIT INFORMATION

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

### A. GENERAL EMISSIONS UNIT INFORMATION

(All Emissions Units)

### **Emissions Unit Description and Status**

1.	. Type of Emissions Unit Addressed in This Section: (Check one)			
[	] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).			
[ X	[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.			
[	[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2.	Regulated or Unr	egulated Emissions Unit	? (Check one)	11.5
[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.				
[	[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
5.	5. Description of Emissions Unit Addressed in This Section (limit to 60 characters):			
NGS – Bed Ash Surge Hopper Bin (EU053)				
4.	Emissions Unit Id	lentification Number:		[ ] No ID
	ID: 053			[ ] ID Unknown
5.	Emissions Unit	6. Initial Startup	7. Emissions Unit Major	8. Acid Rain Unit?
	Status Code:	Date:	Group SIC Code:	[ ]
	С		49	

9. Emissions Unit Comment: (Limit to 500 Characters)
Emission Unit consists of two (2) bed ash surge hopper bins. Each surge hopper bin services a
CFB boiler, along with an additional train between the two bed ash surge hopper bins to allow transfer of bed ash between surge hopper bins.
transfer of occ asir occween surge nopper onis.
The emissions unit includes two emission points.

Emissions Unit Information Section \_\_\_\_\_\_of\_\_\_\_

Emissions Unit Control Eq	uinment	•
	od Description (Limit to 200 charact	ters per device or method):
_ 1F		r
		· <del></del>
2. Control Device or Metho	d Code(s): 017	· . '
Emissions Unit Details		
1. Package Unit:		· · · · · · · · · · · · · · · · · · ·
Manufacturer:	Model Number:	
2. Generator Nameplate Rat		
3. Incinerator Information: 1	N/A Temperature:	°F
Dwon	Dwell Time:	seconds
Incinarator Aftarburnar Tamparatura		°E .

Emissions Unit Information Section \_\_\_\_\_\_of\_\_\_\_

<b>Emissions</b>	<b>Unit Inform</b>	ation Section	of

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

#### **Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate: N/A	
2. Maximum Incineration Rate: N/A lb/hr	tons/day
3. Maximum Process or Throughput Rate: N/A	
4. Maximum Production Rate: N/A	
5. Requested Maximum Operating Schedule:	
8. Operating Capacity/Schedule Comment (limit to 200 characters):	* * * * * * * * * * * * * * * * * * * *
Bed Ash Surge Hopper Bin receives ash at 31.25 TPH and 273,750 TPY	gress of

<b>Emissions</b>	<b>Unit Information Sect</b>	ion of

## C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

#### List of Applicable Regulations

40 CFR 60, Subpart A- General Provisions	Emission unit applicable regulations hereby incorporates by reference the Title V Core List of Applicable Regulations that all Title V sources are presumptively subject.
62-297.520, Stationary Sources- Emissions Monitoring	
Ordinance Code, City of Jacksonville (JOC), Title X, Chapter 376, Odor Control	
Jacksonville Environmental Protection Board (JEPB), Rule 2 Part IX, General Pollutant	
Ordinance Code, City of Jacksonville (JOC), Title V, Chapter 362, Air and Water Pollution	

Emissions	<b>Unit Information Section</b>	of

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

#### **Emission Point Description and Type**

5. Identification of Point on Pl Flow Diagram?	ot Plan or	13. Emission Point Type Code:		
EU053	3			
14. Descriptions of Emission Po 100 characters per point):	14. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
Two (2) Bed Ash Surge Hop	pper Bins			
15. ID Numbers or Descriptions	s of Emission Ur	nits with this Emi	ssion Point in Common:	
16. Discharge Type Code: V	6. Stack Height: 95 feet (estimated)		7. Exit Diameter: 1 foot	
8. Exit Temperature: 150 F	9. Actual Volumetric Flow Rate:		10. Water Vapor: N/A	
11. Maximum Dry Standard Flo N/A	1. Maximum Dry Standard Flow Rate: 12. Nonstack Emission Point Height: N/A			
13. Emission Point UTM Coord	linates:			
Zone: 17 East (km): 446.700 North (km): 3,365.100				
14. Emission Point Comment (l	imit to 200 chara	acters):		

Emissions	Unit Information Section	of
F 11112210112	Cuit inioimanon section	Ul

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

Segment D	escription	and Rate:	Segment	1	of	2

17 Segment Description (Prod	17. Segment Description (Process/Fuel Type) (limit to 500 characters):			
17. Segment Description (Process/Fuel Type) (Hint to 500 characters):				
Bed Ash Surge Hopper Bi	n for EU026 and	l EU027		
18. Source Classification Cod	e (SCC):	3. SCC Units:		
30501222	c (Sec).		rred or Handled	
4. Maximum Hourly Rate:	5. Maximum		6. Estimated Annual Activity	
31.25		,750.00	Factor:	
7. Maximum % Sulfur:	10. Maximum		9. Million Btu per SCC Unit:	
12. Segment Comment (limit	to 200 characters	s):		
	`			
Segment Description and Ra	ite: Segment _ 2	2 of2	****	
1. Segment Description (Process/Fuel Type) (limit to 500 characters):				
6. Source Classification Code (SCC): 3. SCC Units:				
	<del>,</del>			
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity	
7 )/ : 0/ 5/ 15	10.24	0/ 4 1	Factor:	
7. Maximum % Sulfur:	12. Maximum	% Ash:	13. Million Btu per SCC Unit:	
12. Segment Comment (limit to 200 characters):				
12. Segment Comment (mint	to 200 characters	.,		

<b>Emissions Unit Information Section</b>	of
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### F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	Primary Control     Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code		
PM	017		EL		
PM10	017		EL		

<b>Emissions Unit Information Section</b>	of
Pollutant Detail Information Page	of

### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

#### Emissions-Limited and Preconstruction Review Pollutants Only)

#### **Potential/Fugitive Emissions**

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99.50%		
3. Potential Emissions: 0.042 lb/hr 0.184 t	ons/yr 4. Synthetically Limited? [ ]		
5. Range of Estimated Fugitive Emissions:	to tons/year		
6. Emission Factor: 0.27 lb/ton (Reference: AP-42)	7. Emissions Method Code:		
16. Calculation of Emissions (limit to 600 chara	cters):		
Short Term Emissions: (31.25 tons/hr) * (0.27 lb/ton) * (1 - 0.995) =	= 0.042 lb/hr : : : : : : : : : : : : : : : : : : :		
Long Term Emissions: (0.275 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 0.184 tons/yr			
17. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.			
Allowable Emissions Allowable Emissions	<u>l</u> of <u>l</u>		
Basis for Allowable Emissions Code:     RULE	2. Future Effective Date of Allowable Emissions: N/A		
7. Requested Allowable Emissions and Units: 5.00 percent opacity	4. Equivalent Allowable Emissions:		
1 1 1	0.084 lb/hour 0.368 tons/year		
5. Method of Compliance (limit to 60 characters Stack testing (USEPA Method 9 Visual Determ			
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit to 200 characters):		
BACT was evaluated as 0.01 gr/dscf or less in a (5% opacity).	ddition to a no visible emissions limitation		

Emissions Unit Information Section Pollutant Detail Information Page	of		
G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)			
Potential/Fugitive Emissions			
1. Pollutant Emitted: PM10	2. Total Percent Efficie 99.50	•	
3. Potential Emissions: 0.022 lb/hr 0.096 to	ons/yr	4. Synthetically Limited? [ ]	
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	to tons	s/year	
6. Emission Factor: 0.14 lb/ton (Reference: AP-42)	1	7. Emissions Method Code: 3	
18. Calculation of Emissions (limit to 600 characters)  Short Term Emissions: (31.25 tons/hr) * (0.14 lb/ton) * (1 - 0.995) =  Long Term Emissions:	= 0.022 lb/hr		
(0.022 lb/hr) * (8,760 hr/yr) * (1/2,000 ton/lb) = 0.096 tons/yr  19. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  Baghouse removal efficiency is based on PM10. Emissions per Fly Ash Silo.			
Allowable Emissions Allowable Emissions 1	lofl		
Basis for Allowable Emissions Code:  RULE  2. Future Effective Date of Allowable Emissions: N/A			
Requested Allowable Emissions and Units:     5.00 percent opacity	<u> </u>	.290 tons/year	
5. Method of Compliance (limit to 60 characters Stack testing (USEPA Method 9 Visual Determi		i	

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Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable		
RULE	Emissions: N/A		
8. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:		
5.00 percent opacity	0.066 lb/hour 0.290 tons/year		
5. Method of Compliance (limit to 60 characters	s):		
Stack testing (USEPA Method 9 Visual Determination of Opacity)			
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit to 200 characters):		
BACT was evaluated as 0.01 gr/dscf or less in a (5% opacity).	addition to a no visible emissions limitation		

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

Visible Emissions Limitation: Visible Emissions Limitation \_\_\_1\_\_ of \_\_\_1\_

1. Visible Emissions Subtype: VE05	2. Basis for Allowable Opacity:	
	[X] Rule	[ ] Other
3. Requested Allowable Opacity:		
Normal Conditions: 5 % E	Exceptional Conditions:	100 %
Maximum Period of Excess Opacity Allov	ved:	6 min/hour
4. Method of Compliance:		
Stack testing (USEPA Method 9 Visual Deter	mination of Opacity)	
5. Visible Emissions Comment (limit to 200	characters):	
Florida Air Regulation: Rule 62.296		

Attachment D
Proposed Changes to Permit Conditions

4.7

### Proposed Changes to Permit Condition 24 of Construction Permit 0310045-003-AC, PSD-FL-265.

- 24. <u>Standards</u>: The materials handling sources at Northside shall be regulated as follows, and the emission limits and standards shall apply upon completion of the initial compliance tests for each of the units or activities.
- (a) The following materials handling sources shall be equipped with fabric filter controls and visible emissions shall not exceed 5 percent opacity:

Crusher house (EU29)

Boiler fuel silos (EU31)

Limestone receiving bins (EU32)

Limestone crusher conveyor transfer (EU34)

Limestone feed silos (EU35)

Fly ash waste bins (EU36)

Fly ash transfer and storage systems (EU37)

Bed ash transfer and storage systems (EU38)

Bed ash truck loadout systems (EU40)

Fly ash truck loadout systems (EU41)

Pebble lime silo (EU42)

Fly ash silo pre-mixers (EU51)

Bed ash silo mixers (EU52)

Bed ash surge hoppers (EU53)

(b) The following materials handling sources shall use wet suppression, water spray, coverings, and/or conditioned materials to control particulate emissions as needed, and visible emissions shall not exceed 5 percent opacity:

Transfer towers (EU28c, EU28g, EU28I, EU28o and EU28g)

Coal and petroleum coke storage building (EU28h)

Stacker/reclaimers (EU28)

Limestone lowering well (EU28d)

Conveyors (EU28)

Ash hydrator loadouts (EU28r)

(c) The following materials handling sources shall use wet suppression, water spray, partial enclosures, and/or conditioned materials to control particulate emissions as needed, and visible emissions shall not exceed 10 percent opacity:

Northside dock ship unloading operations – shiphold and receiving hoppers (EU28a)

Northside dock receiving conveyor (EU28a)

Limestone storage pile (EU28p)

Limestone reclaim hopper (EU28p)

(d) The fly ash and bed ash silo hydrators (EU39) shall use a venturi scrubber and visible emissions shall not exceed 5 percent opacity.

- (e) The limestone dryer/mill building shall have no visible emissions (other than from a baghouse vent).
- (f) The maximum particulate matter emissions from the following operations shall not exceed 0.01 grains per dry standard cubic foot:

Limestone receiving bins (EU32) Limestone crusher conveyor transfers (EU34) Limestone feed silos (EU34)

# Proposed Changes to Permit Condition 41 of Construction Permit 0310045-003-AC, PSD-FL-265.

Other				
Fly Ash Waste Bin – Baghouse Exhaust (EU36)	9	IVE – 30 min RVE – 30 min	I & R	Ash
Fly Ash Silos – Baghouse Exhaust (EU37)	9	IVE – 30 min RVE – 30 min	I & R	Ash
Bed Ash Silos – Baghouse Exhaust (EU38)	9	IVE – 30 min. RVE – 30 min	I & R	Ash
Fly Ash Hydrators – Scrubber Exhaust (15 min/hydrator) (EU39)	9	IVE – 60 min RVE – 60 min	I & R	Ash
Bed Ash Hydrators – Scrubber Exhaust (15 min/hydrator) (EU39)	9	IVE – 30 min RVE – 30 min	I&R	Ash
Fly Ash Truck Loadout – Baghouse Exhaust (EU41)	ð	IVE — 30 min RVE — 30 min	I&R	Ash
Bed Ash Truck Loadout - Baghouse Exhaust (EU40)	Ď	IVE – 30 min RVE – 30 min	I & R	Ash
Pebble Lime Silo – Baghouse Exhaust (EU42)	9	IVE – 30 min RVE – 30 min	I & R	Ash .
Fly ash silo pre-mixers (EU51)	9	IVE – 60 min RVE – 60 min	. <u>I.&amp; R</u>	Ash
Bed ash silo mixers (EU52)	9	$\frac{IVE - 30 \text{ min}}{RVE - 30 \text{ min}}$	I&R	Ash
Bed ash surge hoppers (EU53)	9	IVE – 60 min RVE – 60 min	<u>I &amp; R</u>	<u>Ash</u>