

Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

December 16, 2003

CERTIFIED MAIL - Return Receipt Requested

Mr. Jay Worley
Group Leader
JEA
St. Johns River Power Park
11201 New Berlin Road
Jacksonville, Florida 32226

Dear Mr. Worley:

RE: Rotary Dumper

The Department received a request from you on December 8, 2003, regarding the Rotary Dumper activity at the St. Johns River Power Park facility. The request will involve an air construction permit and a Title V Air Operation Permit revision to make the proposed changes. You have not been designated as a Responsible Official, whose signature on an application would be required for the action requested and required. In addition, the P.E. page of the application needs to be completed and sealed. Therefore, the request is being returned to you for acquiring a proper signature and appropriate application information.

If there are any questions, please call Bruce Mitchell at 850/413-9198.

Sincerely,

Trina L. Vielhauer
Chief
Bureau of Air Regulation

TLV/bm

Enclosure

cc: Scott Sheplak, BAR
Richard Robinson, RESD
Bert Gianazza, JEA

"More Protection, Less Process"

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1. Article Addressed to:
 Mr. Jay Worley
 Group Leader
 JEA
 St. Johns River Power Park
 11201 New Berlin Road
 Jacksonville, Florida 32226

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 Addressee

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 Mr. Jay Worley

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Sent To
 Mr. Jay Worley
 Street, Apt. No.;
 or PO Box No. 11201 New Berlin Road
 City, State, ZIP+4
 Jacksonville, Florida 32226

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DEC 08 2003

BUREAU OF AIR REGULATION

December 1, 2003



Mr. Scott M. Sheplak, P.E. Administrator, Title V Section
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Northside Generating Station/St. Johns River Power Park
Title V Permit 0310045-008-AV; PSD-FL-10
Rotary Dumper Baghouse Removal

Dear Mr. Sheplak:

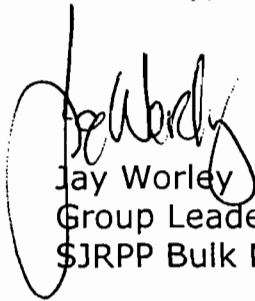
The Title V permit for the combined Northside Generating Station and St. Johns River Power Park (SJRPP) contains an emission unit for SJRPP that originally included a baghouse associated with the rotary dumper for particulate matter (PM) control. This baghouse is no longer needed for PM control since the rotary dumper is mostly enclosed and wet suppression is used as the primary PM control. The baghouse is identified in Subsection E, Condition E.5, Table 6 as 4 transfer points in Item 15. The PM control within the rotary dumper building is primarily through wet suppression since water sprays are part of the rail car dump system. Wet suppression is identified for the rotary dumper as Item 13 in Table 6. We have found that the baghouse does not provide additional PM control since wet suppression is the initial and only control required. The transfer points however will be equipped with additional wet suppression and used as needed to further limit PM emissions. It should be noted that the rotary dumper building has a separate fresh air supply system to move fresh air through the building and does not have a separate baghouse.

The PM emission estimates for wet suppression at the 4 transfer points are attached. The maximum potential PM and PM₁₀ emissions are less than 5 and 2.5 tons/year, respectively. While the maximum PM and PM₁₀ emissions are theoretically higher than those contained in the Title V permit, our experience indicates that there would be no change in emissions.

It is requested that the Title V and PSD permits be changed to reflect wet suppression in the rotary dumper building. This can be accomplished by listing Item 13 in Table 6 as "Rail car unloading (Rotary Building)" and changing Item 15 in Table 6 to "Coal handling transfer points (8 dry collection)".

Please call Bruce Kofler, SJRPP Environmental Production Leader, at (904) 665-7886 if you have any questions or require any additional information.

Sincerely,



Jay Worley
Group Leader
SJRPP Bulk Materials

Enclosure: Table 1. SJRPP Rotary Dumper Emission Estimates

cc: H. Oven, FDEP
W. Tutt, ERMD

bcc: P. Smith
J. Worley
A. Cobb
R. Blake
L. Bradley
B. Kofler
P. Steinbrecher
B. Gianazza
SJRPP File

Golder Associates Inc.

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



September 12, 2003

0137630

Mr. Jay A. Worley, Group Leader Bulk Materials
St. Johns River Power Park (SJRPP)
11201 New Berlin Road
Jacksonville, Florida 32226

RECEIVED

DEC 08 2003

RE: NORTHSIDE GENERATING STATION/SJRPP
TITLE V PERMIT 0310045-008-AV; PSD-FL-10
ROTARY DUMPER BAGHOUSE REMOVAL

BUREAU OF AIR REGULATION

Dear Jay:

This correspondence provides emission calculations regarding the removal of the rotary dumper baghouse. Currently, there are four transfer points within the rotary dumper building that are serviced by a baghouse. However, prior to the transfer of coal from the building by conveyor, particulate matter is controlled using wet suppression. This control technique is identified in Title V and PSD permits. SJRPP desires to remove the baghouse since PM can be effectively controlled using wet suppression making the baghouse unnecessary. Wet suppression will be added to the transfer points within the building in the event additional PM control is needed.

Since the transfer points are completely enclosed within the rotary dumper building, there are no directly applicable emission factors. However, emission estimates using EPA emissions factors for outdoor activities can theoretically be used to estimate emissions by assuming controls are provided by and within the building (i.e., the combined effects of the building and wet suppression). Together particulate control from wet suppression and building enclosure would result in 97% control efficiency. This level of control was initially assumed in the PSD application for the SJRPP and is believed to represent worst case emissions. Based on the maximum potential coal unloaded from rail cars at SJRPP, the removal of the existing rotary dumper baghouse would result in conservatively estimated annual particulate emissions equal to 4.97 and 2.35 tons/year, for PM and PM₁₀ respectively. The calculations are contained in Table 1. It should be noted that these emissions are probably already included in the total PM emission allocated for the rotary dumper.

Since there is a change in the emissions and control device, a change in the existing Title V and PSD permits will be required. It should be noted however that the magnitude of PM emissions in Table 1 is less than that for a generic exemption from permitting pursuant to F.A.C. 62-210.300 (3) (b) F.A.C. and would otherwise be considered an insignificant activity.

Please call me if there are any questions on the information contained herein.

Sincerely,
GOLDER ASSOCIATES INC.

A handwritten signature in black ink, appearing to read 'Kennard F. Kosky'.

Kennard F. Kosky, P.E.
Principal
Professional Engineer Registration No. 14996

Handwritten initials 'JK' in black ink, with the word 'SEAL' printed below them.

KFK/jkw
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JRPP Rotary Dumper Emission Estimates

ms:

332 trains	per year	from SJRPP
33 train cars	per hour	from SJRPP
30,000 train cars	per year	from SJRPP (Worst case scenario if 100% fuel by rail)
107 tons	coal per train	from SJRPP
6.9 %	moisture of DTE	from SJRPP
1 mph	average wind speed	Estimate based on enclosed building.
0.74	particle size multiplier (k)	Estimate, assumes aerodynamic particle size < 30 um, AP-42
0.35	particle size multiplier (k)	Estimate, assumes aerodynamic particle size < 10 um, AP-42
Control:		
90 %	emission control with wet suppression, AP-42 13.2.4.4	
70 %	emission control with building enclosed rotary dumper, engineering estimate	
97 %	total emission control; same as original PSD	

Calculations:

3,531 ton/hr	Maximum
366 ton/hr	Based on Maximum Annual Average; 8760 hr/yr
3,210,000 tons/year	Both Units

AP-42 13.2.4 Aggregate Handling and Storage Piles

$$E = k (0.0032) (U/5)^{1.3} / (M/2)^{1.4}$$

where:

- E = emission factor (lb/ton)
- k = particle size multiplier (dimensionless)
- U = mean wind speed (mph)
- M = material moisture content (%)

$$E = 5.16E-05$$

$$\text{tons/yr} = E * (\text{ton/hr}) * 8760 \text{ uncontrolled}$$

$$\text{tons/yr} = 165.68 \text{ uncontrolled}$$

$$\text{ton/yr} = 4.97 \text{ PM controlled with wet suppression and building enclosure}$$

$$2.35 \text{ PM}_{10} \text{ controlled with wet suppression and building enclosure}$$