



March 17, 2006

L-2006-085
10 CFR 50.36b
10 CFR 50.4
EPP 3.2.4

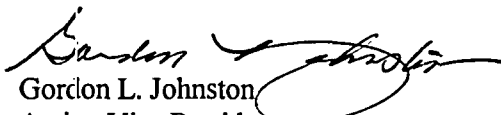
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Proposed Industrial Wastewater Facility Permit Change

Attached is an information copy of a proposed change to the Florida Industrial Waste Water Facility Permit (FL0002208). This proposed change is being forwarded pursuant to Section 3.2.4 of the St. Lucie Units 1 and 2 Environmental Protection Plans.

Please contact Ken Frehafer at (772) 467-7748 should you have any questions regarding this submittal.

Very truly yours,


Gordon L. Johnston
Acting Vice President
St. Lucie Plant

GLJ/KWF

Attachment

0001



Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

March 17, 2006

Mr. Allen P. Hubbard, P.E.
Florida Department of Environmental Protection
Industrial Wastewater Section
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: FPL – ST. LUCIE POWER PLANT
WASTEWATER PERMIT NO. FL0002208
REQUEST FOR MINOR PERMIT REVISION

Dear Mr. Hubbard:

Enclosed please find the following items to support a minor modification to the FPL St. Lucie Plant operating procedures that will require a minor revision to the Industrial Wastewater Permit of Florida Power & Light Company's St. Lucie Plant:

- 1) Three (3) completed copies of DEP Form 62-620.910(9) – Application For A Minor Revision To A Wastewater Facility Permit with attachments.
- 2) A check for the \$250 application fee.

This request for minor revision is to allow the use of a wood flour (fine wood sawdust) application to the sea water once-through cooling water system for the purpose of sealing small condenser tube leaks. Application is to a specific condenser water box inlet and would be discharged through Outfall D-001 (Once Through Cooling Water from St Lucie Units 1 and 2)

If you have any questions or need additional information on this matter, please contact Ed Meyer at (772) 465-3550 ex 3102.

Sincerely,

A handwritten signature in black ink, appearing to read "Gordon L. Johnston".

Gordon L. Johnston
Acting Vice President,
St Lucie Plant

Enclosures
cc: DEP, Port St Lucie



APPLICATION FOR A MINOR REVISION TO A WASTEWATER FACILITY OR ACTIVITY PERMIT

1. Instructions

- a. In accordance with Rule 62-620.325, F.A.C., this form must be submitted to the appropriate Department district office or approved local program when requests for minor revisions to a permit or minor modifications to a facility are made by a permittee, except for transfer of a permit to a new permittee and addition of a major user of reclaimed water to a Part III reuse system. Application for transfer of a permit to a new permittee shall be made on DEP Form 62-620.910(11). Application for addition of a major user of reclaimed water shall be made on DEP Form 62-610.300(4)(a)1.
- b. Each applicable item must be completed in full in order to avoid delay in processing of this form. Where attached sheets or other technical documentation are provided, indicate appropriate cross-references.
- c. Three (3) copies of this application with supporting documentation shall be submitted with this form.
- d. All information is to be typed or printed in ink. Dates are to be entered in MM/DD/YR format.
- e. This application and attachments shall be signed in accordance with Rule 62-620.305, F.A.C. Also, as applicable, this application and all attachments shall be signed and sealed by a professional engineer registered in Florida in accordance with Rule 62-620.310, F.A.C.

2. Facility Information

a. Permit Number: FL0002208 b. Facility Identification Number: FL0002208
c. Project/Facility Name: FPL - St. Lucie Power Plant
d. Contact Name: Vince Munne, Environmental Supervisor
Number and Street: 6501 S. Ocean Drive
City/State/Zip Code: Jensen Beach, FL 34957
Telephone: (772) 467-7453

3. Type of Revision

- Correct Typographical Errors¹ - Submit one copy of each page of the permit showing revisions being requested.
- Change Improvement Schedule¹ - Provide a description of the improvement, a list of the dates to be revised, and a reason for the proposed change in each date.
- Change Expiration Date of Permit¹ - Provide the current and proposed expiration dates for the permit and the reasons for the proposed change.
- Change Staffing Requirements² - Describe the proposed change and submit justification for the change in accordance with Chapter 62-699, F.A.C.

¹A processing fee is not required.
²A processing fee is required with the application in accordance with Rule 62-4.050, F.A.C.

Attachment 1

Reason for Request:

The FPL St. Lucie Plant is currently experiencing a very small once-through cooling water leak into the condensers on each Unit. The leakage is into the condensers because they are under a vacuum so seawater leaks in rather than feedwater leaking out into the ocean. The calculated seawater in-leakage is less than 0.2 gallons per day, but is large enough to produce elevated chloride and sodium contamination in the feedwater in steam generators. This continual elevated contamination level is detrimental to the long term reliability of the steam generator tubes. Please note that this leakage is occurring in the "secondary" side of the plant, which is identical to the same system in a fossil-fired plant, and is not a "radiological" issue.

St. Lucie Unit 2 has taken several corrective actions, including coming off line and helium leak searching the condenser water boxes, but has been unable to identify the leaking tube. A vendor has twice performed leak testing with helium and has concluded that the leak is too small to detect. Industry experts have been queried and concur that there is no practical method of identifying such small leaks.

Industry experience has, however, reported success using wood flour (fine, hard wood dust) to temporarily plug small condenser leaks. St. Lucie Plant would like to test this treatment now and be permitted for future use when similar events occur.

Proposed Application:

The St. Lucie Plant is requesting permission for periodic wood flour additions to the once through cooling water system of the suspect leaking condenser water boxes. Through discussion with peers and review of other plant (i.e.; nuclear plants in other states) practices, we have developed the following plan. All quantities and frequencies are the maximum proposed and would be reduced if not necessary.

Hard wood flour (see Attachment 2 for MSDS) would be wetted (to reduce airborne dust) at the ratio of approximately 3 cubic feet (approx. 50 lbs) wood flour to 55 gallons water. A maximum, based on industry experience, of 60 cubic feet (1,050 lbs) of wood flour will be used per treatment. Each treatment would last as long as it takes to pump the plugging media into the cooling water system for a specific condenser water box. This is estimated to take less than one hour per treatment.

Following treatment, condenser and steam generator contaminant levels will be tracked to determine the treatment effectiveness. Therefore a maximum of three treatments per week is indicated. According to industry experience, the wood flour "plug" will last about two weeks before requiring re-treatment.

Attachment 1

Maximum particulate loading of the once through cooling water system can be estimated using the following assumptions;

1. One container or mix at a time will be pumped into the intake well
2. One container or mix will have approximately 50 lbs wood flour = 108,945

PPM solids

3. It will require a short duration in time to transfer the slurry into intake well
4. Minimum dilution flow based on one Unit shut down with circulating water pumps off – nominal dilution flow operating Unit = 473,000 GPM
5. Total Suspended Solids at POD = 0.23 PPM

SANI-CHIPS | WOOD FLOUR | MEAT SMOKERS | ANIMAL BEDDING | WOOD CHIPS



P.J. MURPHY FOREST PRODUCTS CORP.

MATERIAL SAFETY DATA SHEET

CONTACTS
MSDS SHEETS
SPECIFICATIONS
TESTING

DETAILS

We've put all the quarterly analyses for our Sani-Chips® into one location. Just mouse over the testing link above to use this convenient feature.

- Trade Name: WOOD FLOUR
- Synonyms: None
- CAS. Number: None
- Description: Particles generated by any manual or mechanical cutting or abrasion process performed on wood
- Physical Data:

Boiling Point	Not applicable
Specific Gravity	Variable (Dependent on wood species and moisture content)
Vapor Density	Not applicable
% Volatiles by Volume	Not applicable
Melting Point	Not applicable
Vapor Pressure	Not applicable
Solubility in H ₂ O (% by Wt.)	Insoluble
Evaporation Rate (Butyl Acetate =1)	Not applicable
pH	Not applicable
Appearance & Odor	Light to dark granular solid. Color and odor are dependent on the wood species and length of time since dust was generated.

• Fire & Explosive Data

Flash Point	Not applicable
Autoignition Temperature	Variable (Typically 400-500 degrees F)
Explosive Limits in Air	40 grams per cubic meter (LEL)
Extinguishing Media	Water, sand, CO ₂
Special Fire Fighting Procedures	Use Water to wet down wood dust to reduce the likelihood of ignition or dispersion of dust into the air. Remove burned or wet dust to open area after fire is extinguished
Unusual Fire and explosive Hazard	Wood dust is a strong to severe explosive hazard if dust "cloud" contacts an ignition source

• Health Effects Information:

Exposure Limit	ACGIH TLV (R): TWA-5.0 mg/m ³ ; STEL 915 min)-10.0 mg/m ³ (softwoods); TWA-1.0 mg/m ³ hardwoods.
See important footnote below concerning OSHA PEL's for wood dust skin and eye contact**	OSHA PEL: TWA - 15.0 mg/m ³ (total dust) ; 5.0 mg/m ³ (restorable fraction)
Ingestion	Not applicable
Skin Absorption	Not known to occur
Inhalation	May cause nasal dryness, irritation and obstruction. Coughing, wheezing and sneezing; sinusitis and prolonged colds have also been reported.
Chronic Effects	Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and or irritation. IARC classifies wood dust as a carcinogen to humans (group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.

** In *AFL-CIO v OSHA* 965 F. 2d 962 (11th Cir. 1992), the court overturned OSHA's 1989 Air Contaminants Rule, including the specific PEL's for wood dust that OSHA had established at the time. The 1989 PEL's were: TWA-5.0 mg/m³; STEL (15 min) - 10.0 mg/m³ (all soft and hardwoods, except Western red cedar); Western Red Cedar: TWA - 2.5 mg/m³. Wood product is now officially regulated as an organic dust under the *Particulates Not Otherwise Regulate (PNOR) or Inert or Nuisance Dust* categories at PEL's noted under Health Effects Information section of this MSDS. However, a number of states have incorporated provisions of the 1989 standard in their state plans. Additionally, OSHA has announced that it may cite companies under the OSHA Act general duty clause under appropriate circumstances for non-compliance with the 1989 PEL's.

• **Reactivity Data**

Conditions Contributing to Instability	Stable under normal conditions
Incompatibility	Avoid contact with oxidizing agents and drying oils. Avoid open flames. Product may ignite at temperatures in excess of 400° F.
Hazardous Decomposition Products	Thermal oxidative degradation of wood produces irritating and toxic fumes and gases including CO, aldehydes and organic acids.
Conditions Contributing to	

Polymerization	Not applicable
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• **Precautions & Safe Handling**

- o Avoid eye contact.
- o Avoid repeated or prolonged contact with skin. Careful bathing and clean cloths are indicated after exposure.
- o Avoid prolonged or repeated breathing of wood dust in the air.
- o Avoid contact with oxidizing agents and drying oils.
- o Avoid open flame.

• **Generally Applicable Control Measures**

Ventilation	Provide adequate and local exhaust ventilation to maintain healthful working conditions.
Protection	Wear goggles or safety glasses. Other protective equipment such as gloves and approved dust respirators may be needed depending upon dust conditions.

• **Emergency & First Aid Procedures:**

Eyes	Flush with water to remove dust particles. If irritation persists, get medical attention.
Skin	If a rash or persistent irritation or dermatitis occur, get medical advice where applicable before returning to work where wood dust is present.
Inhalation	Remove to fresh air. If persistent irritation, severe coughing, or breathing difficulties occur, get medical advice before returning to work here wood dust is present.
Ingestion	Not Applicable

- **Spill/Leak Clean Up Procedures:** Sweep or vacuum spills for recovery or disposal; avoid creating dust conditions. Provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for proper disposal.

[Home] [Contact Information] [Material Safety Data Sheet] [E-Mail Us] [Tests] [Specifications]
 [Sanf-Chips®] [Animal Beddings] [Wood Chips] [Meat Smokers] [Wood Flour]
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<http://www.pjmurphy.net/msd/woodflour.htm>

Attachment III
Wood Flour Technical Specifications

SANI-CHIPS | WOOD FLOUR | MEAT SMOKERS | ANIMAL BEDDING | WOOD CHIPS



P.J. MURPHY FOREST PRODUCTS CORP.

CONTACTS
MSDS SHEETS
SPECIFICATIONS
TESTING

WOOD FLOUR - TECHNICAL DATA SHEET

HARDWOOD FLOUR: CHEMICAL & PHYSICAL PROPERTIES:

- Wood Flour**
- Wood Flour Home
 - Technical Data
 - FO6 Specs
 - Packaging Options
 - FAQ Sheet
 - Composite Hints
 - Mesh/Micron Chart

ACIDITY (ph)	3.5 TO 4.6
ASH CONTENT	0.23 TO 0.25 HARDGROVE INDEX
COLOR	LIGHT BROWN TO TAN
DENSITY	12 TO 18 POUNDS / CUBIC FEET
MOISTURE CONTENT	4% TO 6%, DEPENDENT ON RELATIVE HUMIDITY
SOLUBILITY IN WATER	< 0.1%
SPECIFIC GRAVITY	0.5 TO 0.8

[Home] [Contact Information] [Material Safety Data Sheet] [E-Mail Us] [Tests] [Specifications]
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