



Serial: NPD-NRC-2009-118
June 23, 2009

10CFR52.79

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

**LEVY NUCLEAR POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 52-029 AND 52-030
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 051 RELATED TO
EQUIPMENT AND FLOOR DRAINAGE SYSTEM**

Reference: Letter from Tanya Simms (NRC) to Garry Miller (PEF), dated June 1, 2009,
"Request for Additional Information Letter No. 051 Related to SRP Section
09.03.03 for the Levy County Nuclear Plant, Units 1 and 2 Combined License
Application"

Ladies and Gentlemen:

Progress Energy Florida, Inc. (PEF) hereby submits our response to the Nuclear Regulatory Commission's (NRC) request for additional information provided in the referenced letter.

A response to the NRC request is addressed in the enclosure. The enclosure also identifies changes that will be made in a future revision of the Levy Nuclear Power Plant Units 1 and 2 application.

If you have any further questions, or need additional information, please contact Bob Kitchen at (919) 546-6992, or me at (919) 546-6107.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 23, 2009.

Sincerely,

Garry D. Miller
General Manager
Nuclear Plant Development

Enclosure

cc : U.S. NRC Region II, Regional Administrator
Mr. Brian C. Anderson, U.S. NRC Project Manager

bc : John Elnitsky, VP-Nuclear Plant Development
Robert Kitchen, Manager-Nuclear Plant Licensing
Tillie Wilkins, NPD-Licensing
Shawn Hughes (Shaw Power Group)
John O'Neill, Jr. (Pillsbury Winthrop Shaw Pittman, LLP)
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**Levy Nuclear Power Plant Units 1 and 2
Response to NRC Request for Additional Information Letter No. 051 Related to
SRP Section 09.03.03 for the Combined License Application, dated June 1, 2009**

<u>NRC RAI #</u>	<u>Progress Energy RAI #</u>	<u>Progress Energy Response</u>
09.03.03-1	L-0420	Response enclosed – see following pages

NRC RAI No.: LNP-RAI-LTR-051

NRC Letter Date: June 01, 2009

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 09.03.03-1

Text of NRC RAI:

In AP1000 DCD, Revision 15, the wastewater retention basin design features were included as part of the AP1000 certified design. In Revision 16, Westinghouse removed the wastewater retention basin from the DCD and identified it as COL Information Item 9.2.11.2, "Wastewater Retention Basins." COL Information Item 9.2.11.2 states that "the Combined License applicant will address the final design and configuration of the plant wastewater retention basins and associated discharge piping, including piping design pressure, basin transfer pump size, basin size, and location of the retention basins."

In Levy FSAR Section 9.2.9.2.2, "Component Description," a description of the wastewater retention basin was added to address AP1000 DCD COL Information Item 9.2.11.2. The information provided discusses the location and routing of the wastewater system, but does not address all of the details requested in the COL information item.

Provide a discussion on whether all site-specific potentially radioactive effluents draining to the water basin will be monitored prior to disposition. Provide justification for not providing water level instrumentation and radiation monitoring in the wastewater retention basin.

Also, provide additional details on the method proposed for transfer of inventory from wastewater settling basin to the discharge canal and provide a description of the associated components (ie. transfer pumps, size of basin, basin lining, etc...) as requested in the COL information item. Verify that all site-specific potentially radioactive effluents will be monitored prior to disposition. Or provide a justification for why this information is not necessary.

PGN RAI ID #: L-0420

PGN Response to NRC RAI:

The sources of water received in the wastewater retention basin and radiation monitoring of the inlet water sources are described below.

1) Service Water System: As discussed in DCD Subsections 9.2.1.2.1 and 9.2.1.2.2, Service Water Strainers, service water is pumped through strainers to the component cooling water heat exchangers. Backwash flow from the strainer is discharged to waste at the wastewater retention basins. A small portion of the service water flow is normally diverted to the circulating water system (CWS). This blowdown is used to control levels of solids concentration in the service water system (SWS). An alternate blowdown flow path is provided to the wastewater system.

As discussed in Subsections 9.2.1.3, 9.2.1.5, and 11.5.2.3.1, a radiation monitor (SWS-JE-RE008) measures the concentration of radioactive materials in the blowdown flow from the SWS. Provisions are also available for taking local fluid samples. If radioactive fluid is

detected in the SWS, the monitor initiates an alarm in the main control room, and tower blowdown flow can be isolated by remote manual control.

2) Raw Water System: As discussed in FSAR Subsection 9.2.11.2.2.1, backwash from the strainer is discharged to the wastewater retention basin. Also, media filters are backwashed to remove suspended solids, and the backwash water is discharged to the wastewater retention basin. As discussed in FSAR Subsection 9.2.11.4, the raw water system does not have an interconnection with any system that contains radioactive fluids.

3) Oily Waste Separator: As discussed in DCD Subsection 9.2.9.2.1, wastes from the turbine building floor and equipment drains (which include laboratory and sampling sink drains, oil storage room drains, the main steam isolation valve compartment, auxiliary building penetration area and the auxiliary building HVAC room) are collected in the two turbine building sumps. Drainage from the diesel generator building sumps, the auxiliary building sump – north (a nonradioactive sump) and the annex building sump is also collected in the turbine building sumps. The turbine building sump pumps route the wastewater from either of the two sumps to the oil separator for removal of oily waste. The wastewater from the oil separator flows to the wastewater retention basin.

As described in DCD Subsections 9.2.9.1, 9.2.9.5, and 11.5.2.3.3, a radiation monitor (WWS-JE-RE021) located on the common discharge piping of the turbine building sump pumps provides an alarm upon detection of radioactivity in the wastewater. The radiation monitor also trips the sump pumps on detection of radioactivity to isolate the contaminated wastewater. Provisions are included for sampling the sumps. In the event radioactivity is present in the turbine building sumps, the wastewater is diverted from the sumps to the liquid radwaste system.

The diesel fuel oil area sump pump also discharges wastewater to the oil separator; however it drains downstream of the turbine building sump, and therefore, bypasses the radiation monitors. The diesel fuel oil area sump effluent does not interact with any potentially radioactive sources.

Based on the above configuration, the potentially contaminated fluids entering the retention basin are monitored with radiation monitoring instruments. Should there be additional waste streams discharged to the wastewater retention basin, a radiation monitor located on the common discharge of the basin transfer pumps provides an alarm and trips the transfer pumps upon detection of radioactivity in the wastewater.

A description of the wastewater retention basin and water level instrumentation and radiation monitoring for the wastewater retention basins is provided below and will be added to the FSAR in a future amendment.

Associated LNP COL Application Revisions:

The following changes will be made to the LNP FSAR in a future amendment:

1. Revise FSAR Subsection 9.2.9.2.2 from:

“Add the following paragraph at the end of the text under the heading “Wastewater Retention Basin” in DCD Subsection 9.2.9.2.2.

The wastewater retention basins are located southwest of LNP 1 and 2 near the sewage treatment plant.”

To read:

"Add the following paragraph at the end of the text under the heading "Wastewater Retention Basin" in DCD Subsection 9.2.9.2.2.

LNP COL 9.2-2

The wastewater retention basins are located southwest of LNP 1 and 2 near the sewage treatment plant. For redundancy, two basins for each unit are provided to intake the maximum possible flow from two units if one basin is out of service. The basins are sized large enough to allow for sediments as small as silt to settle before the water exits the basin. The basins are constructed of reinforced concrete walls and continuously poured base mats with no construction joints in the mats or any exterior walls (except a construction joint with a waterstop may be used at the exterior wall/mat junction) and waterstops at all construction joints to minimize seepage. This size of the basins provide retention time for settling of solids larger than 10 microns that may be suspended in the wastewater stream. Two 100% pumps for each retention basin are provided to transfer water from the wastewater retention basin to the CWS blowdown. For each retention basin, only one of the pumps will operate at any given time. The pumps will have separate feeds from the 480VAC distribution system. In the event of a LOOP, power will not be supplied to the wastewater retention basin transfer pumps. The basin transfer pumps are designed to discharge a maximum of 850 gpm to the CWS blowdown."

2. Revise FSAR Section 9.2 to add the following new subsection:

"9.2.9.5 Instrument Applications

Add the following information after the last paragraph of DCD Subsection 9.2.9.5:

LNP COL 9.2-2

A level indicator and level transmitter are provided for each wastewater retention basin to automatically control flow out of the wastewater retention basin. High alarms will indicate basin level where operator action is required. A radiation monitor is located on the common discharge of the basin transfer pumps to provide an alarm and trip the basin transfer pumps upon detection of radioactivity in the wastewater.

3. Revise FSAR Subsection 9.2.12.2 from:

"This COL Item is addressed in Subsection 9.2.9.2.2."

To read:

"This COL Item is addressed in Subsections 9.2.9.2.2 and 9.2.9.5."

Attachments/Enclosures:

None.