



May 18, 2004

L-2004-091
10 CFR 50.90

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 License Amendments
Supplement 1 - Request for Additional Information Response
Elimination of RPS, AFAS and ESFAS
Pressure Sensor Response Time Testing Requirements

By letter L-2003-265 dated November 21, 2003 and pursuant to 10 CFR 50.90, Florida Power & Light Company (FPL) requested to amend Facility Operating Licenses DPR-67 and NPF-16 for St. Lucie Units 1 and 2. The proposed changes revise the St. Lucie Units 1 and 2 Technical Specification (TS) Definitions 1.12, Engineered Safety Features (ESF) Response Time, and 1.26, Reactor Protection System (RPS) Response Time.

On March 5, 2004, a conference call was held between the NRC review staff and FPL to discuss the variable damping differential pressure transmitters. Attached is the revised FPL proposed method to address variable damping transmitters and the response to the NRC information requests discussed during the call.

The original No Significant Hazards evaluation remains valid and bounds the proposed change. In accordance with 10 CFR 50.91 (b)(1), a copy of this letter is being forwarded to the State Designee for the State of Florida.

Approval of the proposed license amendments is requested by October 2004 to support the fall 2004 St. Lucie Unit 2 refueling outage (SL2-15). Please issue the amendments to be effective on the date of issuance and to be implemented within 60 days of receipt by FPL. Please contact George Madden at 772-467-7155 if there are any questions about this submittal.

Very truly yours,

A handwritten signature in black ink, appearing to read 'WJ', is written over the typed name 'William Jefferson, Jr.'.

William Jefferson, Jr.
Vice President
St. Lucie Plant

WJ/GRM

Attachments

cc: Mr. William A. Passetti, Florida Department of Health

A001

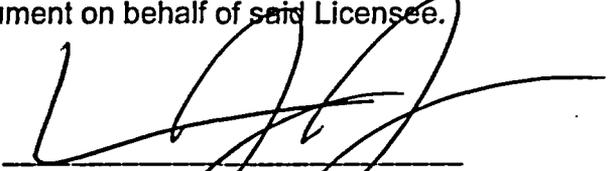
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STATE OF FLORIDA)
)
COUNTY OF ST. LUCIE) ss.

William Jefferson, Jr. being first duly sworn, deposes and says:

That he is Vice President, St. Lucie Plant, for the Nuclear Division of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee.

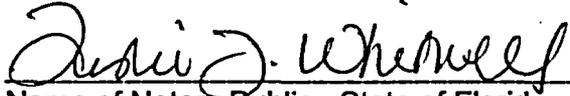


William Jefferson, Jr.

STATE OF FLORIDA
COUNTY OF ST LUCIE

Sworn to and subscribed before me

this 18 day of May, 2004
by William Jefferson, Jr., who is personally known to me.



Name of Notary Public - State of Florida



Leslie J. Whitwell
MY COMMISSION # DD020212 EXPIRES
May 12, 2005
BONDED THRU TROY FAIR INSURANCE, INC.

(Print, type or stamp Commissioned Name of Notary Public)

ATTACHMENT

Response to NRC Request for Additional Information Regarding Unit 1 RCS Low Flow Transmitters With Variable Signal Damping

During a conference call between NRC and FPL on March 5, 2004, the NRC and FPL discussed methods to address the Unit 1 reactor coolant system (RCS) low flow transmitters that have a variable damping option. Based on this discussion FPL has revised the proposed method of addressing the variable damping flow transmitters on Unit 1. The revised methods are discussed below:

Note (2) of Table 2 in our original submittal L-2003-265 stated:

Unit 1 RCS Low Flow transmitters were omitted from the scope of NPSD-1167 since they include a variable damping option. The allocated response time of 0.8 seconds is based on the maximum adjustable range of the damping circuit as documented in the Rosemount technical manual for the model 1154 Series H transmitter. This value represents the physical & electronic limitations of the damping circuit assuming the potentiometer setting is maximized, and is substantiated by both circuit analysis and testing performed by the manufacturer. Use of the Rosemount specified maximum adjustable range value is no less conservative than using the Rosemount published response time value for other transmitters that do not include a damping circuit.

Note (2) of Table 2 is revised to state the following:

Unit 1 RCS Low Flow transmitters were omitted from the scope of NPSD-1167 since they include a variable damping option. However, Rosemount transmitters with the variable damping option are addressed in EPRI Report NP-7243, and as discussed above the EPRI report is the primary justification bases document for elimination of response time testing (RTT). As documented in section 3 of the EPRI report, a detailed failure modes and effects analysis (FMEA) was performed for Rosemount differential pressure transmitters including the variable damping circuit. Based on the results of this FMEA, EPRI concluded that implementation of a method to ensure the potentiometer is at the required setting would eliminate the need for RTT to detect any adverse variable damping circuit failure mode. The allocated response time of 0.8 seconds is conservatively based on the maximum adjustable range of the damping circuit as documented in the Rosemount technical manual for the model

1154 series H transmitter. For each Unit 1 RCS low flow Rosemount transmitter the variable damping circuit potentiometer will be sealed in place at the desired setting. A response time test will then be performed to verify the permanent potentiometer setting results in an overall transmitter response time that is less than the allocated response time value of 0.8 seconds. This approach is consistent with the EPRI recommendation.

In addition, item 4 of the change justification that discusses the compliance with the EPRI recommendations associated with the elimination of the response time testing is revised as follows:

Item 4 of the original submittal L-2003-265 stated:

If variable damping is used, implement a method to ensure that the potentiometer is at the required setting and cannot be inadvertently changed. This approach should eliminate the need for RTT to detect a variable damping failure mode. Otherwise, RTT each transmitter by hydraulic or electronic white noise analysis methods, at a minimum, following each transmitter calibration.

St. Lucie has elected to address this recommendation using a more conservative approach. Rather than attempting to lock the potentiometer setting, an allocated response time equal to the maximum adjustable range of the damping circuit will be used in the overall channel response time summation. The allocated response time will then represent the physical & electronic limitations of the damping circuit assuming the potentiometer setting is maximized, and is substantiated by both circuit analysis and testing performed by the manufacturer. Use of the Rosemount specified maximum adjustable range value is equivalent to, and no less conservative than, using the Rosemount published response time value for other transmitters that do not include a damping circuit.

Item 4 is revised to state:

If variable damping is used, implement a method to ensure that the potentiometer is at the required setting and cannot be inadvertently changed. This approach should eliminate the need for RTT to detect a variable damping failure mode. Otherwise, RTT each transmitter by hydraulic or electronic white noise analysis methods, at a minimum, following each transmitter calibration.

Unit 1 RCS Low Flow transmitters (tag numbers PDT-1111A, B, C, D and PDT-1121A, B, C, D) were omitted from the scope of NPSD-1167 since they include a variable damping option. However, Rosemount transmitters with the variable damping option are addressed in EPRI Report NP-7243, and as

discussed above, the EPRI report is the primary justification bases document for elimination of RTT. As documented in section 3 of the EPRI report, a detailed FMEA was performed for Rosemount differential pressure transmitters including the variable damping circuit. Based on the results of this FMEA, EPRI concluded that implementation of a method to ensure the potentiometer is at the required setting would eliminate the need for RTT to detect any adverse variable damping circuit failure mode. The allocated response time of 0.8 seconds is conservatively based on the maximum adjustable range of the damping circuit as documented in the Rosemount technical manual for the model 1154 series H transmitter. For each Unit 1 RCS low flow Rosemount transmitter the variable damping circuit potentiometer will be sealed in place at the existing setting. A response time test will then be performed to verify the permanent potentiometer setting results in an overall transmitter response time that is less than the allocated response time value of 0.8 seconds. This approach is consistent with the EPRI recommendation.

In addition during the conference call on March 5, 2004, the NRC requested FPL to provide a response to the following information requests.

NRC Request:

Provide the latest response time test data for transmitters with variable damping.

FPL Response:

The only transmitters that include a variable damping circuit are the eight Unit 1 reactor coolant system (RCS) low flow transmitters. The requested data is provided in the following table.

Latest Response Time Test Data for Unit 1 RCS Low Flow Transmitters

Transmitter Tag Number	Measured Response Time	Test Date	Comments
PDT-1111A	0.276 sec	December 1997	Performed with pneumatic test rig
PDT-1111B	0.64 sec	October 1999	Performed via white noise analysis
PDT-1111C	0.60 sec	April 2001	Performed via white noise analysis
PDT-1111D	0.64 sec	October 2002	Performed via white noise analysis
PDT-1121A	0.246 sec	December 1997	Performed with pneumatic test rig
PDT-1121B	0.65 sec	October 1999	Performed via white noise analysis
PDT-1121C	0.61 sec	April 2001	Performed via white noise analysis
PDT-1121D	0.60 sec	October 2002	Performed via white noise analysis

NRC Request 2:

Identify the method that will be used to lock the setting of the variable damping circuit potentiometers.

FPL Response 2:

The work order instructions used to lock the potentiometer setting for each of the eight Unit 1 RCS low flow transmitters will include the following key elements:

1. A suitable material (such as an epoxy) will be selected for the application.
2. The material will be applied such that it both obstructs insertion of a screwdriver in the slotted head and inhibits any change in the potentiometer setting.
3. After the potentiometer is locked in position, a test will be performed to verify that the response time is less than the allocated time of 0.8 seconds.