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SUBJECT: Forwards plan to address GL 89-10 close out insp follow-up items w/specific commitment dates for completion. Draft responses, w/exception of commitment dates, reviewed w/ T Scarbrough of NRR & E Girard of Region II.

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

FPL

October 10, 1997

L-97-258
10 CFR 50.4

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

RE: St. Lucie Units 1 and 2
Docket Nos. 50-335/389
NRC Generic Letter 89-10 Close Out Inspection Follow Up Items

The NRC performed a Generic Letter (GL) 89-10 close-out inspection on the motor operated valve (MOV) program at the St. Lucie Plant from September 15 through September 25, 1997. As a result of that inspection, the NRC identified 13 issues which needed to be addressed by FPL in order to close the GL 89-10 program at St. Lucie. Accordingly, we have attached FPL's plan to address these issues with specific commitment dates for completion. Note that the draft responses (with the exception of the commitment dates) were reviewed with Tom Scarbrough of NRR and Ed Girard of Region II, and their comments were incorporated.

Please contact us if there are any questions about this submittal.

Very truly yours,

J. Scarola for JAS

J. A. Stall
Vice President
St. Lucie Plant

JAS/KWF

A0641

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant
T. G. Scarbrough, NRR, USNRC
E. H. Girard, Region II, USNRC

GL 89-10 MOV INSPECTION

Below is FPL's plan to address the issues identified during the GL 89-10 Close-out inspection, with specific commitment dates for completion.

NRC Issue #1

Some valve groups have weak Valve Factor (VF) justification.

FPL RESPONSE

FPL will revise the grouping criteria, and justifications for selected torque and thrust requirements, in Engineering Evaluation JPN-PSL-SEMP-94-027, "Motor Operated Gate, Globe, and Butterfly Valve Grouping for MOV Dynamic Test Reduction Program" and Engineering Evaluation JPN-PSL-SEMP-95-024, "Motor Operated Gate, Globe, and Butterfly Valve Grouping for MOV Dynamic Test Reduction Program" for St. Lucie Units 1 and 2, respectively, to include considerations for the following:

a) Pressure class
b) Fluid temperature
c) Fluid medium
d) Valve size

The affect of these changes would result in an increase in the number of valve groups. However, sufficient baseline testing has been conducted to substantiate most valve groups. One or two additional dynamic tests may be required per unit, and if so they will be scheduled as part of our periodic verification program.

Commitment: The subject evaluations will be revised by October 31, 1997.

NRC Issue #2

Periodic verification plan did not address dynamic testing for globe valves.

FPL RESPONSE

FPL will revise Engineering Evaluation JPN-PSL-SEMP-91-030, "NRC Generic Letter 89-10 Program Description", for St. Lucie Units 1 and 2 and Engineering Evaluation PSL-ENG-97-018, "Periodic Verification of Design Basis Capability of Safety Related Motor Operated Valves for NRC Generic Letter 96-05" to include dynamic testing of a sample of motor operated balanced disk globe valves.

Additional dynamic testing of unbalanced globe valves may be considered at St. Lucie pending the results of the Joint Owners Group (JOG) program for unbalanced globe valves.

Commitment Date: The subject evaluations will be revised by October 31, 1997.

NRC Issue #3

Globe valve calculations did not use the correct area.

FPL RESPONSE

FPL will revise Standard No. STD-M-003, "Engineering Guidelines for Sizing and Evaluation of Limitorque Motor Operators" to provide specific reference to Appendix A to EPRI MOV Performance Prediction Program Globe Valve Model Report for determination of the valve flow orifice (D_1). Specific valve calculations shall also be revised, where required, to use the correct area. These calculation revisions are included as part of FPL's overall commitment to update calculations (see NRC Issue #8 on calculations below)

Commitment Date: The subject standard will be revised by October 31, 1997.

NRC Issue #4

Dynamic testing data extrapolation guidance needs updating.

FPL RESPONSE

FPL will revise Engineering Evaluation JPN-PSL-SEMP-91-030, "NRC Generic Letter 89-10 Program Description", for St. Lucie Units 1 and 2 to require the use of the latest EPRI MOV Performance Prediction Program methodology for linear extrapolation of dynamic test data. FPL will also document the acceptability of the previously performed linear extrapolations of dynamic test data with regard to this criteria in the appropriate engineering evaluation of diagnostic test results.

Commitment Date: The subject evaluations will be revised by October 31, 1997.

NRC Issue #5

Condition Report (CR) 97-1732 does not address Load Sensitive Behavior (LSB) in the open direction.

FPL RESPONSE

FPL will revise the disposition to CR 97-1732 to address LSB in the open direction.

Commitment Date: A revision to the CR disposition has been issued addressing LSB in the open direction. No operability issues were identified and no immediate actions were required. Long term actions will be addressed as part of FPL's response to NRC Issue #8 below.

NRC Issue #6

Stem lubricant change and plans regarding its effect on Stem Friction Coefficient (SFC) and LSB.

FPL RESPONSE

FPL will revise Engineering Evaluation PSL-ENG-97-018, "Periodic Verification of Design Basis Capability of Safety Related Motor Operated Valves for NRC Generic Letter 96-05" to address the change in stem lubricant from FELPRO N-5000 to Mobil 28 and its effect on SFC and LSB.

Commitment Date: The subject evaluation will be revised by October 31, 1997.

NRC Issue #7

There is no margin identified for Age Related Degradation (ARD).

FPL RESPONSE

FPL will revise Engineering Evaluation PSL-ENG-97-018, "Periodic Verification of Design Basis Capability of Safety Related Motor Operated Valves for NRC Generic Letter 96-05" to identify a 10% goal for ARD. The impact of this goal on actual valve margins will be addressed as part of our overall plan to improve low margin valves (see NRC Issue # 11 on low margin valves below).

Commitment Date: The subject evaluation will be revised by October 31, 1997.

NRC Issue #8

MOV calculations need to be corrected to incorporate the latest design information (i.e., single valves, LSB, feedback of test data, SFC's =0.2, etc.).

FPL RESPONSE

FPL will revise appropriate calculations and GL 89-10 engineering evaluations to incorporate LSB, the latest test data, etc. This effort will also include incorporation of the Phase 2 EPRI Performance Prediction Program results including the Safety Evaluation provisions and long term plans where the EPRI model is used as best available data. Total Equipment Data Base (TEDB) update will also be performed as a result of the calculation and document revisions.

Commitment Date: The calculation and evaluation revisions and TEDB update will be completed by March 31, 1998.

NRC Issue #9

Long term plans where EPRI only best available data.

FPL RESPONSE

Response to this issue is addressed in FPL's response to NRC Issue #8 above.

Commitment Date: See commitment to NRC Issue #8 above.

NRC Issue #10

Update TEDB database.

FPL RESPONSE

Response to this issue is addressed in FPL's response to NRC Issue #8 above.

Commitment Date: See commitment to NRC Issue #8 above.

NRC Issue #11

Plans to upgrade low margin valves.

FPL RESPONSE

FPL plans to improve valves with low margin as part of our periodic verification program. This would result in achieving our margin goals for St. Lucie Units 1 and 2 over the next three fuel cycles for each unit. This will include targeting an SFC =0.2 for all valves and addressing ARD goals. Valves with less than 10% design margin will be reviewed to determine if enhancements are necessary. These potential enhancements include:

1. Reduction in design differential pressure conditions based on more rigorous evaluation of system operating conditions.
2. Procedure changes to reduce design differential pressure conditions.
3. Reduction in design thrust based on actual dynamic testing results.
4. Changes in current thrust windows to accommodate higher field margin.
5. Increased periodic test frequency.
6. Potential valve/actuator modifications.

Commitment Date: Low margin valves for St. Lucie Units 1 and 2 will be addressed over the next three fuel cycles for each unit.

NRC Issue #12

SFC of 0.2 for valves < 0.2.

FPL RESPONSE

Response to this issue is addressed in FPL's response to NRC Issue #11 above.

Commitment Date: See commitment to NRC Issue #11 above.

NRC Issue #13

PORV Block Valve long term plan.

FPL RESPONSE

Unit 1 PORV Block Valve

Current Outage Scope:

1. Change valve stem material to eliminate potential for stem embrittlement.

2. Replace wedges with wedges containing stellited guide slots.

Due to the recent increase in the required valve closing thrust, analysis of the revised thrust windows will be reviewed to determine if adequate margin exists for field setup. If adequate margin is determined not to exist, modifications will be evaluated and implemented.

Unit 2 PORV Block Valves

Due to the recent increase in the required valve closing thrust, analysis of the revised thrust windows will be reviewed to determine if adequate margin exists for field setup. If adequate margin is determined not to exist, modifications will be evaluated and implemented.

Commitment Date: Margins for the PORV block valves will be improved during the next refueling outage for each unit.