



DEC 6 1995

L-95-324  
10 CFR 2.201

Mr. James Lieberman  
Director, Office of Enforcement  
U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Dear Sir:

Re: St. Lucie Unit 1  
Docket No. 50-335  
Inspection Report 95-16  
Reply to Notice of Violation EA 95-180

Florida Power and Light Company (FPL) has reviewed the subject notice of violation. Pursuant to the provisions of 10 CFR 2.201 and Section 182 of the Atomic Energy Act of 1954, as amended, the reply to the notice of violation is attached. FPL will remit payment of the penalty by electronic transfer on or before December 13, 1995.

Very truly yours,

J. H. Goldberg  
President - Nuclear Division

JHG/EJB

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, USNRC Region II  
Senior Resident Inspector, USNRC, St. Lucie Plant

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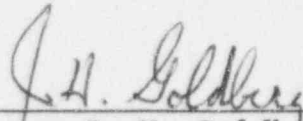
Re: St. Lucie Unit 1  
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STATE OF FLORIDA            )  
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COUNTY OF PALM BEACH    )

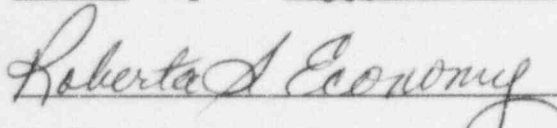
J. H. Goldberg being first duly sworn, deposes and says:

That he is President, 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.

  
\_\_\_\_\_  
J. H. Goldberg

Subscribed and sworn to before me this  
6<sup>th</sup> day of December, 1995.

  
\_\_\_\_\_

NOTARY PUBLIC, in and for the County of  
Palm Beach, State of Florida

My Commission expires \_\_\_\_\_



ROBERTA S. ECONOMY  
MY COMMISSION # CC283823 EXPIRES  
JUNE 1, 1997  
BONDED THRU TROY FAIR INSURANCE, INC

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**VIOLATION A:**

Technical Specification 3.4.13 requires, in part, that two Power Operated Relief Valves (PORVs) be operable in Mode 4 when the temperature of any RCS cold leg is less than or equal to 304°F, in Mode 5 and Mode 6 when the head is on the reactor vessel; and the RCS is not vented through a greater than 1.75 square inch vent. Technical Specification 3.4.13, Action Statement (c), requires that, with both PORVs inoperable, at least one PORV be returned to an operable status or that the RCS be completely depressurized and vented through a minimum 1.75 square inch vent within 24 hours.

Contrary to the above, from November 22 through 27, 1994, and from February 27 through March 6, 1995, while St. Lucie Unit 1 was in one of the conditions specified in Technical Specification 3.4.13 requiring operable PORVs, PORVs V-1404 and V-1402 were inoperable because the main disc guide had been installed upside down and the provisions of Technical Specification 3.4.13, Action Statement (c) were not met. (01013)

**RESPONSE A:**

1. FPL concurs with the violation.
2. **REASON FOR VIOLATION**

The root cause of the PORV inoperability was cognitive personnel error on the part of contractor maintenance personnel who improperly assembled the PORVs following overhaul.

Additionally, there were two contributing factors which prevented early detection of the inoperable PORVs: 1) Post-maintenance testing did not test the ability of the main valve to stroke when the pilot valve actuated, and 2) In-service testing of the valves did not utilize additional available plant parameters to confirm the test results, but relied on indications that could be influenced by system response to the pilot valve actuation. These contributing factors and associated corrective actions are discussed in responses B and C of this submittal.

3. **CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED**

- A. A spare PORV was tested at an offsite laboratory to confirm valve response to an open demand with the main disc guide improperly installed. This testing demonstrated that the PORVs could not have operated as required with the main disc guide assembled in the as-found condition.
- B. The personnel involved in this event were interviewed to determine if additional causal factors were present at the time of the PORV assembly which could have adversely impacted the assembly work. No additional causal factors were identified from this interview.
- C. The PORV maintenance procedure 1-M-0037, which was used during valve assembly, was reviewed by plant staff and revised to include an enhancement of the instruction for PORV main disc guide installation to further assist Maintenance personnel in the proper assembly. Additionally, a Quality Control (QC) hold point was added to the procedure to verify main disc guide orientation during valve assembly.
- D. Both PORVs were removed from the pressurizer and properly reassembled using the revised PORV maintenance procedure.
- E. Valve actuation and seat leakage tests were performed satisfactorily on both PORVs prior to installation. PORV V-1402 was placed back in service on August 14, 1995 and PORV V-1404 was placed back in service on August 15, 1995.
- F. Once in service, the PORVs were satisfactorily tested using a revised in-service test procedure on August 16, 1995.
- G. Other work at the plant which was performed by the same contractor responsible for the PORV assembly was evaluated. No additional problems were identified.
- H. The Unit 2 PORV design was evaluated for generic concerns, and it was determined that no generic concerns existed. This is due to a design difference on Unit 2, which precludes the misinstallation of the main disc guide. Additionally, the Unit 2 PORV design provides direct indication of valve position.

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4. **CORRECTIVE STEPS TO AVOID FURTHER VIOLATIONS**

- A. The procedure for controlling contractor work at St. Lucie, QI 7-PR/PSL-1, "Control of Purchased Material, Equipment and Services, was revised to ensure that procedures planned for use by contractor personnel are reviewed for critical characteristics prior to work. Critical characteristics are considered to be measurable or controllable aspects of a procedure which should be closely monitored to ensure overall job success.
  - B. The contractor certification process and contractor qualifications were reviewed and determined to be satisfactory.
  - C. The contract personnel involved in this event have been excluded from further work at St. Lucie Plant.
  - D. QI 7-PR/PSL-1, "Control of Purchased Material, Equipment and Services" was revised to include mandatory training for FPL personnel acting as contract administrators.
  - E. The PORV post-maintenance and in-service test procedures were revised to ensure that testing provides an adequate indication of valve performance. This corrective action is further described in responses B and C of this submittal.
  - F. St. Lucie Plant safety related maintenance procedures will be reviewed by technical and engineering personnel to assess quality control attributes and critical characteristics. This action is scheduled to be completed by February 1, 1997.
5. Full compliance was achieved on August 16, 1995 with the completion of items 3D, 3E and 3F above.

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**VIOLATION B:**

10 CFR Part 50, Appendix B, Criterion XI, requires, in part, that a test program be established to ensure that all testing required to demonstrate that components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents and that the test program shall include proof tests prior to installation.

10 CFR 50.55a(f)(4)(ii) requires, in part, that inservice tests to verify operational readiness of valves, whose function is required for safety, conducted during successive 120-month intervals, must comply with requirements of the latest edition and addenda of the ASME Code.

Section XI of the 1983 ASME Boiler And Pressure Vessel Code, article IWV-3000, Test Requirements, Section IWV-3200, Valve Replacement, Repair, and Maintenance, requires, in part, that when a valve or its control system has been replaced or repaired or has undergone maintenance that could affect its performance, and prior to the time it is returned to service, it shall be tested to demonstrate that the performance parameters, which could be affected by the replacement, repair, or maintenance are within acceptable limits.

Contrary to the above, after maintenance performed on November 4, 1995, the licensee failed to adequately identify and perform post-maintenance testing of Power Operated Relief Valves V-1404 and V-1402 to demonstrate that the valves would perform satisfactorily in service after valve maintenance was performed. Specifically, the post-maintenance test performed did not include a verification that the valve would change state under pressure prior to return to service. (01023)

**RESPONSE B:**

1. FPL concurs with the violation.
2. **REASON FOR VIOLATION**

The root cause of this violation was a procedural deficiency, in that the PORV post-maintenance test procedure did not require verification of main valve operation when the pilot valve actuated. The post-maintenance test procedure required only that a seat leakage test be performed.

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3. **CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED**

- A. The Unit 1 PORV maintenance procedure was revised to require verification that the main valve disc actuates when test pressure is applied at the valve lift setpoints.
- B. Following proper valve reassembly, both PORVs were satisfactorily tested using the revised test procedure. The PORVs were then placed back into service on August 14, 1995 and August 15, 1995, respectively.
- C. Plant staff conducted a review of the Unit 2 outage scope post-maintenance, safety related, test procedures to ensure that critical component functions were addressed by these procedures.

4. **CORRECTIVE STEPS TO AVOID FURTHER VIOLATIONS**

- A. The Unit 2 PORV post-maintenance test procedure was revised to provide verification that the main valve actuates during testing.
  - B. Plant staff is reviewing the post-maintenance testing of other safety related equipment to ensure that testing adequately demonstrates component operability. This action will be completed by March 31, 1996.
  - C. Predictive and in-service test groups were consolidated under a single supervisor reporting to the Operations Manager to strengthen the technical leadership in the testing area and to improve overall equipment performance at the plant.
5. Full compliance was achieved on August 15, 1995 with the completion of items 3A and 3B above.

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**VIOLATION C:**

10 CFR 50.55a(f)(4)(ii) requires, in part, that inservice tests to certify operational readiness of valves, whose function is required for safety, conducted during successive 120-month intervals, must comply with requirements of the latest addition and addenda of the ASME Code.

Florida Power and Light Second Ten-year Inservice Inspection Interval Inservice Testing Program For Pumps and Valves, Document Number JNS-PSI 203, Revision 5, states, in part, that, between February 11, 1988 and February 10, 1998, the St. Lucie Unit 1 ASME Inservice Inspection (IST) Program will meet the requirements of the ASME Boiler and Pressure Vessel Code (the Code), Section XI, 1983 Edition.

Section XI of the 1983 ASME Boiler And Pressure Vessel Code, article IWV-3000, Test Requirements, Section IWV-3400, Inservice Tests, requires, in part, that Category A valves shall be full-stroke exercised at least once every three months. Category A valves that cannot be exercised during plant operation shall be full-stroke exercised during cold shutdowns.

Contrary to the above, on November 25, 1994, and February 27, 1995, the licensee failed to adequately full-stroke exercise ASME Category A Power Operated Relief Valves V-1404 and V-1402. Specifically, operational surveillance testing, performed on the above dates to satisfy ASME Section XI full-stroke exercise requirements, under Administrative Procedure 1-0010125A, "Surveillance Data Sheets" (revision 39), Data Sheet 24, "Valve Testing Procedures," did not include an adequate test to detect that the main disc guides in valves V-1404 and V1402 were misoriented causing the valves to fail to stroke open. (01033)

**RESPONSE C:**

1. FPL concurs with the violation.

2. **REASON FOR VIOLATION**

The root cause of this violation was a procedural deficiency, in that the PORV in-service test procedure relied solely on one indication (acoustic flow monitoring) to determine valve operation, and other confirmatory parameters were not included as test criteria of the in-service test.



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3. **CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED**

- A. The PORV in-service test procedure was revised to include diverse and confirmatory indications of valve operation.
- B. The PORVs were functionally tested using the revised in-service test procedure on August 16, 1995. The results of the test were satisfactory.

4. **CORRECTIVE STEPS TO AVOID FURTHER VIOLATIONS**

- A. The in-service test procedure for the PORVs, as stated above, was revised to require the use of diverse indications when confirming proper valve operation. These parameters include:
    - 1) Reactor Coolant System (RCS) pressure
    - 2) Quench Tank temperature
    - 3) Quench Tank level
    - 4) Quench Tank pressure
    - 5) Relief Valve downstream temperature
    - 6) Acoustic flow
  - B. In-service testing of other safety related equipment is being reviewed by plant staff to ensure that the testing adequately demonstrates component reliability. This action will be completed by March 31, 1996.
  - C. Predictive and in-service test groups were consolidated under a single supervisor reporting to the Operations Manager to strengthen the technical leadership in the testing area and to improve overall equipment performance at the plant.
5. Full compliance was achieved on August 16, 1995, with the completion of items 3A and 3B, above.