

November 13, 1995

EA 95-180

Florida Power and Light Company
ATTN: Mr. J. H. Goldberg
President - Nuclear Division
Post Office Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$50,000
(NRC Inspection Report No. 50-335/95-16 and 50-389/95-16)

Dear Mr. Goldberg:

This refers to the inspection conducted on August 9-30, 1995, at the St. Lucie Nuclear Plant. The inspection included a review of the circumstances associated with the incorrect installation of a key component in both of the Unit 1 Power Operated Relief Valves (PORVs) resulting in inoperability of both PORVs. The results of our inspection were sent to you by letter dated September 8, 1995. A closed predecisional enforcement conference was conducted in the Region II office on September 25, 1995, to discuss the apparent violations, the root causes, and your corrective actions to preclude recurrence. A list of conference attendees, NRC slides, and a copy of your presentation summary are enclosed.

Based on the information developed during the inspection and the information you provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. Violation A, described in the enclosed Notice, involved the failure to meet Technical Specification 3.4.13 requirements to maintain PORVs V-1404 and V-1402 operable when at low pressure conditions. The valves were inoperable because the main disc guide had been installed upside down during routine maintenance. Although the direct root cause of Violation A was the failure of contractor technicians to specifically follow the approved maintenance procedure, other weaknesses contributed to the errors. One such weakness involved the fact that although the maintenance activities were performed on both valves by the same technicians, additional controls were not in place to ensure operability and protect against a common mode failure such as verification of orientation of the main disc guide by either quality control or an independent verification by a second party.

Violation B involved the failure to adequately identify and perform post-maintenance testing of PORVs V-1404 and V-1402 in order to demonstrate that the valves would perform satisfactorily in service after valve maintenance was performed. Although testing was performed to confirm that seat leakage requirements were met, you failed to identify and perform testing to ensure that the valves would function as required under pressure. Testing to ensure

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satisfactory performance of valves in service is a requirement of 10 CFR Part 50, Appendix B, Criterion XI, Test Control.

Violation C involved the failure to perform adequate inservice testing of the PORVs as required by 10 CFR 50.55(f)(4)(ii). The inservice testing performed relied solely on the use of acoustic monitoring of valve discharge to indicate valve position. This method was not sufficient to discern the difference between bypass flow through the PORV pilot valves and actual changes in main valve position. At low pressure the inservice test was performed with the block valves open providing multiple alternative indications of PORV position. The violation was caused by the reliance on a parameter insufficient to determine valve position.

The NRC relies on implementation of strong maintenance and testing programs to ensure operability of key components. The NRC is particularly concerned that your procedures and controls in diverse parts of the maintenance and testing process failed and led to a common mode failure of the PORVs. In addition, opportunities to recognize the inoperability of the valves during a unit trip and during inservice tests were missed. The safety consequences of these multiple errors were that the availability of both PORVs for secondary heat removal in a post accident condition and for low temperature overpressure protection was lost. The failure to maintain programs that provide defense in depth to preclude common mode failures is a significant safety and regulatory concern. Therefore, these violations are classified in the aggregate in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), (60 FR 34381; June 30, 1995/NUREG-1600) as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for a Severity Level III problem. Because your facility has not been the subject of escalated enforcement actions within the last two years, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment provision in Section VI.B.2 of the Enforcement Policy. Your immediate corrective actions included restoring the valves to an operable status, revising maintenance and test procedures, and conducting a comprehensive review of the facts and circumstances which led to the valve failure. Your planned long-term corrective actions included, in part, (1) a phased review of other maintenance and test procedures to ensure quality control attributes are identified and verified and that post-maintenance and inservice testing adequately demonstrate operability; (2) consolidating test groups under a single manager; and (3) training on accountability and administration with regard to the control of contractors. The NRC determined that credit was warranted for the factor of *Corrective Action*.

Notwithstanding your past performance and corrective action, the NRC may exercise discretion, as provided in Section VII.A of the Enforcement Policy, to propose a civil penalty to ensure that the enforcement action reflects the significance of the circumstances and conveys the appropriate regulatory message. In this case there were six opportunities missed to ensure system

operability with a resulting loss of a safety function required by your Technical Specifications. These opportunities involved:

- 1) Expected provisions to ensure valve operability during maintenance on the PORVs were not implemented. Examples included the failure to include a quality control holdpoint for a critical point in the reassembly and the failure to employ independent verification methods when vulnerabilities to common mode failures were introduced by allowing the same individuals to work on the redundant valve.
- 2) Management reviews of testing criteria and results were inadequate. Your plant safety committee and plant management accepted post maintenance testing that only verified seat leakage prior to putting the valves back in service. The post maintenance test failed to demonstrate per the ASME code that valve performance parameters were within acceptable limits prior to the time the valves were returned to service.
- 3) Operations and Maintenance did not have a common understanding of the status of PORV operability and each organization made erroneous assumptions about the post-maintenance and preoperational testing that the other organization would perform. As a result of these misunderstandings, the PORVs were placed in the RCS and declared operable without reasonable assurance that the PORVs would perform satisfactorily in the low temperature over pressure conditions which would exist prior to performance of the routine surveillance test.
- 4) The engineering and management reviews of the ability of the acoustic monitors to provide a reliable indication of valve operability were inadequate. Your subsequent investigation of the event revealed that the PORV pilot valves allowed sufficient bypass flow to actuate the acoustic monitors. A thorough initial review could have identified this testing flaw.
- 5) Operator attention to diverse control board indications during testing was lacking and only when the one parameter that was required, i.e., the acoustic monitoring indication, failed, did operators question the other indications they were getting.
- 6) An adequate post trip data analysis during the July 1995 unit trip would have detected that the PORVs were inoperable.

These failures warrant the exercise of discretion. Therefore, to emphasize the importance of maintaining adequate and diverse methods to ensure system operability, I have been authorized, after consultation with the Director, Office of Enforcement and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the base amount of \$50,000 for the Severity Level III problem.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be placed in the NRC Public Document Room (PDR). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96.511.

Sincerely,

Original signed by
Stewart D. Ebnetter

Stewart D. Ebnetter
Regional Administrator

Docket No. 50-335
License No. DPR-67

Enclosures: 1. Notice of Violation and Proposed
 Imposition of Civil Penalty
 2. List of Attendees
 3. NRC Slides
 4. Licensee Presentation Handout

cc w/encls: (See Next Page)

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NRC Resident Inspector

U.S. Nuclear Regulatory Comm.

7585 South Highway A1A

Jensen Beach, FL 34957-2010

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