

March 31, 1999

EA 98-513

Florida Power & Light Company
ATTN: Mr. T. F. Plunkett
President - Nuclear Division
P. O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: NOTICE OF VIOLATION AND EXERCISE OF DISCRETION (NRC
INSPECTION REPORT NOS. 50-335/98-14, 50-389/98-14)

Dear Mr. Plunkett:

This refers to the inspection conducted on October 10-23 and November 2-6, 1998, at the St. Lucie facility. The purpose of the inspection was to further evaluate the issues identified during the Fire Protection Functional Inspection (FPFI) that was conducted in March and April 1998. The results of the inspection were discussed with your staff at an exit meeting conducted on December 4, 1998, and were formally transmitted to you by letter dated December 4, 1998. An open, predecisional enforcement conference was conducted in the Region II office on January 7, 1999, with you and members of your staff to discuss the apparent violations, the root causes, and corrective actions to preclude recurrence. A list of conference attendees, copies of the Nuclear Regulatory Commission's (NRC) slides, and Florida and Power Light Company's (FP&L) presentation materials are enclosed.

Based on the information developed during the inspections and the information that you provided during the conference, the NRC has determined that four violations of NRC requirements occurred. One of the violations is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding all four violations are described in detail in the subject inspection report and summarized below.

The first violation, as described in the Notice, involves an inadequate fire protection procedure intended to implement the alternative shutdown capability in the event of a main control room evacuation. At the conference and as documented in NRC Inspection Report Nos. 50-335/98-14, 50-389/98-14, the NRC initially determined that a violation of 10 CFR 50, Appendix R, Sections III.L.2.e and III.L.3 occurred, based on the understanding that, for fires in the control room or in the cable spreading room, the normal heating, ventilation, and air conditioning (HVAC) support functions would be lost due to a loss of offsite power. We also previously determined that heat and smoke from a postulated cable spreading room fire could affect the habitability of the Hot Shutdown Control Panel (HSCP) room and the switchgear room. However, based on new information FP&L provided at the conference, the NRC has concluded that the issue is more appropriately characterized as a procedural inadequacy involving the procedures needed to provide operator habitability, as it appears that HVAC equipment would have been available to provide the process cooling necessary for the HSCP room and the 1B Electrical Equipment room. Specifically, process cooling to these areas could be achieved through manual operation of HVAC equipment whose control circuits and

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components were protected from fire. As discussed at the conference, Procedure 1-ONOP-100.02, "Control Room Inaccessibility," was the procedure plant operators would have used to evacuate the control room in the event of a fire, and this procedure did not provide the necessary direction to plant operators to place in service the appropriate HVAC equipment and take other actions to ensure acceptable habitability conditions in the 1B Electrical Equipment room and HSCP room. You pointed out at the conference that even absent specific procedural guidance, there was likelihood that operators would transition to Emergency Operating Procedure (EOP) 1-EOP-99, "Appendices/Figures/Tables," which did provide direction to energize the 1B Switchgear Room Exhaust Fan. However, operation of this fan alone, per the EOP, could have caused smoke migration which would have further impacted habitability of the HSCP, absent other, unproceduralized actions. Based on further review of this issue, the NRC has concluded that the lack of procedural guidance to ensure proper and expeditious operation of HVAC equipment supporting the 1B Electrical Equipment room and HSCP room is a violation of 10 CFR 50, Appendix R, Section III.L.3. The root cause of the violation was FP&L's failure to adequately address HSCP habitability in the original Unit 1 Safe Shutdown Analysis and Alternate Shutdown Procedure.

As part of its consideration of the Severity Level of this violation, the NRC independently assessed its risk significance. As presented at the conference, your staff concluded the increase in risk was low. Our analysis concludes that, although the contribution to risk of the violation when viewed in isolation may be low, when viewed in the context of the overall fire protection program at this facility, the violation is of moderate risk significance. Specifically, the FPGI noted other deficiencies in detection and suppression capabilities at the facility. Such deficiencies credibly increase the frequency of the conditions under which the habitability of the HSCP room becomes an issue, and thus increase the risk. Additionally, there was uncertainty as to the potential for smoke migration to the HSCP room which would adversely affect the success of achieving and maintaining safe shutdown conditions, upon energization of the available HVAC system.

The NRC has normally categorized at Severity Level III those violations, in which a postulated fire could so damage equipment that shut down could not be achieved and maintained using the applicable equipment identified in the fire hazards analysis in accordance with applicable requirements. In this case, the absence of instructions in the designated procedure, to provide HVAC support to ensure habitability of the HSCP room, posed an additional challenge to achieving safe shutdown. For these reasons, the violation has been categorized in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 at Severity Level III.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III violation. Because your facility has been the subject of escalated enforcement action within the last two years¹, the NRC considered whether credit was warranted for Identification and Corrective Action in accordance with the civil penalty assessment process described in Section VI.B.2 of the Enforcement Policy. This violation was identified by the NRC. However, based on the information provided by FP&L at the conference,

¹A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$88,000 was issued on March 25, 1998, for a Severity Level II problem involving an incorrect Refueling Water Tank setpoint (EA 98-009).



the NRC has determined that credit is warranted for identification of this issue because the FP&L SSA Revalidation effort, in progress at the time of the inspection, was sufficient in scope to conclude that FP&L would have likely identified this issue absent NRC involvement. Your corrective actions for the violation were prompt and comprehensive. FP&L immediately revised the Alternate Shutdown Procedure to include interim manual actions to operate HVAC equipment and create an adequate ventilation path to support the 1B Switchgear Room and HSCP room habitability. This was considered an acceptable interim measure until modifications to protect the HSCP fan circuits, scheduled for completion in 1999, are completed. In addition, cameras were installed to serve as a continuous fire watch for this fire area. As such, the NRC concluded that credit is warranted for the factors of Identification and Corrective Action.

Therefore, to encourage prompt identification and comprehensive correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty for this violation. However, similar violations in the future could result in a civil penalty.

The second violation involves FP&L's failure to install a one-hour rated fire barrier for charging pump (CP) 1A. Operating License Condition 2.C(3) requires that FP&L implement the fire protection program as described in the Updated Final Safety Analysis Report (UFSAR). The UFSAR, Volume 9.5, Section 4N, Exemption N1 states that conduits carrying cables for CP 1A in Fire Zone 38 will be provided with a minimum one-hour rated protection. However, due to FP&L's inadequate implementation of the original fire protection exemption, the required one-hour fire barrier was not installed in Fire Zone 38 as required by FP&L's Operating License, Condition 2.C(3). If an all-consuming fire occurred in Fire Area N (which consists of Fire Zones 36A, 38, 75, 76) affecting cables above the fire partitions that separate the charging pumps, all charging pumps could have been rendered inoperable. As FP&L presented at the conference, EOPs were available to place in service the high pressure safety injection pumps to provide an alternate reactor coolant system makeup source, should the charging pumps have become unavailable due to a fire in the area.

Regarding the third violation, the NRC initially determined that FP&L was unable to limit fire damage so that one train of a system (in this case, the Train A shutdown cooling equipment, including the low pressure safety injection (LPSI) 1A pump) was free from fire damage as required by Section III.G.1 of Appendix R to 10 CFR 50, because Train A equipment contained unprotected cables. However, FP&L provided information at the conference indicating that Train B components, being protected from fire, could easily be placed in service to satisfy Appendix R requirements to achieve and maintain hot or cold shutdown. As FP&L stated at the conference, the procedure to be used to respond to fires in this fire area, Off-normal Operating Procedure 1-ONOP-100.01, "Response to Fire," incorrectly identified that Train A shutdown cooling equipment was protected from fire instead of Train B equipment. This error occurred during FP&L's original SSA reviews. Based upon an additional review of this issue, including the information FP&L provided at the conference, the NRC has concluded that Procedure 1-ONOP-100.01 was inadequate, in that it referenced the use of Train A of shutdown cooling equipment rather than Train B equipment. As FP&L stated at the conference, the use of Train B LPSI pumps to achieve cold shutdown was maintained at all times and could have been accomplished in accordance with EOPs, and this task was well within the capability of plant operators.

The NRC has determined that these two violations did not pose a significant challenge to the ability to achieve safe shutdown. Therefore, the NRC has concluded that the two violations should be classified separately as Severity Level IV violations. Your corrective actions for the two violations were determined to be prompt and comprehensive. Corrective actions for first of these violations included the completion of a modification to reroute the control circuit for CP 1A, a modification for CP 1A power cable protection (to be completed by March 1999), and the installation of cameras to serve as a continuous fire watch for this fire area. Your corrective actions for the second of these violations included a prompt procedural revision to reflect that Train B LPSI is the protected train. Therefore, these Severity Level IV violations are being treated as two separate Non-Cited Violations, consistent with Appendix C of the NRC Enforcement Policy.

An additional apparent violation was discussed at the conference and documented in NRC Inspection Report Nos. 50-335/98-14, 50-389/98-14, involving the analysis methodology and evaluations for circuits of equipment whose spurious actuation could adversely affect post-fire safe-shutdown capability. Specifically, this issue involved three separate but related areas: (1) an FP&L analysis methodology, which assumed only one spurious operation to occur as a result of fire in any area, without any further consideration of the number, type, or specific location of potentially affected cables and circuits; (2) the potential for fire to cause a breach of pressurizer power operated relief valve (PORV) and reactor coolant system gas vent system (RCSGVS) high/low pressure interface boundaries; and (3) an inadequate evaluation of the potential for fire to cause damage to motor operated valves (MOVs) relied on to accomplish post-fire safe-shutdown functions.

You informed the NRC at the conference that FP&L disagreed with the NRC's position that 10 CFR 50, Appendix R required licensees to consider multiple spurious equipment operation in facility SSAs. FP&L stated that the facility's original SSA assumed any and all spurious equipment operation, one at a time, in accordance with NRC Generic Letter 86-10, Implementation of Fire Protection Requirements, dated April 24, 1986. In addition, FP&L concluded that issues (1) and (2) were not risk significant, based on the following: the results of the recently completed Unit 1 and 2 SSA Revalidation effort, which considered multiple concurrent spurious equipment operation and concluded that this condition would have minimal impact on the overall results of the SSA; the small portion of the PORV circuitry that was not protected; and the reactor coolant system inventory loss due to spurious operation of the RCSGVS high/low pressure interface boundary valves could be accommodated by the makeup capacity of one charging pump. However, the NRC has concluded that multiple spurious operation of equipment in the event of a fire is within the licensing basis of the facility and our position is consistent with previously issued NRC guidance for implementation of fire protection requirements.

Accordingly, we have determined that issues (1) and (2) above constitute violations of 10 CFR 50, Appendix R, Section III.L.7. However, after consultation with the Director, Office of Enforcement, the NRC is exercising discretion to not issue a Notice of Violation for these Severity Level III violations. For issue (1), discretion is being exercised pursuant to Section VII.B.6 of the Policy because of: (i) the apparent widespread industry misunderstanding of the requirement; (ii) the low risk significance; and (iii) your actions to promptly perform the required analysis, evaluate the effect of this condition on the facility, and complete the required corrective actions. For issue (2), discretion is being exercised pursuant to Section VII.B.3 of the



NRC Enforcement Policy because: (i) these circuit vulnerabilities were independently identified by your staff prior to the FPF; (ii) they were caused by inadequate original implementation of the SSA and not reflective of current performance; and (iii) the corrective actions taken and planned are appropriate.

Based on the information FP&L provided at the conference, the NRC considers it appropriate to hold in abeyance the final disposition of issue (3) above regarding the potential for fire to cause damage to MOVs, pending the completion of FP&L's MOV evaluation and NRC's additional review of the results of that evaluation. This issue will continue to be identified as EEI 50-335, 389/98-14-07.

The NRC has concluded that information regarding the reason for the violation cited in the enclosed Notice, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket as documented in Inspection Report No. 50-335/98-14, 50-389/98-14 and this letter. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

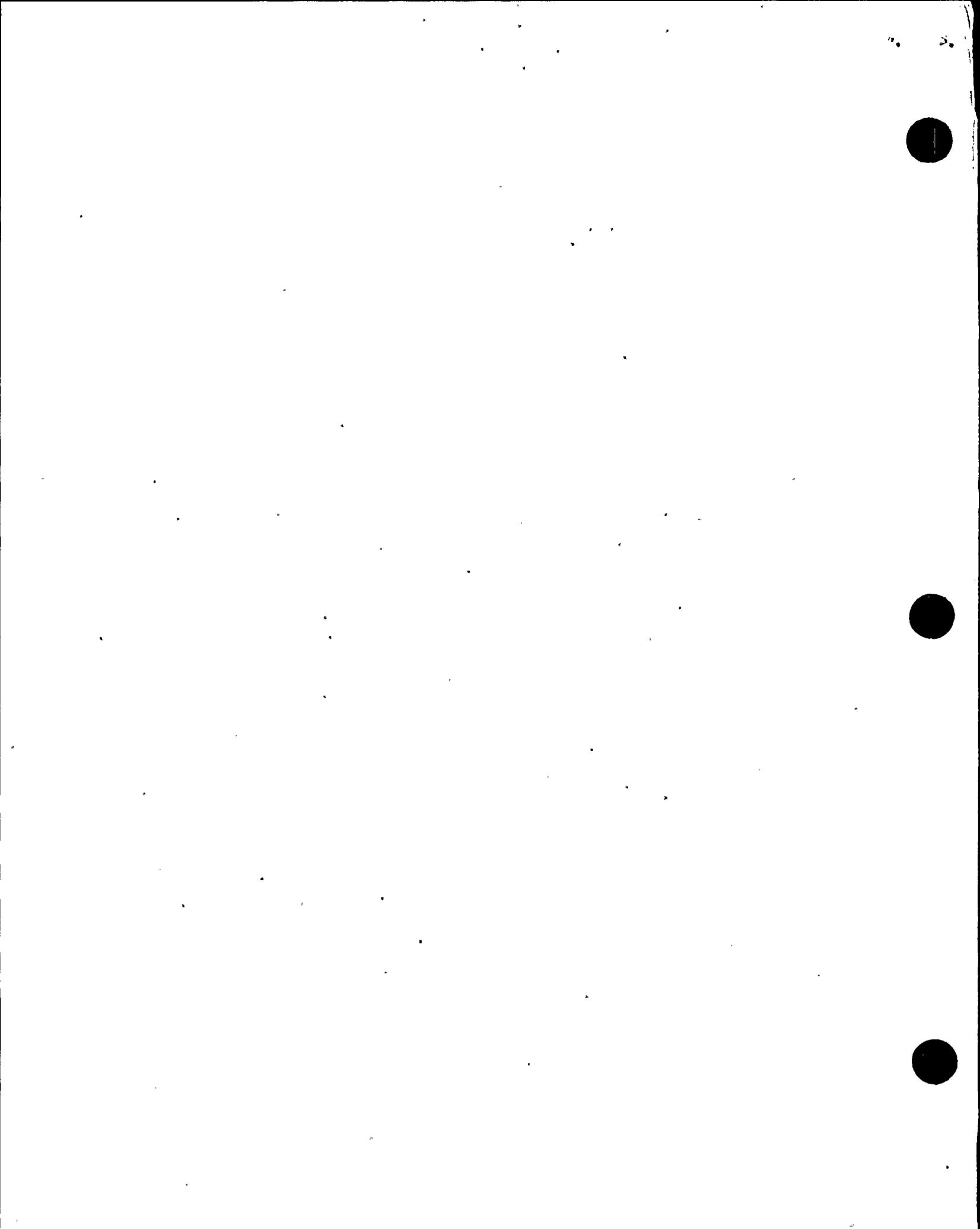
Sincerely,

Original Signed by
Luis A. Reyes

Luis A. Reyes
Regional Administrator

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosures: 1. Notice of Violation
 2. List of Attendees
 3. NRC Slides
 4. Licensee Material



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