

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

SESSION NBR: 9312270133 DOC. DATE: 93/12/16 NOTARIZED: NO DOCKET #  
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

AUTH. NAME: GOLDBERG, J.H. AUTHOR AFFILIATION: Florida Power & Light Co.  
 RECIP. NAME: RECIPIENT AFFILIATION: Document Control Branch (Document Control Desk)

SUBJECT: Responds to violation noted in Insp Repts 50-250/93-24 & 50-251/93-24. Corrective actions: boration initiated & control rods inserted to restore power to below 100% & to return Tavg to within normal operating band.

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DEC 16 1993

L-93-315  
10 CFR 2.201

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

Gentlemen:

Re: Turkey Point Units 3 & 4  
Docket No. 50-250/251  
Reply to Notice of Violation  
NRC Inspection Report 93-24

Florida Power & Light Company has reviewed the subject inspection report and, pursuant to 10 CFR 2.201, the required response is attached.

If there are any questions, please contact us.

Very truly yours,

J. H. Goldberg  
President  
Nuclear Division

JHG/CLM/cm

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
T. P. Johnson, Senior Resident Inspector, USNRC,  
Turkey Point Nuclear Plant

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ATTACHMENT

REPLY TO A NOTICE OF VIOLATION

RE: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
NRC Inspection Report 93-24

FINDING:

Technical Specification 6.8.1 requires that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

Item 2.g of Regulatory Guide 1.33, Revision 2, February 1978, Appendix A, recommends the use of procedures for activities involving power operation and process monitoring, and item 1.h of this Appendix recommends the use of procedures for log entries.

Section 5.3, Dilution, step 5.3.2.9, of procedure 0-OP-046, Chemical and Volume Control System - Boron Concentration Control, requires the operator to observe Tav<sub>g</sub> for 15 to 20 minutes and stop dilution if Tav<sub>g</sub> increases greater than 1.5°F above Tref. Section 5.3.13 of procedure 0-OP-46 also requires entries to be made in the reactor control operator (RCO) log book following completion of any section.

Section 5.3 of procedure 0-ADM-204, Operations Narrative Log Books, requires log book entries to be made in the RCO log book for activities involving reactivity changes other than during startup and shutdown.

Contrary to the above, on October 22, 1993, the Unit 3 RCO failed to adequately observe Tav<sub>g</sub> and Tref during the performance of section 5.3 of procedure 0-OP-046. Consequently, Tav<sub>g</sub> increased more than 2.6°F above Tref, and an inadvertent overdilution event went unnoticed. This resulted in an unplanned increase in reactor power. Further, this reactivity change, as well as others, were not logged in the RCO log book.

This is a Severity Level IV violation (Supplement 1).



RESPONSE TO FINDING

1. Florida Power & Light Company (FPL) concurs with the finding.
2. Reason for the violation:
  - a. The root cause of the inadvertent dilution was an inadequate work practice by the RCO (licensed operator). Specifically, the self-checking was less than adequate, in that the expected response was not checked. The RCO intended to set the dilution for 100 gallons; instead he inadvertently set in 1000 gallons. He did not review his action to ensure that the proper amount was set. Had he set in 100 gallons instead of 1000, the dilution should have taken about 2 minutes. The system was not checked to verify that the dilution had stopped. Additionally, the result of adding the "100" gallons was not checked in a timely manner, to see the effect of the dilution. A contributing cause was that the RCO allowed himself to be distracted by other work. It is normal for the RCOs to be interrupted while other tasks are in process, and these interruptions are not normally a problem. In this event, the RCO was monitoring reactor coolant pumps on the Emergency Response Data Acquisition and Display System (ERDADS), and preparing for a liquid release. These tasks could have been delayed in order to maintain focus on the positive reactivity addition and the expected plant response.
  - b. The root causes of the failure to log the reactivity change were inadequate training on the procedure revisions which added the requirements to log reactivity changes, and inadequate enforcement of the procedural requirements.

0-OP-046 was first created in November 1985, as an upgrade replacement for three old style procedures, one of which was OP-2603.1, CVCS Boron Concentration Control System. OP-2603.1 did not require logging the start or completion of the procedure or its sections. 0-OP-046 added the requirement in the "Records Required" section, and has since been revised to require logging only of the completion of a section.

0-ADM-204 was first created in September 1988, as part of an upgrade/replacement of AP-0103.2, Responsibilities Of Operators And Shift Technicians On Shift And Maintenance Of Operating Logs And Records. AP-0103.2 required the logging of "operations which are intended to change the Reactor Coolant System boron concentration. (Dilutions may be logged as a total figure for shift or period of time." 0-ADM-204 requires the logging of "reactivity changes (other than during startup and shutdown)."

Although operators were trained on the upgrade procedures, these nuances of change in logging criteria apparently were not sufficiently recognized within the framework of the wholesale upgrade of the procedures. As a result, RCOs continued to log dilutions as they had in the past.

3. Corrective steps which have been taken and the results achieved:

Boration was initiated and control rods were inserted to restore power to below 100% and to return Tav<sub>g</sub> to within the normal operating band.

The operator involved was removed from control board duties until his performance was evaluated, and he was disciplined in accordance with nuclear division policy.

Actual reactor power was analyzed by calorimetric data, and determined to be 101.4%, thereby demonstrating that compliance with the operating license (102% maximum) had been maintained.

4. The corrective steps which have been taken to avoid further violations:

A night order was issued requiring the RCOs to remain at the control board during reactivity changes to monitor the process.

A review of this event was required of all crews prior to their assuming the watch.

Senior plant management met with all operating crews to discuss the cause of the event and the actions which could have been taken to prevent an occurrence of this nature.

To preclude a recurrence of the failure to log all reactivity changes, a letter was issued to all operations personnel reminding them of the procedural requirements and management expectations regarding log keeping and log entries.

The Assistant Nuclear Plant Supervisor (a licensed senior reactor operator) has been assigned to remain within the operating area of each unit's main control board to provide additional supervisory oversight until plant management is satisfied that all crews have adequately demonstrated their commitment to the procedural requirements and management expectations described above.





5. Corrective actions which will be taken to prevent further violations:

Engineering is evaluating a modification to the digital totalizer controls to add an audible indication of boration or dilution flow as a system enhancement to aid the operator.

Training will be conducted to (1) review this event, (2) re-emphasize self-checking techniques, and (3) show how the failure to use self-checking led to the event. At least one scenario to demonstrate the failure of the primary water controls will be developed.

6. The date when full compliance was achieved:

Reactor power was restored to  $\leq 100\%$  by 9:20 P.M. on October 22, 1993. The next routine dilution took place on October 23, 1993. It was properly observed and logged, in accordance with 0-OP-046 and 0-ADM-204, thereby achieving full compliance.

1

