

# CATEGORY 1

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SUBJECT: Responds to violations noted in insp repts 50-335/97-13 & 50-389/97-13. Corrective actions: initiated work package change notice to change step to match field conditions & provided addl levels of contractor oversight.

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Florida Power & Light Company, 6351 S. Ocean Drive, Jensen Beach, FL 34957

January 14, 1998

L-98-006  
10 CFR §2.201

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

Re: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Reply to a Notice of Violation  
NRC Integrated Inspection Report 97-13

Florida Power and Light Company (FPL) has reviewed the subject Notice of Violation and, pursuant to 10 CFR §2.201, the response to the violations is attached.

Two of the three violations from Inspection Report 97-13 are the result of personnel errors. FPL continues in its efforts to reinforce the need for verbatim compliance with procedures to minimize the potential for personnel errors. The third violation is an example of inadequate procedures. This problem is being countered by the ongoing effort at St. Lucie Plant to ensure that procedures are properly written and sufficiently detailed to assure proper implementation of all activities.

Please contact us with questions on the enclosed violation responses.

Very truly yours,

Thomas F. Plunkett  
President  
Nuclear Division

TFP/JAS/EJW

Attachment

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

*TFP/1/*

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an FPL Group company

L-98-006  
Attachment  
Page 1

Violation A

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions and procedures and shall be accomplished in accordance with those instructions and procedures. The licensee's Topical Quality Assurance Report implements this requirement in Section 5.0.

Licensee Work Package 1038, step 38, stated, in part, "Apply or verify markings on the top and bottom of one of the main girders to show the travel limits from the centerpost centerline. Note: Ensure the locations of the markings are visible to the hydrajack operator and to the person in charge on the floor."

Contrary to the above, on November 16, 1997, no markings were identified on the top and bottom of the main girders. In addition, the markings on one side of one main girder were not visible to the hydrajack operator and to the person in charge on the floor.

This is a Severity Level IV Violation (Supplement I) applicable to Unit 1.

Response

1. FPL concurs with the violation.

2. REASON FOR VIOLATION

The cause of the violation was cognitive personnel error by a non-utility field engineer. Additionally, the contractor oversight by FPL personnel was inadequate.

FPL reviewed the work package requirements for the load limit markings for the Temporary Lifting Device (TLD) and verified that the original steam generators were lifted safely within the safe load limits imposed on the lift. However, markings used to define the safe load limits were placed in a different configuration than called for in the procedure used for the installation of the TLD inside containment.

The load limit markings for the erection and testing of the TLD outside containment (work package 1039) required that markings be applied on the side of one main girder, which were visible to the person-in-charge (PIC) from the ground and to the hydrajack operators. However, these load limit marking requirements were different from the load limit marking requirements for the TLD when erected inside containment (work package 1038). Work package 1038 required markings on the top and bottom of one main girder once installed inside containment. The non-utility field engineer incorrectly signed off the hold point based on this step being "previously



installed during the load test at south yard," (i.e., when the TLD was load tested outside containment). A work package change request should have been submitted, or additional tape marks applied in accordance with the work package. The level of contractor oversight provided by FPL personnel was inadequate to identify the work package noncompliance and the resultant discrepant TLD safe load markings.

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

- A. A work package change notice was initiated to change the step to match the field conditions. The safe load limit markings on the side of the main girder were verified as correct and additional markings were applied to the other main girder. The correct load limit markings were applied on November 20, 1997.
- B. Additional levels of contractor oversight were provided by the FPL Quality Assurance Department to ensure procedural compliance by the Steam Generator Team.

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

- A. The requirements of verbatim compliance with work steps, procedural steps, and sign-offs were the topic of documented training for FPL and contractor personnel which was completed on November 21, 1997.
  - B. Management expectations concerning FPL oversight of contractors will be reinforced at the site wide pre-outage stand down meetings. FPL field coverage of contractors and adherence to FPL procedures by contractors will be one of the topics covered in these meetings.
5. Full compliance was achieved on November 20, 1997, when the proper safe load limit markings were applied to the TLD.

L-98-006  
Attachment  
Page 3

Violation B

Technical Specification 6.8.1.a requires that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A, Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation), Revision 2, February 1978. Appendix A paragraph 7.e requires licensee's establish procedures for (1) Access Control to Radiation Areas Including a Radiation Work Permit System and (7) Personnel Monitoring.

Contrary to the above, on November 4, 1997, the licensee did not have adequate written access control procedures to radiation areas in that the procedures did not provide for the issuance of tele-dosimetry devices that would ensure the dose limit setpoints applied in tele-dosimetry monitoring systems were in agreement with the limits established on the applicable Radiation Work Permits.

This is a Severity Level IV violation (Supplement IV) applicable to both Units.

Response

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

There were several causes which contributed to this event. The use of tele-dosimetry at St. Lucie gradually evolved from an informational tool used by Health Physics to a system actively used for controlling radiation exposure. However, St. Lucie did not recognize the need for procedural requirements and training once tele-dosimetry was actively relied upon for dose control, which resulted in the following deficiencies:

- 1) Health Physics procedure HPP-1, "Radiation Work Permits," did not contain the necessary instructions to Health Physics personnel when tele-dosimetry is required by the Radiation Work Permit (RWP).
- 2) There was no specific procedure that addressed the use of Telemerlin dosimetry.
- 3) Training provided to FPL and contract personnel did not result in an adequate level of knowledge and understanding of the system.

The REMACS system, which is used to create and administer RWPs does not communicate with the tele-dosimetry system, so a setpoint change to one does not automatically result in a change to the other. Dose and dose rate alarm setpoints must be manually changed on the tele-dosimetry

system after a change is made to the RWP. Personnel involved in this event were not aware of the requirement to manually update the tele-dosimetry system, and did not notify the appropriate individual working in the multibadge office to facilitate the change after the Telemerlin dose alarm set point was changed on RWP 97-1431. This RWP was written to govern work on the Unit 1 pressurizer during heater replacement and nickel plating operations.

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

- A. The dose alarm setpoint for RWP 97-1431 was revised on the tele-dosimetry system to 400 mrem upon discovery of the problem.
- B. Health Physics supervision included the tele-dosimetry issue station in the distribution of RWPs and revisions to RWPs that require Tele-dosimetry.
- C. Health Physics Procedure HPP-1, "Radiation Work Permits," was revised to include instructions addressing the distribution of original and revised copies of RWPs to the tele-dosimetry issue station for RWPs requiring the use of tele-dosimetry. This change was approved on December 10, 1997, and was issued for use on January 9, 1998, following pre-implementation training.

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

- A. FPL will develop a procedure addressing the use of tele-dosimetry by March 31, 1998.
  - B. FPL will increase the frequency, and enhance the level, of training on the use of tele-dosimetry for FPL and contract Health Physics personnel by May 31, 1998. These changes will include tele-dosimetry training in the annual requalification program for FPL Health Physics personnel and tele-dosimetry training in the contract Health Physics technician training program. The training will use an on-the-job training (OJT) method.
5. Full compliance will be achieved on March 31, 1998, with the completion of 4.A. above.

Violation C

Technical Specification 6.8.1.a requires that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A, Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation), Revision 2, February 1978. Appendix A paragraph 7.e requires licensee establish procedures for (1) Access Control to Radiation Areas Including a Radiation Work Permit System and (7) Personnel Monitoring.

Section 5.9 of Health Physics Procedure (HPP)-1, Revision 10, "Radiation Work Permits (RWPs)", required a job specific RWP for entry into the Reactor Containment Building (RCB).

Section 7.1 of HPP-3, Revision 6, "High Radiation Areas (HRAs)", specified responsibilities of radiation workers in HRAs. The procedure required radiation workers be knowledgeable of dose margin and RWP requirements.

Contrary to the above, on November 4, 1997, a radiation worker entered the Unit 1 Reactor Containment Building (RCB) without signing in on a job specific RWP for the RCB as required by Section 5.9. In addition, on November 4, 1997, a radiation worker entered the Unit 1 RCB without knowledge of the RWP dose limit and dose rate limits for the RWP the worker was using as required by Section 7.1.

This is a Severity Level IV violation (Supplement IV) applicable to both Units.

Response

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

The primary reason for this violation was a failure of a radiation worker to utilize the correct RWP in that the person entered the reactor containment building (RCB) on a RWP that did not authorize entry into that area.

The Merlin access machines at the normal RCB entry location outside the personnel airlock will deny access if a non-RCB RWP is used. When the temporary containment access building (CAB) was established for Steam Generator Replacement Project (SGRP) personnel, a separate set of Merlin access stations were installed to log personnel into and out of the RCA. Personnel were allowed to sign in and out of either the auxiliary building and other RCA areas, or the RCB, from this location. This system was established to facilitate traffic flow since SGRP personnel could enter the RCB from either the annulus or the personnel airlock.



L-98-006

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Page 6

This unique setup, which was established for the one time steam generator replacement on Unit 1, coupled with the lack of personnel accountability, resulted in the individual being able to enter the RCB on the incorrect RWP.

Additionally, this violation involved an individual not being knowledgeable of his allowable dose margin upon being questioned by a Health Physics technician. Dose and dose rate margins are displayed on the Merlin access station screen each time an entry is made into the RCA and the importance of knowing these margins is stressed in RCA training. Following this incident, Health Physics personnel questioned individuals about their dose and dose rate alarms, and allowable exposure margins. A high percentage of individuals questioned were not able to provide the correct answers thus indicating that some workers were relying on the alarm function of the dosimeter, and not placing the proper importance on recognizing and knowing their individual settings and limits.

3. CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED

The immediate corrective step taken was to assign dedicated personnel at the RCA entry point at the temporary CAB access, and at the Unit 1 RCB entrance to question all personnel as to their dose margins and alarm setpoints. These individuals were provided a list of RWP numbers, and the corresponding dose and dose rate alarm setpoints. Any individual not able to provide the correct response was required to exit through the Merlin access station, and sign back in to determine their correct margins.

4. CORRECTIVE STEPS TO AVOID FURTHER VIOLATIONS

The Health Physics Department will continue the practice of having an individual stationed at the containment entrance for the purpose of ensuring personnel are knowledgeable of applicable limits and margins, until such time that the access monitoring is no longer needed. This will be added as a St. Lucie Unit 1 outage critique item for replication at future outages.

5. Full compliance was achieved on November 6, 1997, with the completion of item 3, above.