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NUCLEAR REGULATORY COMMISSION
REGION II
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February 10, 2000

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

SUBJECT: NRC INTEGRATED INSPECTION REPORT NOS. 50-335/00-03, 50-389/00-03

Dear Mr. Plunkett:

On January 14, 2000, the NRC completed an inspection at your St. Lucie 1 and 2 reactor facilities. The enclosed report presents the results of that inspection.

This was an inspection of the Corrective Action Program. We found the process to be effective in identifying issues and evaluating significant equipment issues. The Corrective Action Program was strongly supported by management and used by personnel throughout your organization.

Based on the results of this inspection, the NRC has determined that a violation of NRC requirements occurred. This violation is being treated as a Non-Cited Violation (NCV), consistent with Section VII.B.1.a of the Enforcement Policy. This NCV is described in the subject inspection report. If you contest the violation or the severity of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, Region II, the Resident Inspector at your facility, and the Director, Office of Enforcement, USNRC, Washington, D.C. 20555-0001.

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

Sincerely,

/R/

Leonard D. Wert, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report Nos. 50-335/00-03, 50-389/00-03

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

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

Report Nos: 50-335/00-03, 50-389/00-03

Licensee: Florida Power & Light Co.

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 6351 South Ocean Drive
Jensen Beach, FL 34957

Dates: January 10 - 14, 2000

Inspectors: P. Van Doorn, Senior Resident Inspector, Watts Bar
S. Rudisail, Project Engineer
G. Warnick, Resident Inspector

Approved by: L. Wert, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Enclosure

EXECUTIVE SUMMARY

St. Lucie Nuclear Plant, Units 1 & 2
NRC Inspection Report 50-335/00-03, 50-389/00-03

This special inspection included a review of the effectiveness of the corrective action process.

Corrective Action Program

- The corrective action program was effective in identifying problems and evaluating significant equipment issues. The process was strongly supported at all levels as a viable tool for addressing problems and management had a clear vision of an effective process (Section O7.1).
- Two significant deficiencies and other observations indicated that the Corrective Action Program has not yet fully matured. The deficiencies involved the lack of an effective trending process and the failure of the process to reduce human errors (Section O7.1).
- Licensee self-assessment and other oversight activities were generally thorough and have resulted in identification of the significant problems in implementation of the corrective action program (Section O7.2).
- The corrective action backlog received strong management attention and was decreasing. No significant backlogged issues were noted (Section O7.3).
- Trending methods were not effective in identifying recurring problems with implementation of the program requirements for revising emergency operating procedures. Adverse conditions were identified and documented during the period since 1998. However, several of the corrective actions were in effective or not implemented in a timely manner resulting in recurring problems. A Non-Cited Violation was identified for untimely corrective actions (Section O7.4).

Summary of Plant Status

Both units remained at 100% power during the inspection.

O7 Quality Assurance in Operations

O7.1 Review of the Corrective Action Program and Problem Resolution

a. Inspection Scope (40500)

The inspectors assessed the effectiveness of the corrective action program (CAP) through review of procedures and Condition Reports (CRs). Approximately 35 personnel were interviewed. These included the site Vice President, Plant General Manager, middle managers, supervisors, and workers. A total of 48 CRs were reviewed, including all severity levels and all significance levels. Procedural controls associated with implementation of the corrective action program were reviewed.

b. Observations and Findings

The CAP contained the necessary attributes for an effective program. It included problem identification at a low threshold with multi-tiered categories based on significance, provided a data base for trending, had guidance for root cause evaluations, included prompt operability and significance screening, and included feedback to the originator. The program was strongly supported by management and considered a valuable tool for addressing problems by all levels of personnel. The process appeared to be unnecessarily cumbersome in some respects. For example, the program provided for three severity levels and three significance levels. Severity levels were based on the time frame assigned to evaluate operability and reportability, determine corrective actions, and fully complete corrective actions. These included Severity Level A, three working days; Severity Level B, ten calendar days; and Severity Level C, 30 calendar days. Typically, the A and B categories provided insufficient time to evaluate and complete corrective actions. Additional paperwork was often initiated to change the category to C after operability/reportability review was completed. When corrective actions could not be completed within 30 days, the CR was closed and actions were transferred to Plant Management Action Items (PMAIs) requiring additional paper work and separate tracking. If the corrective actions listed in the PMAIs were changed or deleted, a supplement to the CR was required.

During the CR reviews, the inspectors noted that CRs were being initiated with a low threshold. An exception had been noted approximately six months previously. The inspectors reviewed the licensee's evaluation and corrective actions for this issue and considered these thorough and effective (CR 99-0620). The licensee attributed previous low use of the CAP by the security department to a lack of awareness and knowledge of program.

Evaluations were typically thorough especially for significant equipment issues. A few CRs contained minor administrative errors and three individual CRs contained incomplete or unclear documentation. These included a poor root cause statement,

incomplete documentation of extent of condition, and unclear documentation of corrective actions for the cause. No significant technical problems were noted regarding these issues and the technical issues were fully evaluated. Three CRs were noted to be repeat problems but the Condition Report Oversight Group (CROG) had not specifically identified these as repeats. The specific issues were being properly addressed.

The interviews indicated that personnel at all levels strongly supported the program. Personnel were encouraged to initiate CRs at a low threshold and thoroughly evaluate issues in a timely manner. A few negative comments were expressed by a small number of personnel (5 or less). These included: corrective actions are sometimes inappropriately assigned to the originator; the 30 day time constraint is not always appropriate in some cases resulting in additional paperwork; some personnel have difficulty understanding the process and more training would be appropriate, and some personnel don't always get feedback regarding the problem they identified. The feedback problem involved the cases where the problem identifier was not the originator of the CR. This occurred sometimes in the Maintenance department where a supervisor might initiate a CR for an issue identified by a craft worker. The program requires formal feedback to the originator. None of the above concerns appeared to be major issues or caused personnel to not initiate a CR when necessary. Ten personnel indicated that the threshold for CRs was sometimes too low. For example, CRs would be issued to answer a question that a phone call could resolve and for isolated equipment issues. The inspectors concluded that this was a result of management encouraging a low threshold on CR initiation. Management also indicated that trending and effectiveness reviews needed improvement.

Additional observations were noted during the inspection and are described in the sections below. Included in these observations were two significant deficiencies:

- The process failed to significantly reduce human errors (Section O7.2)
- There was a lack of a thorough trending process (Section O7.4)

The licensee had identified both of these issues.

c. Conclusions

The CAP was effective in identifying problems and evaluating significant equipment issues. The process was strongly supported at all levels as a viable tool for addressing problems and management had a clear vision of an effective process. The lack of a thorough trending process and the failure of the process to significantly reduce human errors indicated that the CAP had not yet fully matured.

O7.2 Self-Assessment and Oversight of the Corrective Action Program

a. Inspection Scope (40500)

The inspectors reviewed documentation of various assessment activities, held discussions with personnel involved in assessments and oversight, and observed management oversight meetings of the CAP. The management meetings included three CROG meetings and one Facility Review Group (FRG) meeting. The documents reviewed included the following:

- Functional Area Audit QSL-CA-98-09, August 24 to November 5, 1998
- FPL Nuclear Division Monthly Indicator Report, October, 1999
- Monthly Quality Report Nos. 99-0209 and 5079
- Licensing First Quarter 1999 Self-Assessment
- Performance Windows Report, Third Quarter 1999
- Corrective Action Program Reports for October, November, and December, 1999
- Condition Report Trend Reports for the second and third quarter, 1999

b. Observations and Findings

Collectively, the assessments resulted in thorough oversight of the CAP. Numerous problems were identified and improvement initiatives established. These resulted in improved root cause evaluations, improved significance categories allowing for a lower tier level, improved low threshold initiation, improved management of backlogs, and improved documentation based on subsequent licensee assessments and reviews by the inspectors. However, some problems had persisted. Human error rate has been high for an extended period. The licensee's second and third quarter trend reports identified this fact and resulted in CRs being issued to Maintenance and Operations departments on December 15, 1999, for evaluation. These CRs were assigned a Significance Level 2. The CAP process failed to effectively reduce human errors. In late 1999, the licensee recognized that they had not performed adequate trending and management oversight resulting in a failure to identify an adverse trend in Emergency Operating Procedure problems (see Section O7.4). The inspector also noted that the licensee had accepted a low percentage for self-identification of problems (31%) in the Maintenance Department as good performance.

The CROG and FRG meetings resulted in thorough overview and questioning regarding CRs. The FRG was reviewing all Significance Level 1 CRs and selected lower level CRs. The CROG reviewed CR initiations daily for appropriate categorization and recommendations for severity level, operability reviews, requirements for reportability review, significance level, department assignment, assignment of event initiator codes, identification of repeat events, and nonconformance and functional failure

determinations. Thorough discussions were noted in the CROG meetings. The FRG exhibited comprehensive questioning of CRs being reviewed.

c. Conclusions

Licensee self-assessment and other oversight activities were generally thorough and have resulted in identification of the significant problems in implementation of the CAP.

O7.3 Corrective Action Backlog

a. Inspection Scope (40500)

The inspectors reviewed the numbers of corrective actions being tracked by the licensee and the various methods used to track items associated with corrective actions identified for CR resolution.

b. Observations and Findings

The inspectors reviewed the backlog of corrective actions. The licensee considered the backlog as higher than desired. The backlog numbers were decreasing and strong management attention was being applied. Managers had goals to achieve reductions of outstanding corrective actions for each department. The inspector reviewed the ten oldest backlog items and Plant Manager Action Items greater than twelve months old. The inspector did not identify any items where the timeliness of corrective actions was not appropriate.

c. Conclusions

The corrective action backlog received strong management attention and was trending down. No significant backlogged issues were noted.

O7.4 Review of Emergency Operating Procedure Problems

a. Inspection Scope (40500)

The inspectors performed a review of 1999 trending reports, numerous condition reports documenting problems with emergency operating procedure (EOP) program implementation, and the corrective actions and Plant Manager Action Items (PMAI) developed to correct the identified program weaknesses. Interviews were also conducted with the corrective action program supervisor and the assistant operations manager to discuss EOP deficiency identification and resolution. Details regarding inadequate implementation of the program requirements for revising EOPs were included in Section O3.1 of NRC Inspection Report 335, 389/1999-08.

b. Observations and Findings

Since 1998, problems have been noted with the Emergency Operating Procedures. These problems occurred during the process of making procedure revisions and involved the EOP change process. Evidence of EOP discrepancies and program implementation weaknesses was available early in 1999. However, existing trending methods did not detect these issues. The significance of the EOP issues became evident to the licensee during the 4th quarter of 1999 as a result of several condition reports involving recurring significant issues and the large magnitude of recently issued EOP-related CRs due to self-assessment efforts.

During the period since 1998, conditions have been documented describing numerous problems with verification and validation (V&V), pre-implementation training, and adherence to administrative procedures governing EOP revisions. Corrective actions and PMAIs were developed to correct these conditions. However, several of the corrective actions were not effective or were not implemented in a timely manner. Multiple V&V problems had occurred since the 3rd quarter of 1998 resulting in corrective actions and PMAIs. By the 4th quarter of 1999, when licensee management became aware of the magnitude of the EOP problems, corrective actions had not been effective in preventing V&V errors. Furthermore, a PMAI was three months overdue to address the V&V issues. Corrective actions did not prevent the violations for failing to follow administrative procedures for EOP maintenance discussed in NRC Inspection Report 50-335, 389/1999-08.

Criterion XVI of Appendix B to 10 CFR 50, Corrective Action, requires that conditions adverse to quality are promptly identified and corrected. Contrary to the above, several of the corrective actions developed to prevent EOP program implementation errors were ineffective and/or not conducted in a timely manner resulting in recurring issues. This violation is being treated as a Non-Cited Violation (NCV) in accordance with section VII.B.1.a of the NRC Enforcement Policy and is identified as NCV 50-335, 389/00-03-01, Untimely Correction of EOP Program Implementation Deficiencies. The violation was addressed in the licensee's corrective action program by CRs 99-2369 and 99-2551.

c. Conclusions

Trending methods were not effective in identifying recurring problems with implementation of the program requirements for revising emergency operating procedures. Adverse conditions were identified and documented during the period since 1998. However, several of the corrective actions were ineffective or not implemented in a timely manner resulting in recurring problems. A NCV was identified for untimely corrective actions.

V. Management Meetings and Other Areas

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 14, 2000. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Bible, Site Engineering Manager
 G. Bird, Protection Services Manager
 W. Bladow, Maintenance Manager
 D. Huey, Corrective Action Group Supervisor
 R. De La Espriella, Site Quality Manager
 W. Guldemon, Operations Manager
 C. Ladd, Operations Supervisor
 E. Weinkam, Licensing Manager
 R. West, St. Lucie Plant General Manager
 A. Stall, St. Lucie Plant Vice President

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, security, and corporate personnel.

INSPECTION PROCEDURES USED

IP 40500: Effectiveness of Licensee Process to Identify, Resolve, and Prevent Problems

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-335,389/00-03-01 NCV Untimely Correction of EOP Program Implementation Deficiencies

Closed

50-335,389/00-03-01 NCV Untimely Correction of EOP Program Implementation Deficiencies