

December 4, 1998

Mr. Theodore A. Sullivan
Vice President Nuclear and Station Director
BEC Energy
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, Massachusetts 02360-5599

SUBJECT: PILGRIM INTEGRATED INSPECTION REPORT (IR) Nos. 50-293/97-02, 50-293/97-11, 50-293/97-13, 50-293/97-80, and 50-293/98-01

Dear Mr. Sullivan:

This letter refers to your letters dated December 17 and 30, 1997, and January, 12, March 9, April 23, and June 30, 1998 in response to the Notices of Violation forwarded with the subject Inspection Reports.

Thank you for informing us of the corrective and preventive actions documented in your letters. These actions were reviewed and found acceptable by the NRC during subsequent inspections of your licensed program, including: IR 50-293/97-13, dated February 6, 1998, IR 50-293/98-01, dated March 24, 1998, IR 50-293/98-05, dated July 9, 1998, and IR 50-293/98-06, dated August 28, 1998.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

Curtis J. Cowgill, Chief
Projects Branch 8
Division of Reactor Projects

Docket No. 50-293

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Mr. Theodore A. Sullivan

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Boston Edison

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closed in

IR 97-13

Henry V. Oheim
General Manager - Technical Section

December 30, 1997
BECo Ltr. 2.97.133

U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555-0001

Docket No. 50-293
License No. DPR-35

SUPPLEMENTARY INFORMATION RELATED TO VENDOR OVERSIGHT VIOLATION

- References:
- (1) Boston Edison Company Letter No. 2.97.065, "Initial Reply to Notice of Violation 97-02-02," dated June 20, 1997.
 - (2) Beco Letter No. 2.97.073, "Supplemental Reply to Notice of Violation (97-02)", dated July 11, 1997.

References 1 and 2 conveyed Boston Edison Company's initial and supplemental responses to NRC Notice of Violation 97-02-02 concerning weaknesses in oversight of vendors. The latter letter committed to developing criteria that identifies categories of vendor interface (e.g., specialty skills, proprietary information used for analyses or calculations, atypical or prototype design) that will require additional controls. A checklist or matrix for determining additional controls when special vendor oversight/interface is required will be created from those categories. The committed completion date was December 31, 1997.

Currently, a preliminary effort identifying the categories of vendor interface has been completed. Additional categories are expected pending completion of other team reviews. However, the commitment will not be fulfilled by the original target date due to resource challenges presented by the recent forced outages and other emergent issues. This requires deferral of the target completion date to March 15, 1998.

If you have any questions regarding the information contained in this letter, please contact Walter Lobo at (508)830-7940.

H.V. Oheim
H.V. Oheim

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see
97-11
98-01

L.J. Olivier
Vice President Nuclear and Station Director

December 17, 1997
BECo Ltr. 2.97.132

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Docket No. 5. 293
License No. DPR-35

Completion of Reply to Notice of Violation 97-80-01

Boston Edison Company (BECo) provided an initial response to Notice of Violation 97-80-01 by letter dated October 17, 1997, (BECo 2.97.104). That response provided the reasons for the specific procedural violations cited by the NRC and the corrective actions taken and results achieved. A sixty day extension was requested in order to conduct an in-depth root cause of the overall issue of procedural compliance at Pilgrim Station and thereby determine meaningful and effective corrective actions to preclude recurrence. A multi-discipline root cause team was formed to analyze the procedural compliance data contained in the Pilgrim Station corrective action data base, assess root cause, correlate the relationship to the previous and current procedural compliance corrective action activities, and recommend comprehensive solutions. A discussion of the team's findings and Pilgrim's corrective actions to preclude recurrence are enclosed.

This letter describes the following corrective actions to preclude recurrence:

- A 1998 organization goal for addressing procedure adherence will be developed and individual department tasks for meeting the goal will also be developed.
- Establish a cross functional team for improving procedure structure and content.
- Managers will be updated on the overall broad procedural compliance issues and with issues that may be unique to their area of oversight.

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Details of the activities to be undertaken to implement these corrective actions are described in the enclosure.

Should you have any questions or require further clarification, please do not hesitate to contact me.

L. J. Olivier
for L. J. Olivier

Enclosure
Completion of Reply to Notice of Violation 97-80-01

cc w/encl.

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Enclosure

Completion of Reply to Notice of Violation 97-80-01

On September 17, 1997, the NRC issued the 40500 team inspection results of the Pilgrim Station corrective action processes (NRC IR 97-80). The NRC identified three specific issues relating to procedural compliance at Pilgrim Station that became NRC Notice of Violation (NOV) 97-80-01. Boston Edison Company (BEC) provided an initial response by letter dated October 17, 1997. In this response, the reasons for each of the instances of procedural noncompliance were addressed along with the specific corrective actions taken or planned for each instance. A sixty day extension to determine corrective actions to preclude recurrence was requested and granted. The extension was needed to conduct an in-depth root cause of the broader issue of procedural usage and why noncompliance with procedures remains an issue at Pilgrim Station.

A multi-discipline root cause team was formed to analyze the procedural compliance data contained in the Pilgrim Station corrective action data base, assess root cause, correlate the relationship to the previous and current procedural compliance corrective action activities, and recommend comprehensive solutions. The root cause analysis findings and corrective actions to preclude recurrence are presented below.

Findings

The corrective action program (CAP) information data base was reviewed to determine the extent of organizational procedure non-adherence. These data show procedure non-adherence exists in every work unit, at all job levels in the organization. Administrative tasks are cited three times more frequently than technical tasks.

A defense of quality, barrier matrix was developed to determine the barriers that are in place to ensure procedure compliance. The potential weaknesses of the barriers and the probability of failure of any of the barriers were assessed and reconciled to the data base. It was concluded the barriers that are most likely to be weak or potentially fail are management expectations and standards, supervisory oversight, procedure complexity and construction, and time and resources to implement jobs correctly.

A survey of the organization corroborated the barrier analysis conclusions. This survey probed for agreement or disagreement on each of the proposed barriers and solicited free form feedback. As a feedback question, the survey solicited an opinion on why procedure non-compliance events occur and what management can do to correct the problem.

Root Cause

Two primary causes have been identified for procedure non-adherences at Pilgrim.

- The structure and content of procedures are complex and inhibit performing tasks in a timely and complete manner. Problem resolutions via procedural additions and/or repairs over the years have contributed to many of the cumbersome requirements.
- Manager and supervisor oversight efforts to resolve procedure adherence issues have been generally ineffective. Although action plans have been formulated to resolve the problem, they were not effective nor validated to ensure the actions were solving the problem. Also, the emphasis on following procedures is not consistently carried through using coaching on implementation of assigned tasks nor is there sufficient accountability for procedure non-compliance. This provides an attitude of acceptance toward procedure non-compliance.

Several ancillary and contributing causes were also identified. These ranged from the hierarchy of the procedure system, (Policies, Nuclear Organization Procedures (NOPs), Procedures, and Work Instructions) to training on updates and to perceived time pressure. While these concerns are related to the problem, they are of a contributing nature, generally limited in scope, and not the root of the problem. However, while the effort to correct the root causes is the major focus of the corrective actions to preclude recurrence, elements of the contributing causes are included as part of the overall corrective action plan required to preclude recurrence. The contributing causes are:

- The content of procedures for new and revised versions is sometimes ineffectively communicated to the users.
- A time/pressure perception exists in some disciplines when performing tasks.
- End-user input is not universally used in procedure development and revision.

Corrective Actions to Preclude Recurrence (CATPR)

The procedure non-adherence problem is the result of two primary root causes, a complex and confusing procedure structure, and ineffective oversight and corrective action validation at the manager and supervisory level. The corrective actions to preclude recurrence, therefore, are structured to address these causes and build on past corrective actions already taken or that are still in progress.

CATPR 1

A 1998 organization goal will be established for improvement in procedure adherence. The goal will be developed and instituted by February 1, 1998.

The following tasks will be required for each department as part of this goal implementation:

- Include procedure adherence as a required focus for the corrective action program (CAP) quarterly self-assessment program. A report of department procedure compliance and improvements experienced during the quarter will be required. The reports shall provide details of coaching and accountability actions. The reports will continue until satisfactory performance thresholds are achieved.
- Establish focus themes for procedure adherence and improvement meetings to be held on a bi-monthly frequency. These meetings will follow the format similar to that of department safety meetings with procedural issues selected for discussion as case studies based on department-specific issues.
- Department performance matrices will be developed and used in evaluating long term progress or possible recurrence of procedure non-compliance problems. The matrices will also be used by the managers to apply accountability and ownership.

CATPR 2

Some improvements were made from the previous effort to integrate the high level policies and nuclear organization procedures (NOPs). This work needs to continue. Therefore, a cross functional and multi-disciplined team will be established to continue the effort to improve procedure structure and content. The team shall specify what content is required in procedures and establish a definition of procedure compliance. Integral to this effort will be the task to work with department managers to cancel, combine, consolidate and re-write procedures. The extent of input from the end users for the revised procedures will be determined by the respective department manager. Team selection will be from all groups and all levels.

The team will take importance of the procedure relative to safety, reliable plant operation, and the incidences of procedural non-compliances into account when establishing the priority of procedures to be worked through this effort.

This effort will complete by June 30, 1998.

CATPR 3

Because of the varying nature of department roles and responsibilities, the type of procedure non-adherence differs for each department. Therefore, in addition to the broader organizational corrective actions to be taken, department-specific corrective actions will need to be determined and implemented at the department level. Therefore, the root cause team leader will explain to each group and department manager, the CAP data base trends, the survey results, and the results of the root cause analysis. This will familiarize the managers with the overall broad procedural compliance issues and with issues that may be unique to their particular area of oversight. This activity will be completed by March 10, 1998.

Discussion of Past Corrective Actions

Although previous corrective actions have not resolved the problem of procedure compliance, these past activities were correctly focused albeit not in sufficient detail. Our evaluation of these activities concluded most of the actions have been effective in resolving various aspects of the problem but suffered from a lack of cohesive programmatic assessment for determining how appropriate and effective the activities were for problem resolution. Thus, the activities were not necessarily ensuring resolution of the problem in total.

The following is a summary of some of the past and current corrective actions taken.

- Management expectations and personal accountability were discussed in small group meetings (in January and again in September 1997) with all personnel.
- Procedural improvements were made on known problem procedures.
- Management oversight in the field was increased.
- An error rate performance indicator was developed.
- QA oversight was increased.
- An error matrix was developed and is maintained by the maintenance department.
- A monthly senior managers audit program was established.
- Root cause assessment improvements were made.
- Performance monitoring and trending improvements were made.
- Failure Prevention Institute (FPI) training was provided for conducting more comprehensive root cause assessments.
- The worker level self assessment process was strengthened with increased management participation and oversight.
- An Independent Oversight Team (IOT) was formed.
- Monthly human performance reports were developed. **
- A culture index was conducted.
- The management oversight program was focused on conducting observations of performance related activities.
- Enhanced problem report coding was established.
- A real-time behavior-based human error performance monitoring program was developed.
- A procedure change process redesign effort was established. *

- The Mission Organization and Policies (MOPS), Nuclear Organization Procedures (NOPs), and Administrative procedures were reviewed, revised and consolidated.
- The QA deficiency report (DR) process was consolidated into the problem report (PR) process.
- The modification process was redesigned. (Completion of the procedure revisions and personnel training is expected to be completed on or before December 31, 1997.)
- Root cause analysis and human error prevention training were expanded.

* A procedure change team has re-written the procedure change process. The revised process will provide for a broader class of field changes that allows work to continue without waiting for the full procedure change and issue process to be completed.

Please note, however, current restrictive language in the Administrative Section of the PNPS Technical Specifications needs to be revised to allow this field change procedure revision capability to take place. The needed proposed Technical Specification changes were submitted for NRC review and approval on September 19, 1997, (BEC letter 2.97.096). Based on NRC feedback, this change is expected to be approved near the end of the first quarter 1998.

The procedure change team reviewed the option of breaking out the change portion of the process redesign and issuing other portions; however, the team feels it is best implemented in total. Therefore, this process revision has been placed on hold until approval of the Technical Specification change request.

Summary

We are committed to the corrective action process enhancements introduced at Pilgrim in the 1996 timeframe. The problem reporting thresholds have been sufficiently lowered, and the organization is becoming more comfortable in its use for recognizing and resolving problems.

However, we recognize that more attention is needed in the oversight of emerging problem trends highlighted by the corrective action program. In particular, the effectiveness of corrective actions taken or being taken requires continuous evaluation to ensure the problem is being resolved. In the case of procedural adherence, although myriad action plans to resolve the problem were developed, each met with limited success. The activities were managed at the task level by different individuals but were not being measured in a total programmatic sense for effectiveness at resolving the problem of procedural adherence across the station. Therefore, the corrective actions to preclude recurrence are assigned with actions at both the Vice President Nuclear/Station Director level and department manager/supervisor level. The Vice President Nuclear/Station Director will keep the issue highly visible, while the department managers/supervisors resolve the problems at the department level. Monitoring of the problem will continue at all levels of management until evidence shows the problem to be resolved.



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97-13-01
↳ closed 98-06

97-13-02 → closed in 98-06

L.J. Olivier
Vice President Nuclear and Station Director

March 9, 1998
BECo Ltr. #2.98.026

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

REPLY TO NOTICE OF VIOLATIONS 97-13-01 AND 97-13-02
NRC INSPECTION REPORT NO. 50-293/97-13, DATED FEBRUARY 6, 1998

Enclosures 1 and 2 provide Boston Edison Company's reply to the Notice of Violations 97-13-01 and 97-13-02 contained in the subject inspection report.

Violation 97-13-02 states the degraded condition due to temperature detector deficiencies resulted in an extra plant cooldown and heatup. This is an incorrect statement; Pilgrim did not undergo an extra heatup and cooldown due to temperature detector deficiencies. The heatup and cooldown referenced in the violation was performed as a result of a management decision, and it is generally Pilgrim Station policy to place the plant in shutdown cooling following shutdowns to perform maintenance and prepare for startup. Also, engineering analysis confirmed the vessel flange to shell differential temperatures during heatup and cooldown did not result in exceeding code stress allowables.

This letter includes the following commitments.

Commitments addressing violation 97-13-01 (Enclosure 1): The effectiveness of the preparation and implementation of the maintenance work package (MWP) process will be enhanced by March 27, 1998, as follows:

- Work control planners will be provided with clear expectations for preparing and reviewing work packages involving substitution equivalency evaluations (SEEs), plant design changes, and field revision notices.
- The task-ready review process will be enhanced. The expectations for I&C technicians and supervisors on task-ready review walkdowns will be clearly defined with an individual MWP walkdown review sheet to cover all requirements of a task-ready review in accordance with procedure 1.5.20, "Work Control Process". These expectations will be discussed with all I&C Maintenance Department personnel relative to MWP walkdowns and like-for-like replacements during implementation of MWPs.
- The engineering department managers will hold meetings with their staff to discuss and review the events associated with ATWS relay replacement problems.

- Maintenance, I&C, work control, and engineering departments will review the multiple human errors caused by indirect communications to promote face-to-face communications to minimize misinterpretations and missed information.
- A standard method for building replacement parts reservations and documenting them will be established in the planning department's desktop instructions.

Commitments addressing violation 97-13-02 (Enclosure 2): The following corrective actions are planned to avoid further violations of vessel flange temperature indications.

- A technical specification change to remove the requirement for vessel shell to vessel flange differential temperature limit of 145°F will be submitted by March 27, 1998, for NRC approval.
- A redesign of the temperature element leads in the drywell will be prepared. This modification is currently planned for implementation during RFO 12 or an outage of sufficient duration that would provide access to the drywell.
- This violation will be presented as a case study within the existing continuing training programs. The case study will be prepared and the training schedule will be determined by April 10, 1998.

Please do not hesitate to contact me if there are any questions regarding the enclosed reply.


L. J. Olivier

WGL/ VIO97-13-01&02

Enclosure 1: Reply to Notice of Violation 97-13-01

Enclosure 2: Reply to Notice of Violation 97-13-02

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ENCLOSURE 1

Reply to Notice of Violation 97-13-01

VIOLATION 97-13-01 (identified as item B in the Notice of Violation)

During an NRC inspection conducted on November 11, 1997, through January 6, 1998, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions, NUREG-1600, the violations are listed below:

- A. (see Enclosure 2)
- B. Pilgrim Technical Specification (TS) 6.8A, Procedures, requires that procedures be implemented for activities covered under Appendix "A" of NRC Regulatory Guide 1.33. Section 9, Procedures For Performing Maintenance, of Appendix "A" requires that maintenance be properly preplanned, and be performed in accordance with written procedures or instructions that are appropriate to the circumstances. Additionally, BECo procedure 1.5.20, Work Control Process, step 7.5, Task Ready Review, specifies that planners and I&C supervisors shall ensure that parts are in reserve/withdrawn for the work prior to designating a package as task ready. Step 7.5 also specifies that the work supervisor or his designee will perform a hands-on parts verification for each job.

Contrary to the above on December 20, 1997, a work control planner and I&C supervisor classified a work package to replace an ATWS system electrical relay as task ready when all parts were not available. Additionally, a hands-on parts verification was not performed prior to the start of work. As a result, a relay of the incorrect voltage rating was installed which overheated and resulted in an unplanned ATWS system LCO maintenance outage.

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

REASON FOR THE VIOLATION

The reason for the violation was non-compliance with procedure 1.5.20, "Work Control Process". Our assessment (PR 97.9821) of the ATWS relay replacement activity revealed the following.

The root cause of the installation of the incorrect voltage ATWS relay is the maintenance work package (MWP) being signed as "task ready" without all the relays reserved. The contributing causes are (i) a wrong substitution equivalency evaluation (SEE) was used for ATWS relays, (ii) human errors during MWP preparation and review and parts verification, and (iii) communication errors by personnel during the preparation and implementation of ATWS relay MWP. These errors resulted in violations of the work control process requirements.

To replace the aging ATWS relays, a work control planner prepared a MWP to replace four ATWS relays using the wrong generic SEE No. 797. The ATWS package dealt with three 24

vdc and one 125 vdc relays. The SEE was not intended for replacement of ATWS relays. The planner reserved three 24 vdc relays and ordered the 125 vdc relay, but did not include a copy of the stock material request form (MRF) in the work package. The planner placed the work package on a "parts hold" status pending the arrival of the fourth relay. The MWP did not caution the technicians that it differed from the other relay packages that were planned for the ECCS panel. The MWP steps only required technicians to remove and replace relays per SEE No. 797.

Two weeks prior to the implementation of the ATWS relays replacement MWP, a second planner was assigned to make the package task ready. The second planner was not familiar with the previous history of the package and took shortcuts to arrive at an assumption all parts were reserved. Since the task ready review on the MWP was already signed by the first planner, the second planner changed the MWP status coding without making an entry in the "actions taken" section that he was now the alternate member of the team, in accordance with procedure 1.5.20 section 7.4, and without becoming familiar with the work plan and its instructions. Accordingly, the second planner changed the status from "parts hold" to "task ready" on or about December 10, 1997.

Also, the I&C supervisor delegated the maintenance portion of the task ready review for walkdown review to a lead technician. He had four Agastat relay replacement packages for review. Each package was written to replace four relays in either the ECCS or the ATWS panels using SEE No. 797. The MWP for replacement of ATWS relays should have been based upon SEE No. 107. The technician reviewed the first package for the ECCS panel and had questions that needed to be resolved with the SEE on socket compatibility. Since the same SEE was incorrectly referenced in all four relay replacement packages, the technician decided not to walk the three other packages down until after the questions about the SEE were resolved.

The I&C supervisor and his lead technician communicated through a MWP status sheet. The MWP status sheet was not intended to go into the details necessary to properly cover all the concerns and complete the reviews. The status sheet indicated one MWP had problems and the other three had similar problems with the SEE. The I&C supervisor mistook the status sheet to mean that all four packages had been walked down and only one common problem existed due to the SEE about the socket. The packages were placed on hold until the system engineer resolved questions on SEE No. 797. Once the SEE questions were resolved, the I&C supervisor assumed the MWPs were ready to work; accordingly, he approved the task-ready reviews as being completed and changed the status code for all four MWPs. This assumption resulted from miscommunications and violated step 7.5[4] of the Work Control Process.

The final opportunity to detect the incorrect part was missed when one-for-one verification of the removed relay was not performed. The technicians performed a spot check by only verifying two of the four relays. The normally energized hot relays required gloves to handle them which contributed to the technician not obtaining and verifying all information on the removed parts. A mindset was created that all relays were the same due to a previous MWP that replaced all the same 24 volt relays in a ECCS panel.

A review of multiple human performance errors was conducted. Miscommunications during the MWP development, review, and implementation were a major contributing cause to barrier breakdowns.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The following corrective steps were taken to resolve the errors included in the Notice of Violation:

- I&C took an immediate corrective action to replace the incorrect voltage ATWS relay. Operations entered active LCO A97-435 and walkdowns were performed, which revealed no visual damage to relay sockets or associated wiring. An adjacent relay had signs of external damage due to localized overheating. A priority 1 maintenance request, (MR19703150) was written, which later replaced the two damaged relays with the appropriate relays. Temporary Procedure TP97-084 described the necessary post work testing. Independent reviews were also conducted of all previous MWP's associated with SEE No. 797 to ensure no other problems existed. None were found.
- Individuals involved in the preparation and implementation of the MWP were counseled concerning the standards and requirements of task ready review, significance of their signatures in the task ready reviews, and adherence to procedure requirements.
- A critique was held on December 31, 1997, at 0730 to gather facts, ensure the plant was in a safe condition, and determine any further immediate corrective actions. No other immediate corrective actions were needed.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The effectiveness of preparation and implementation of the maintenance work package (MWP) process will be improved by March 27, 1998, as follows:

- Work control planners will be provided with clear expectations for preparing and reviewing work packages involving substitution equivalency evaluations (SEEs), plant design changes, and field revision notices.
- The task-ready review process will be enhanced. The expectations for i&C technicians and supervisors on task-ready review walkdowns will be clearly defined with an individual MWP walkdown review sheet to cover all requirements of a task-ready review in accordance with procedure 1.5.20, "Work Control Process". These expectations will be discussed with all I&C Maintenance Department personnel relative to MWP walkdowns and like-for-like replacements during implementation of MWP's.
- Engineering department managers will hold meetings with their staff to discuss and review the events associated with ATWS relay replacement problems.
- Maintenance, I&C, work control, and engineering departments will review the multiple human errors caused by indirect communications to promote face-to-face communications to minimize misinterpretations and missed information.
- A standard method for building replacement parts reservations and documenting them will be established in the planning department's desktop instructions.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on December 31, 1997, when ATWS relays were replaced.

The MWP process improvements will be completed by March 27, 1998.

ENCLOSURE 2

Reply to Notice of Violation 97-13-02

VIOLATION NO. 97-13-02 (identified as item A in the Notice of Violation)

During an NRC inspection conducted on November 11, 1997, through January 6, 1998, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions, NUREG-1600, the violations are listed below:

- A. 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, states, in part, that measures shall be established to assure that conditions adverse to quality, such as deficiencies, deviations, and non-conformances are promptly identified and corrected. The measures shall assure that the cause of the condition is determined and corrective actions taken to preclude repetition.

Procedure 1.3.121, "Problem Report Program," revision 3, section 6.6.3 and 6.6.4 require that corrective actions taken and/or required to correct the deficiency shall be identified and corrective actions developed are adequate to prevent recurrence. Step 6.1(1) requires that "Hardware and non-hardware (human performance, administrative controls, procedural deficiencies) related problems shall be documented on a PR. This includes failures, malfunctions, deficiencies, human errors, abnormal occurrences, defective or degraded material or equipment, and non-conformances."

Contrary to the above, BECo did not properly evaluate the cause and implement corrective actions to preclude repetition of the temporary temperature detectors deficiencies from the reactor vessel flange. The temperature elements moved/separated from the reactor vessel flange on three separate occasions (November 27, December 2, and December 7, 1997). This degraded condition resulted in an extra plant cooldown and heatup. In addition, BECo failed to document on a problem report that two of three temporary temperature detectors, installed per temporary modification 97-29, had become disengaged from the reactor vessel flange on November 27, 1997.

This is a severity Level IV Violation (Supplement I).

REASON FOR THE VIOLATION

The root cause for the violation was our failure to assign ownership for permanent resolution of all temperature detector deficiencies following startup from RFO 11. This initial barrier failure led to a later non-compliance with procedure 1.3.121, "Problem Report Program" during troubleshooting and repair efforts on the temperature element. The assessment (PR97.9747 and 98.0271) conducted in response to the reactor vessel flange temperature indication problems and notice of violation revealed the following.

The cause of our failure to perform adequate causal investigation and implement commensurate corrective actions during the forced shutdowns for the temperature detector

deficiencies, as well as our failure to document on a problem report that two of three detectors became disengaged from the reactor vessel flange on November 27, 1997, is human performance error. This cause is attributed to our failure to assign ownership for permanent resolution of all temperature detector deficiencies following startup from RFO 11. At that time, the condition of the originally installed temperature elements (TE) was known to be degraded resulting in the installation of temporary modification TM 97-29. Since TEs are non safety-related and there were no known problems associated with TM 97-29 during heatup from RFO 11, there was no elevated awareness or urgency to initiate actions to develop a permanent resolution until the next refueling outage. Accordingly, the problems received low priority for a permanent resolution. When TE problems again occurred on November 23, 1997, with no individual owner in place and, consequently, with no established plan in place to permanently solve the TE problems, all efforts were focused on restoring the temporary modification to working condition.

The violation states that the degraded condition due to temperature detector deficiencies resulted in an extra plant cooldown and heatup. This is an incorrect statement; Pilgrim did not undergo an extra heatup and cooldown due to temperature detector deficiencies. The heatup and cooldown referenced in the violation was performed as a result of a management decision, and it is generally Pilgrim Station policy to place the plant in shutdown cooling following shutdowns to perform maintenance and prepare for startup.

Also, notwithstanding the temperature detectors' failures to provide reliable temperature indications, engineering analysis (EE 97-67, Rev. 0) confirmed the vessel flange to shell differential temperatures during heatup and cooldown did not result in exceeding code stress allowables.

BACKGROUND

On February 19, 1997, following reactor shutdown for RFO 11, PR 97.9125 reported that TR-263-105 shell temperature was indicating low. I&C Engineering performed a direct cause analysis that determined the recorder was out of calibration. During the RFO 11 reactor vessel hydrostatic test, the vessel flange thermocouples gave inadequate temperature readings. PR97.1487 was issued to document the low readings on the flange temperature elements. TM 97-27 was installed to allow operators to read the actual vessel flange temperature during the reactor vessel hydrostatic test. On April 5, 1997, at the time of the restart from the RFO 11, TM 97-27 was changed to provide temperature indications in the control room and was installed on April 7, 1997, as TM 97-29 per MR#19700982. There were no known problems with TM 97-29 during heatup from RFO 11.

On April 30, 1997, PR97.1780 was issued stating that vessel flange TEs leading to TR-263-105 (blue pen, point 2) were not reading correctly. This problem report was dispositioned to a maintenance request to calibrate the recorder.

On November 24, 1997, at the time of plant cooldown for MSIV repairs, the Operations Department observed TR-263-105 blue pen failed downscale. On November 26, PR97.9731 stated TR-263-105 blue pen failed downscale during plant cooldown. This recorder, as well as TR-263-104, measures vessel flange temperature, and TR-263-104 is commonly used as the technical specification reading (point 3). MR#19702899 was issued and PR97.9731 was closed. MR#19702899 was closed to MR#19700982 and all work was performed under MR#19700982. Numerous entries into the drywell were performed to ensure magnetic mounted TEs provide reliable temperature indication. Investigation by maintenance personnel

revealed the temperature element for point 3 was found separated from the vessel flange. Inspection of the other elements revealed point 2 had also separated from the vessel flange. The terminal screws for these two TEs were loose. However, no problem report was written to document the temperature elements had separated from the reactor vessel flange.

During the December 6, 1997, forced outage, I&C Maintenance, System Engineering, and I&C supervisory and management personnel were involved at different times in performing investigation and corrective actions for the TE problems. With no single point of contact established for ownership, a situation was created in which the coordination of the overall resolution, including consistent, reliable, accurate communication and evaluation became ineffective. Additionally, more than one MR was being used to address the TE problems and MR log documentation practices were not well implemented for some entries regarding conditions found and actions taken. Both of these items added additional confusion. The general mindset was these TEs are non safety-related devices, only required for startups and shutdowns. Important information concerning the as-found condition of the TEs pulled back during the investigative entry on November 26, 1997, was communicated to a system engineer, documented in an MR log, but was not documented on a problem report. This failure to write problem report and to address cumulative temperature detectors deficiencies violated procedure 1.3.121.

Once the TEs became an issue for potential technical specification violations on December 2, 1997, concurrent with the issuance of PR97.9747, the I&C Engineering and Maintenance Managers engaged in direct and prompt work actions for a permanent resolution. Currently, the adequacy of the design and compliance with technical specification are being addressed to prevent repeat occurrences.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The following corrective steps were taken to resolve ineffective corrective actions included in the Notice of Violation.

- An engineering evaluation, EE 97-67, Rev. 0, was completed in response to PR97.9747 which confirmed that vessel flange to shell differential temperatures during heatup and cooldown did not result in exceeding code stress allowables.
- An I&C night order was issued on December 23, 1997, advising I&C technicians to write problem reports when they discover deficiencies and problems.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

Attempts to correct the loss of correct temperature indication on November 26, December 3, and 7, 1997 were unsuccessful. Accordingly, the following corrective actions are planned to avoid further violations.

- A technical specification change to remove the requirement for vessel shell to vessel flange differential temperature limit of 145°F will be submitted by March 27, 1998, for NRC approval.
- A redesign of the temperature element leads in the drywell will be prepared. This modification is currently planned for implementation during RFO 12 or an outage of sufficient duration that would provide access to the drywell.

- This violation involved many different personnel and plant processes and is essentially a case of missed opportunities. Knowledge-based errors were made, and the application is broad affecting the entire organization. Accordingly, this violation will be presented as a case study within the existing continuing training programs. This case study will be prepared and the schedule for training will be determined by April 10, 1998.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance resolving all issues related to the vessel flange to shell temperature monitoring will be completed by RFO 12.

The proposed technical specification changes to remove the vessel flange differential temperature limit will be submitted to the NRC by March 27, 1998.

The vessel flange temperature corrective action case study and schedule for training will be set by April 10, 1998.



Boston Edison
Pilgrim Nuclear Power Station
Rocky Hill Road
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10CFR 2.201

closed in
98-05

L.J. Olivier
Vice President Nuclear and Station Director

January 12, 1998
BECo Ltr. #2.98.002

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

REPLY TO NOTICE OF VIOLATION 97-11-01
SUBJECT: NRC INSPECTION REPORT NO. 50-293/97-11

Enclosed is Boston Edison Company's reply to the Notice of Violation (VIO 97-11-01) contained in the subject inspection report.

The following commitments are made in this letter to enhance the effectiveness of the tagout process by June 15, 1998:

- Operations personnel will receive initial or refresher training in human error prevention techniques.
- Procedure 1.4.5, "PNPS Tagging Procedure", will be revised to clarify requirements for an independent technical review of tagout adequacy and correctness of maintenance tasks.
- The standard tagouts retained in the tagout database will be reviewed to ensure entries for component isolation are correct. Operations management will review the feasibility of including the standard tagout database in the configuration management program to help ensure accuracy of "normal" specified positions.
- Procedure 1.5.20, "Work Control Process", will be evaluated to determine if any enhancements can be made to provide for earlier work package review and tagout preparation by operations and maintenance personnel.
- Operations management will establish trending indicators and perform quarterly reviews of the effectiveness of these corrective actions through department self-assessments during the first two quarters of 1998. If required, additional quarterly self-assessments will continue during 1998 and corrective actions will be taken based upon the results of these self-assessments.

Please do not hesitate to contact me if there are any questions regarding the enclosed reply.

L.J. Olivier
E. J. Olivier

WGL/Vio97-11
Enclosure: Reply to Notice of Violation

Boston Edison Company

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ENCLOSURE

Reply to Notice of Violation 97-11-01

VIOLATION

As a result of an inspection conducted September 14, 1997, through November 10, 1997, the following violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy (60 FR 24381; June 30, 1995), the violation is described below:

Pilgrim technical specifications, section 6.8, Procedures, requires that written procedures be established and implemented for activities covered in NRC Regulatory Guide 1.33, Appendix A. Appendix A, Section 1.c, Equipment Control, requires procedures to be established and implemented for equipment tagging. BECo Procedure No. 1.4.5, "PNPS Tagging Procedure", steps 3.0, 6.2 and 6.7 require that tagouts be properly prepared, implemented and independently verified.

Contrary to the above,

- A. On October 1, 1997, the licensee identified that, tagout T97-46-162 was incorrectly prepared and applied; breaker 1021 was placed in the closed vice open position as required by the tagout. This resulted from redundant errors in implementing the tagout process by their licensed operators.
- B. On October 7, 1997, the NRC identified that tagout T97-61-44 was inadequate for maintenance work on K-103A, air start compressor for the "A" emergency diesel generator. The tagout did not require that the boundary valve in the sensing line between the air compressor and the air start receivers was isolated.

This is a Severity Level IV Violation (Supplement I).

REASON FOR THE VIOLATION

The reason for the violation was non-compliance with procedure 1.4.5, "PNPS Tagging Procedure". The assessment conducted in response to the above tagout problems revealed the following:

The cause of the first example (Problem Report 97.2909) was licensed operator error. The tagout was prepared by a Senior Reactor Operator (SRO) using the tagout computer. The tagout computer incorrectly listed the "normal" position for breaker 52-1021 as "closed" verses normally "open". Therefore, the tagout sheet was incorrect for the normal position of this breaker. The SRO did not verify that the normal positions listed on the tagout sheet were correct as required by procedure 1.4.5. Although the "normal" position was not correct, the tagged position on the tagout sheet was correct.

Subsequently, Operator A tagged breaker 52-1021 in an incorrect position. The operator did not use the proper self checking technique of reading the tagged position on the tagout sheet

and comparing it to the actual position specified in the tagout. Contributing to the error was the operator's mind-set about the position of this breaker. He knew its normal position was open; however, when he read the tagout sheet to position the breaker open with a normal position of closed, he was mentally prompted to change the state of the breaker. This action was incorrect for the isolation portion of the tagout. The tagout was independently verified by Operator B, but the operator failed to execute the intended purpose of an independent verification. This was apparently caused by a mind-set that he expected to see breaker 52-1021 open and visualized it in that condition. Thus the positioning error was not discovered by either the person hanging the tagout or by the verifier of the tagout.

The cause of the second example (Problem Report 97.2997) was licensed SRO error. This was due to inadequate review of the maintenance work plan for the "A" emergency diesel generator (EDG) air start compressor. An SRO solicited information on the maintenance activities from the work week manager and the system engineer. The standard tagout for work on the "A" EDG air compressors normally requires the air receiver drain valves to be tagged open to depressurize the tank. In order to reduce the EDG out-of-service time (72 hour LCO), he decided to keep the air receiver pressurized. However, when the standard tagout was modified, the tagout preparer did not identify that the pressure sensing tubing connected to the compressor unloader needed to be isolated from the receiver. A second SRO performed a field walk-down and maintenance request review but also failed to recognize the omission of the isolation in the compressor unloader pressure sensing line. The review by the Nuclear Watch Engineer authorizing the tagout was not to a level of detail that would have identified this omission. The Nuclear Watch Engineer's review was focused more on equipment availability with respect to the technical specification requirements. The maintenance technicians proceeded with maintenance on the compressor with minor air leakage present. When it was identified that further isolation was needed, operations was notified. A tag change was initiated by the Nuclear Operations supervisor to add danger tags to the sensing line isolating valves.

A review of errors associated with operations tagout preparation and execution was conducted. Additionally, an independent review of the corrective action data base by the independent oversight team did not indicate that significant problems existed. However, an adverse short term trend has been noted by the two examples identified in the violation and another tagging error (PR97.9734) identified by our staff subsequent to the end of the inspection 97-11.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The following corrective steps were taken to resolve the tagout errors included in the Notice of Violation:

- The operator who hung tagout T97-46-162 did not have any recent performance problems. The operator who did the independent verification had one recent performance problem. He was removed from shift duties for one week and provided training for remediation. Senior plant management conducted interviews with the operator to verify the effectiveness of the remediation training. Both operators received quality verification and validation training. The SRO that prepared the tagout had no previous performance issues; however, his performance was addressed by operations management. The SROs' and operators' performance is routinely trended.

- Tagout T97-61-44 was modified to include isolation of the air compressor unloader from the air receivers. An operations night order was issued clearly delineating second person review of tagout preparation, and a second night order was issued for senior reactor operators to emphasize that the review for normal component position in accordance with procedure 1.4.5 must be done during tagout preparation. These actions were completed by December 30, 1997.
- A sample population of in-place tagouts was inspected to verify proper positions and tagging. No other examples of non-compliance were identified.
- A maintenance night order was issued to reinforce the job walkdown requirements for maintenance personnel. This order stressed ensuring isolation is adequate for safe work performance and to immediately notify operations if there is a problem with the isolation.
- The operations and maintenance department managers briefed their respective crews on the importance of proper tagging and verification methods.
- Operations management has begun the process of having licensed reactor operators preparing tagouts. The intent is to have more worker level involvement in the initial preparation using the extensive field 'hands on' experience.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The effectiveness of preparation and implementation of tagout process will be improved by June 15, 1998, as follows:

- Operations personnel will receive initial or refresher training in human error prevention techniques. This training covers various human error reduction techniques to reduce the impact of time pressure, distractions, high workload, over confidence inducers, stress and imprecise communications. Also included in this training will be an overview of these tagging errors and the issues surrounding them.
- Procedure 1.4.5, "PNPS Tagging Procedure", will be revised to clarify requirements for an independent technical review of tagout adequacy and correctness of maintenance tasks. In the past, the second person review was done by the Nuclear Watch Engineer. As specified in the operations night order identified above, the expectation is that each tagout receives an independent review for adequacy by an operator or SRO.
- The standard tagouts retained in the tagout database will be reviewed to ensure correctness of entries for component isolation. Unneeded or infrequently used standard tagouts will be reviewed for deletion from the database. Operations management will review the feasibility of including the standard tagout database in the configuration management program to help ensure accuracy of "normal" specified positions.
- Procedure 1.5.20, "Work Control Process", will be evaluated to determine if any enhancements can be made to provide for earlier work package review and tagout preparation by operations and maintenance personnel.
- Considering the potential consequences of a tagging error on plant and personnel safety, management reviews will focus on early identification and correction of adverse trends in

this area. Operations management will establish trending indicators and perform quarterly reviews of the effectiveness of these corrective actions through department self-assessments during the first two quarters of 1998. If required, additional quarterly self-assessments will continue during 1998 and corrective actions will be taken based upon the results of these self-assessments.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance resolving all the tagout issues was achieved by January 7, 1998.

The tagout process improvements will be completed by June 15, 1998.



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98-01-07: 10 CFR 2.201

~~updated 10/6/98?~~

when & where was this closed?
 98-01-08: closed in 98-06?

April 23, 1998
 BECo Ltr. #2.98.054

L.J. Olivier
 Vice President Nuclear and Station Director

U.S. Nuclear Regulatory Commission
 Attention: Document Control Desk
 Washington, DC 20555

Docket No. 50-293
 License No. DPR-35

REPLY TO NOTICE OF VIOLATIONS 98-01-07 AND 98-01-08
NRC INSPECTION REPORT NO. 50-293/98-01, DATED MARCH 24, 1998

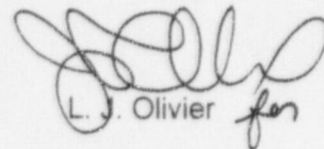
Enclosures 1 and 2 provide Boston Edison Company's reply to Notice of Violations 98-01-07 and 98-01-08 contained in the subject inspection report.

This letter includes the following commitment addressing violation 98-01-07 (Enclosure 1):

- The circumstances surrounding this late 10 CFR 50.72 reporting will be communicated to all nuclear engineering personnel in the 2nd quarter engineering support personnel training session. This will be completed by July 30, 1998.

Violation 98-01-08 was resolved and full compliance achieved in October 1997.

Please do not hesitate to contact me if there are any questions regarding the enclosed reply.


 L.J. Olivier for

WGL/298054/ltrs

Enclosure 1: Reply to Notice of Violation 98-01-07
 Enclosure 2: Reply to Notice of Violation 98-01-08

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ENCLOSURE 1

Reply to Notice of Violation 98-01-07

VIOLATION 98-01-07

During an NRC inspection (investigation) conducted January 7 - February 24, 1998, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, violation, VIO 97-01-07, is listed below:

- A. 10 CFR 50.72(b)(ii)(B) requires that a condition outside the design basis of the plant be reported to the NRC within one hour.

Contrary to the above, the NRC identified that a condition outside the design basis of the plant involving the emergency diesel generator fuel oil storage system was not reported to the NRC within 1 hour. The condition was initially identified by the licensee on January 21, 1998, but not reported to the NRC until January 27, 1998.

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

REASON FOR THE VIOLATION

The reason for the violation was non-compliance with PNPS Procedure 1.3.121, "Problem Report Program," Rev. 3. Our assessment (PR 98.0646) of the violation revealed the following.

The cause for a condition outside the design basis of the plant not being reported within one hour was a human error. The individuals involved with the evaluation of the emergency diesel generator (EDG) fuel requirement did not submit PR 98.9052 to the Nuclear Watch Engineer (NWE) in a timely manner in accordance with procedure 1.3.121.

During an engineering review of calculation S&SA 55 (Rev. 5), "Minimum On-Site Diesel Fuel Requirement" an inconsistency in an assumption was identified. A problem report (PR 98.9052) was written to document the inconsistency. An engineering evaluation (EE 98-011) dated January 21, 1998, was drafted to document the minimum fuel oil capacity was adequate. The PR 98.9052 and EE 98-011 were submitted to the NWE concurrently on January 27, 1998.

The individuals involved did not believe the issues presented in PR 98.9052 were reportable. During the review of the problem report and as a result of discussion between the NWE and the engineer, a potential single failure vulnerability in the EDG fuel oil supply system was identified. Specifically, it was discovered that failure of either main storage tank suction check valve (38-CK-101A/B) could eliminate the ability to cross-connect the tanks. This new potential single failure vulnerability in the EDG fuel oil cross-connect line was added to the PR 98.9052 on January 27, 1998. The NRC Operations Center was notified in accordance with 10 CFR 50.72(b)(ii)(B) on January 27, 1998, due to the belief that a condition was identified to be potentially outside the design basis of the plant. Licensee Event Report, LER 98-001-00, describing the event, was submitted to the NRC on March 3, 1998.

PNPS procedure 1.3.121, steps 6.1[4] and [5], require the originator of the problem report fill out the entire problem report form to the extent practical, and if the conditions on the back of the problem report exist or if the originator is uncertain, the PR shall be hand carried to the NWE. Also, step 6.1[5] requires an individual to write a problem report at the end of 72 hours if there is insufficient information to validate the need for a problem report and the concern relates to the potential operability of safety-related systems, structures and components. The procedure specifically requires the problem report be submitted if, at the end of 72 hours, the need for a problem report cannot be ruled out. PR 98.9052 was not submitted to the NWE in a timely manner as specified in step 6.1[4] of procedure 1.3.121. This led to delayed reporting of the potential condition outside the design basis of the plant.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

- The NESG Group Manager held a group meeting where he reiterated his expectation that individuals must prepare a problem report and bring it to the NWE when the engineer becomes aware of the problem. The engineer cannot wait until an engineering evaluation is completed.
- Individuals involved in the EDG fuel oil requirement assessment were counseled on their failure to submit the PR 98.9052 to the NWE in a timely manner.
- Training was provided to all NESG engineers on the requirements of PNPS procedure 1.3.121. Emphasis was placed on the expectation and requirement to write a problem report per Section 6.1[4]. It was also explained, that though a problem may not pose a threat to operability, it may still be reportable as being outside the design basis. This training was given by the S&SA department manager during the weeks of March 2 and March 9, 1998.
- Engineers on the design basis information project have been made aware they must follow PNPS 1.3.121 when design basis issues are discovered. They were also given the above training.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

- The circumstances surrounding this PR will be communicated to all NESG engineers in the 2nd quarter ESP training session. This will be completed by July 30, 1998.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on January 27, 1998, when the NRC was notified in accordance with 10CFR 50.72.

ENCLOSURE 2

Reply to Notice of Violation 98-01-08

VIOLATION NO. 98-01-08 (identified as item B in the Notice of Violation)

During an NRC inspection (investigation) conducted January 7 - February 24, 1998, two violations of NRC requirements were identified. In accordance with "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, violation, VIO 98-01-08, is listed below:

- B. 10 CFR 50.71(e) requires periodic updates be submitted to the UFSAR to assure information included in the UFSAR contains the latest information available. Revisions must be filed annually or six months after each refueling outage provided the interval between updates does not exceed 24 months.

Contrary to the above, prior to October 1997, FSAR updates submitted to the NRC, per BECo procedure NOP 83A17, "10 CFR 50.71(e) Update," did not include all relevant changes made to information in the UFSAR within the prescribed time limits. Instead of updating the UFSAR during the operational turnover phase of changes, the UFSAR was only updated after completion of modification close-out. This often times exceeded the time limits set forth in 10 CFR 50.71(e).

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

REASON FOR THE VIOLATION

The reason for the violation was Pilgrim Nuclear Organization Procedure, NOP83A17, "10 CFR 50.71(e) FSAR Update," did not conform to specific requirements set forth in 10 CFR 50.71(e) for updating the Final Safety Analysis Report (FSAR). Also, our assessment (PR 97.0426) showed NOP83E4, "FSAR Change Request", NOP83E1, "Control of Modifications at Pilgrim Station", and ineffective quality defense barriers in the areas of management and independent oversight created delays in FSAR updating timeliness. As such, FSAR updates submitted to the NRC did not include all relevant changes made to information in the FSAR within the prescribed time limits.

The first FSAR update took place in 1982 for compliance with the new requirements of 10 CFR 50.71(e). 10 CFR 50.71(e) required implementing a periodic update to the FSAR to assure information included in the FSAR reflects the changes made to the facility or procedures as described in the FSAR, all safety evaluations performed by the licensee either in support of requested license amendments or in support of conclusions that changes did not involve an unreviewed safety question, and all analysis of new safety issues performed by or on behalf of the licensee at Commission request. NOP83E1 and NOP83E4 provided procedural steps to make changes to the information contained in the FSAR after the update of drawings and close-out of modifications.

A PNPS regulatory relations self assessment (96-4) identified the PNPS FSAR update process did not provide timely FSAR updates. Specifically, after a plant design change (PDC) was performed, an FSAR change request was only submitted after final PDC close-out.

In some cases, even though modifications were put into operation, the PDC final close-out occurred after all drawings and other paperwork were updated, which resulted in UFSAR updates exceeding the time limit prescribed in 10 CFR 50.71(e).

NRC Inspection Report No. 50-293/96-10, dated February 7, 1997, documented the FSAR change process weakness initially identified by BECo was potentially a nonconformance with the requirements of 10 CFR 50.71(e). In response, BECo initiated problem report (PR) 97.9133, dated February 21, 1997, which was classified as a significant condition adverse to quality. The PR root cause analysis, dated September 22, 1997, concluded that procedures for updating the FSAR did not meet the intent of 10 CFR 50.71(e).

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Several corrective actions were developed and implemented as part of the resolution of PR97.9133, more specifically, the following actions were implemented.

- NOP83A17, "10 CFR 50.71(e) FSAR Update," was revised to initiate UFSAR change requests at the same time modifications were considered ready for operational turnover.
- Changes to NOP83E1, "FSAR Change Request" and NOP83E1, "Control of Modifications at Pilgrim Station", were also implemented to make changes to the information in the FSAR in a timely manner.
- NOP83A3, "Regulatory Correspondence Control" was revised to include, in part, guidance on the identification of commitments that affect the Pilgrim station licensing basis.
- All fully implemented plant modification changes affecting the FSAR as of April 21, 1997, were submitted to the NRC in revision 21 of the FSAR in October 1997, in full compliance with 10 CFR 50.71(e).

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

A full compliance with 10 CFR 50.71(e) was achieved in October 1997.