U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	50-302
License No:	DPR-72
Report No:	50-302/98-09
Licensee:	Florida Power Corporation
Facility:	Crystal River 3 Nuclear Station
Location:	15760 West Power Line Street Crystal River, FL 34428-6708
Dates:	September 13 through October 24, 1998
Inspectors:	S. Cahill, Senior Resident Inspector S. Sanchez, Resident Inspector C. Payne, Reactor Engineer (Sections O5.2, O5.3) G. Wiseman, Reactor Inspector (Sections F8.1, F8.2)
Approved by:	L. Wert, Chief, Projects Branch 3 Division of Reactor Projects

Enclosure

EXECUTIVE SUMMARY

Crystal River 3 Nuclear Station
NRC Inspection Report 50-302/98-09

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a six-week period of resident inspection; in addition, it includes the results of announced inspections by regional inspectors in the areas of fire protection and licensed operator requalification training.

Operations

- The licensee was proactively and thoroughly addressing personnel errors which had previously caused operational equipment configuration control problems. A multi-disciplined team was established to review the problem. The team issued a comprehensive and self-critical report with numerous thorough corrective action recommendations. Effective short-term corrective actions such as full procedural usage and peer checking requirements were implemented and appropriate long term actions were being considered (Section O1.2).

- The training provided for a complete revision to the clearance and tagging processes was thorough and closely linked to the procedure requirements. Training included hands-on practical applications for different user levels, which was appropriate due to the entirely new process being implemented (Section O5.1).

- Simulator training was effective and operator performance during this training was good. The conduct and performance of the simulator examinations was satisfactory. The evaluators were thorough in noting individual performance discrepancies and the scenarios observed were effective in discriminating non-competent from competent operators. Documentation of individual performance results was satisfactory (Section O5.2).

- The licensee conducted remedial training and evaluations as required by 10CFR 55.59 and facility training procedures. Operators that had failed requalification tests and quizzes were removed from shift until remediation was complete (Section O5.3).

- The licensee's Corrective Action Review Board consistently exercised strong and critical oversight of proposed root cause determinations and corrective action plans. Expectations for quality were high and the Board's review resulted in improved individual performance. This was considered a strength of the licensee corrective action system (Section O7.1).

- The Plant Review Committee (PRC) was upholding high review standards to ensure supplied material was fully developed in order to support a valid PRC approval (Section O7.1).

Engineering

- The licensee was adequately pursuing resolution of open long-term design and inspection open items. A minor deficiency was identified associated with tracking of corrective actions initiated at License Amendments Review Boards (Section E1.1).

- A Design Review Board for a new diesel driven emergency feed pump was widely attended and all groups received an opportunity to identify their concerns and needs for the modification. Questioning identified numerous valid concerns, addressed lessons learned from previous major projects, and was reflective of superior performance standards (Section E1.2).

Report Details

Summary of Plant Status

The plant began the inspection period at full rated thermal power and remained at that level throughout the report period.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

Using Inspection Procedure 71707 the inspectors performed routine reviews of plant operations which included shift turnovers, operator log reviews, daily planning meetings, clearance reviews, operator training, and system walkdowns. Significant observations are discussed in subsequent paragraphs.

The inspectors performed a complete detailed walkdown of the fluid portion of the Emergency Feedwater (EF) system, verifying system configurations against licensee flow print and valve lineup requirements. Walkdown of EF support systems, verification of EF Improved Technical Specification (ITS) surveillance requirements, and review of EF maintenance and corrective action backlogs were still in progress at the close of the report period. During the walkdown, the inspectors observed that the condition of the EF system appeared very good due to the lack of observed equipment deficiencies and work request tags. The inspectors identified several minor discrepancies between the flow prints and the field installation, mainly involving pipe caps, pipe reduction locations, and components not reflected on the flow prints. Most of these discrepancies had been also identified by the licensee during their labeling upgrade project walkdown. The inspector verified all of the deficiencies were either already being corrected or were added to the label project deficiency list for correction.

O1.2 Operational Configuration Control

a. Inspection Scope (71707)

The inspector reviewed the licensee's actions following several component position problems attributed to poor human performance which occurred in July and August of 1998. Some previous similar problems and the licensee's actions were discussed in Inspection Report (IR) 50-302/98-07.

b. Observations and Findings

In response to the most recent (August 1998) problems with operational configuration control, the licensee's immediate response included a 30-day requirement for all plant departments to perform 100% peer checking and to have a procedure in hand for any evolution on plant equipment. All troubleshooting activities were also required to use equipment alteration logs and have restoration positions determined by Operations. The inspector observed that the number of errors significantly decreased in the two months following implementation of these actions.

The licensee established a multi-disciplined team of maintenance, operations, and chemistry personnel to investigate the problem, review the trends of the previous year, and propose long term corrective actions. The licensee had previously identified examples of poor status control over the past year and attempted to correct the underlying causal factors, but concluded the actions were not fully successful because problems continued to occur. The licensee's Collective Analysis Trend Report issued July 16, 1998 for the period from November 1997 through April 1998, also concluded that generic weaknesses in self-checking human performance techniques were still evident. Although none of these recent problems resulted in significant impact on plant systems, the licensee concluded that an escalated and more comprehensive response to human performance issues was warranted. The previous investigations of component mispositionings concluded that numerous disparate causes, such as inadequate verification of components, poor procedural compliance, and incomplete restoration from troubleshooting, were involved.

The inspector reviewed the investigation team's detailed summary report, issued on October 6, 1998, and found it very candid and comprehensive. The team had reviewed all precursor cards (PC) initiated this year on component mispositions and conducted interviews with workers and supervisors from all plant departments. The team also benchmarked their equipment status control processes with other utilities and reviewed related industry guidance to attempt to find successful strategies for reducing human errors. The report contained conclusions which included specific areas for improvement. Numerous recommendations were made for each conclusion which were diverse, original, and ambitious. Although a committed corrective action had not yet been assembled and prioritized at the close of the report period, the licensee was considering a new plant-wide consolidated program to control operational configuration and had decided to periodically implement full procedure usage in weekly increments.

c. Conclusions

The licensee was proactively and thoroughly addressing personnel errors which had previously caused operational equipment configuration control problems. A multi-disciplined team was established to review the problem. The team issued a comprehensive and self-critical report with numerous thorough corrective action recommendations. Effective short-term corrective actions such as full procedural usage and peer checking requirements were implemented and appropriate long term actions were being considered.

O5 Operator Training and Requalification

O5.1 Revised Clearance Process Training

a. Inspection Scope (71707, 92901)

The inspector attended training given to operators and maintenance personnel on the licensee's new clearance and tagging processes. The training was a combination of classroom lecture and practical application conducted on September 24 and 25, 1998. Previous problems with implementation of the licensee clearance tagging process had

been identified as Violation 50-302/98-01-01, Closure of Electrical Linkages While Under a Red Tag Clearance. Implementation of a new process and the associated training were licensee corrective actions for that problem.

b. Observations and Findings

The licensee replaced the previous tagging process with two new procedures, one for Operations Danger Tagouts and one for Personal Danger Tags, Caution Tags and Test Tags. The new processes were developed using industry benchmarks and resulted in a complete change in the philosophy and mechanics for processing clearances and tagging requests. The licensee appropriately determined that this necessitated detailed training for all users. The inspector's review focused on the scope and adequacy of the training provided to the users of the process. The inspector did not evaluate the adequacy of the new process or the licensee's implementation plan.

The inspector attended the last of several scheduled training sessions. The classroom lecture portion of the training was thorough and supported by detailed training materials provided to each student. The inspector compared the materials to the revised procedures and found them closely linked. The inspector observed that a member from the dedicated licensee team that created the new process was not present at this training session. The inspector noted that this reduced the efficiency of the training because the training instructor was unable to adequately address questions on the intent or philosophy of the new processes. Questions were captured for later follow-up with the trainees so this did not impact the final effectiveness of the training. The inspector also confirmed that other sessions of the training had included a reinvention team member. The inspector observed that the second day of training consisted of hands-on training specifically designed for each user group. Past performance problems and common errors were specifically addressed in the training. The inspector observed that the overall training was more detailed and thorough than training completed for a previous revision to the clearance process in 1997.

c. Conclusions

The training provided for a complete revision to the clearance and tagging processes was thorough and closely linked to the procedure requirements. Training included hands-on practical applications for different user levels, which was appropriate due to the entirely new process being implemented.

O5.2 Simulator Training and Examinations

a. Inspection Scope (71001)

The inspector observed the licensee's conduct of two training simulator scenarios and administration of the annual simulator examinations to one crew of licensed operators. The inspection served to assess the licensee's compliance and effectiveness in conducting operator requalification training in accordance with 10 CFR 55.59, "Requalification."

b. Observations and Findings

The inspector observed the licensed operator requalification simulator training for operating Crew E. The crew attended a four hour simulator training session each day of the training week. Each training session consisted of one integrated simulator scenario from the training bank followed by a two hour review session of operator specified equipment failures and transient events. The inspector found the training scenarios were of equivalent complexity and level of difficulty as the examination scenarios. Following the scenario, the instructor feedback to the operators regarding their actions was accurate, informative and constructive.

At the end of the training week, the inspector observed the administration of two examination scenarios (SES-32 and SES-12) to the operating crew which met the NRC requirements for an annual simulator evaluation of the licensed operators. The inspector observed the facility evaluator debrief sessions and reviewed the evaluator documentation of the crew's performance. The post scenario meeting was well organized and conducted. The evaluators kept to an established agenda that focused their attention on the important aspects of the evaluation process and also controlled the amount of time expended to a minimum. The evaluators' comments and findings were appropriate and were similar to NRC observations. The inspector found that both scenarios were challenging and discriminating test tools that were appropriate for measuring the knowledge and skill of the operators .

c. Conclusion

Simulator training was effective and operator performance during this training was good. The inspector also determined that the conduct and performance of the simulator examinations was satisfactory. The facility evaluators were thorough in noting individual operator performance discrepancies and the scenarios observed were judged to be good evaluation tools. Documentation of individual performance results was satisfactory. The inspector concluded that this portion of the licensed operator requalification program met the requirements of 10 CFR 55.59.

O5.3 Remedial Training and Testing

a. Inspection Scope (71001)

The inspector reviewed the licensee's licensed operator requalification training records and associated procedures to ensure that an appropriate remedial training program was developed, implemented, maintained and documented as required by 10 CFR 55.59 and the licensee's procedures.

b. Observations and Findings

The inspector reviewed attendance records for training administered in cycle 2 of 1998 (98-2) and weekly quiz results for all the requalification training sessions conducted in 1998. For cycle 98-2, the inspector identified that 38 licensed operators were scheduled to receive eight classroom lectures. The inspector found that only two operators missed

one lecture each during the cycle for an excellent overall attendance rate of 99.3%. The inspector also noted that four licensed operators had failed one or more weekly written requalification tests during 1998. The inspector reviewed each remedial training package and evaluated licensee compliance with Training Department Procedure (TDP) 203, "Licensed Operator Requalification Training Program," for operator failure of a requalification test. The inspector found that each operator was temporarily removed from shift as required by TDP-203, section 5.2.1.6 until he was adequately remediated. The inspector did not identify any problems with the remediation plans that were implemented nor with the final documentation which showed that the operators had satisfactorily completed their remedial training.

c. Conclusions

The licensee had conducted remedial training and evaluations as required by 10CFR 55.59. Operators that had failed requalification tests and quizzes were removed from shift until remediation was complete.

O7 Quality Assurance in Operations

O7.1 Quality Assessment and Corrective Action System Activities (71707)

The inspector routinely reviewed the activities and results of the licensee's Nuclear Quality Assessments (NQA) group. Section O7.1 of IR 50-302/98-08 previously documented that NQA was not specifically evaluating responses and corrective action plans to precursor cards (PC) identified by NQA. The inspector reviewed the licensee's response to this problem and verified that the corrective action program software was being revised to address this concern and allow NQA evaluation without impacting schedule commitments of other groups. The inspector confirmed that NQA was planning to perform evaluations of all NQA-originated PCs and considered the actions appropriate in response to the original problem.

The inspector attended numerous Corrective Action Review Board (CARB) meetings in 1998. The inspector observed that CARB was consistently attended by virtually all of the assigned senior managers. The use of alternates or absent members were extremely rare situations. The inspector also observed that CARB reviews of root cause determinations and corrective action plans consistently used high standards, were constructively critical, and were highly detailed. Frequently, first-time presenters of investigation results to CARB were unsuccessful in meeting the CARB's high standards. The presenters were provided with detailed feedback to upgrade their performance. Subsequent presentations and investigations fulfilled the high CARB expectations. The inspector determined that the CARB was a strength of the licensee corrective action system.

The inspector also attended one Plant Review Committee (PRC) meeting on October 22, 1998. The inspector observed that the PRC Chairman identified a discrepancy between the revision of an issue supplied for PRC member review and the revision used by the issue presenter. While resolved with no impact, a discussion ensued as to the finality of the issues supplied for PRC review. The inspector noted that

the PRC chairman expressed appropriate concern that material supplied to the PRC needed to be fully developed to support a valid PRC approval. The inspector concluded the PRC chairman was upholding high standards for PRC review and approval.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments (61726, 62707)

The inspectors observed all or portions of the following surveillance activities and some minor troubleshooting efforts in response to testing problems:

- SP-108 Reactor Trip Module and Control Rod Drive Trip Functional Test
- SP-358A Engineered Safeguards (ES) Monthly Actuation Logic Functional Test #1

A relay failure occurred approximately twenty minutes after the satisfactory performance of SP-358A. The component that failed was determined to be an interposing relay in ES channel 2 that actuated blocks 4 and 6 of the emergency diesel generator block loading circuitry. This failure was not an Agastat relay failure. Failure of Agastat relays is addressed in Section E1.3 of this report. This relay, which had been replaced earlier this year, was again replaced and successfully tested. The licensee attributed this problem to an early in life electronic component failure. The inspectors concluded that the licensee had appropriately evaluated this relay failure and was tracking all failures for specific relay type performance. No other concerns or problems were noted during the performance of SP-358A.

III. Engineering

E1 Conduct of Engineering

E1.1 Engineering Reportability Evaluations and Licensee Amendment Requests

a. Inspection Scope (37551, 92903)

The inspector reviewed the results of several license amendment requests and reportability evaluations to ensure they adequately resolved outstanding long term issues and dispositioned problems from open inspection items.

b. Observations and Findings

The licensee submitted License Amendment Request (LAR) 229 on October 16, 1998 to resolve an issue with the normal position of the decay heat system valves (DHV) 34 and 35. These valves are the suction valves from the Borated Water Storage Tank (BWST) to the decay heat pumps and had been reconfigured in 1985 to be normally positioned

closed. The repositioning was the subject of Violation 50-302/97-14-13. The licensee subsequently submitted a LAR because the new normal valve position could represent an Unreviewed Safety Question (USQ). The valves were evaluated as operable as closed in the short term under Deficiency Report (DR) 97-7755, using the guidance in NRC Generic Letter 91-18. The licensee's LAR proposed to perform monthly pressure checks as an Improved Technical Specification (ITS) surveillance requirement to ensure the suction piping remained full of fluid and free of voids. This was to address a concern for water hammer and operability of the system with the valves closed. However, the inspector identified that the pressure checks were not addressed in DR 97-7755 as a specific interim compensatory action and thus were not being routinely implemented by the licensee at the time of the inspection. The inspector subsequently determined that the licensee had identified the need to revise the DR at their final License Amendment Review Board (LARB) but informally assigned the action to the cognizant engineer. This action had not been completed at the end of the report period because the engineer was unable to report to work for an extended time due to an injury. Since the interim action was not formally tracked, it was not being implemented. The licensee initiated a PC to address corrective action for the failure to track LARB action items. No violation of regulatory requirements occurred. The licensee had verified the subject pressures at the time of the LARB and was developing a routine surveillance procedure for long-term measures.

Violation 50-302/97-12-08 discussed a problem with incomplete qualification records and post-accident time duration requirements for the make-up system pumps (MUP) to verify that they were capable of fulfilling their emergency functions. Short-term operability of the MUP was dispositioned in DR 98-0041. On October 7, after reviewing the results of a vendor review for MUP qualification, the licensee identified that guidance would be needed to restrict normal operation time of each MUP to limit mechanical seal wear, to implement higher limits on MUP gear drive cooling water flow, and to ensure MUP flow was throttled to a prescribed flowrate within 72 hours of an event. These restrictions were needed to ensure the MUP capability to perform its function for up to 2 months after an event. The inspector verified the restrictions were implemented and reviewed the licensee's detailed operability and reportability evaluation. The inspector did not identify any notable discrepancies with the licensee's conclusion that the issue was not reportable and that the MUPs were operable and had been operable in the past.

The inspector reviewed the results of a Low Pressure Injection System Study submitted by the licensee on October 22, 1998. The study was in response to concerns identified in Unresolved Item (URI) 50-302/97-12-09 and URI 50-302/98-02-08 regarding position and throttling of decay heat system (DH) outlet isolation valves DHV-5 and 6, and control of DH crossover line operation. The licensee committed to address the problems by modifying the DH system to add new control valves in their next refueling outage. The inspector did not identify any problems requiring immediate action in the study letter.

The inspector also reviewed the licensee response to ongoing technical investigations of once-through steam generator (OTSG) tube end anomalies discovered in inspections done in July 1997. The inspector did not identify any problems with the results of the investigation relative to new Technical Specification requirements issued in a recent license amendment. The inspector concluded the issue was receiving appropriate licensee and vendor attention.

c. Conclusions

The inspector concluded the licensee was adequately pursuing resolution of open long-term design and inspection open items. A minor deficiency was identified associated with tracking of corrective actions initiated at License Amendments Review Boards.

E1.2 Interim Design Review Board for New Diesel-Driven Emergency Feed Pump

a. Inspection Scope (37551)

The inspector attended an interim design review board (DRB) conducted on October 5, 1998, for a major modification to add a new diesel-driven emergency feedwater pump (EFP) and building. The inspector reviewed resolution of open items from the earlier conceptual DRB and tracking of concerns raised at the interim DRB.

b. Observations and Findings

The inspector observed that the DRB was broadly attended by all major licensee departments, with several groups represented by more than one attendee. The inspector verified the required attendees were present to fulfill the DRB quorum requirements in licensee design change procedures. The format of the DRB consisted of a presentation on the current status of the project design by the contractor and licensee liaisons performing the engineering work. The contractor also specifically addressed each open item from the conceptual DRB. The licensee attendees directed detailed and varied questions to the presenters that exhibited a high degree of skepticism. The inspector noted that an atmosphere supporting open questioning was encouraged and the broad attendance gave a good multi-discipline review of the project. Previous problems with other projects were raised to ensure they were addressed, even though not specifically required to be part of the EFP design basis. The licensee attendees also consistently requested the basis for design limits supplied by the contractor. Specific consequences if these limits were exceeded were requested to be clearly defined in the final modification paperwork to support future operability determination for unexpected circumstances.

The inspector verified that the concerns identified during the DRB were clearly documented and tracked to completion via 37 specific action items assigned in the DRB minutes. The inspector did not identify any concerns that were not addressed by the licensee.

c. Conclusions

The inspector concluded the DRB was widely attended and all groups received an opportunity to identify their concerns and needs for the diesel-driven emergency feed pump modification. Questioning identified numerous valid concerns, addressed lessons learned from previous major projects, and was reflective of superior performance standards.

E1.3 Engineered Safeguards System (ES) Relay Failures (37551, 71707)

Over the past 30 months Crystal River Unit 3 (CR-3) has experienced twelve Agastat DSC model electronic time delay relay failures, with three occurring in the last two months. These relays were installed in 1991 to alleviate concerns over electromechanical time delay relay accuracy. CR-3 has 33 of these relays installed in the emergency diesel generator block loading sequencer portion of the ES system. Because of the recent increase in the number and trend of failures, the licensee has taken an aggressive approach to understand the potential failure mechanisms. The licensee completed an operability impact and extent of condition review and determined the failures were specific to the Agastat relays in the ES system and did not affect operability of the ES system. The inspectors reviewed this determination in detail and concluded the licensee had thoroughly and appropriately addressed all operability concerns. The ongoing investigation into the relay failure mechanism requires vendor support for additional review. The licensee has not yet determined if the issue is reportable under 10 CFR Part 21. The inspectors concluded the licensee was appropriately pursuing the issue with the involved vendors.

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) LER 50-302/97-42-00 and 01: Inadequate Engineering Evaluation Results in Loss of Diverse Reactor Coolant System Leak Detection Capability. This LER delineated the inability of the gaseous containment radiation monitor to detect a one gallon per minute (gpm) reactor coolant system leak within one hour, rendering the gaseous channel inoperable. The licensee also discovered their particulate containment radiation monitor was inoperable because it was configured for iodine monitoring. This combination did not meet ITS 3.4.14 which required two of three leakage detection monitors to be operable. The inspector verified the licensee has maintained the gaseous channel in an administratively inoperable status and has been relying on the containment sump monitor and the reconfigured and operable particulate containment radiation monitor to comply with the ITS. As committed in the LER, on September 30, 1998, the licensee submitted License Amendment Request (LAR) 238 to the NRC to revise the license basis for the gaseous detector one hour detection requirement as described in the ITS 3.4.14 Bases. The licensee determined the gaseous channel could conservatively detect a Reactor Coolant System (RCS) one gpm leak in 14 hours and that changing the license basis was an unresolved safety question. The inspector reviewed the LAR and determined it was a complete description of the problem and fulfilled the licensee LER commitments to address the problem. This inspection open item will now be tracked as a license action and no further inspection activity is planned. Although this item was a noncompliance with regulatory requirements, for the reasons

discussed in Inspection Report 50-302/97-21, the licensee met the criteria for enforcement discretion per Section VII.B.2 of the NRC Enforcement Policy as described in NUREG-1600. Consequently this item is closed and is identified as a further example of Non-Cited Violation NCV 50-302/97-21-01, Examples of Noncompliances in Design Control, 50.59 Evaluations, Procedure Adequacy, Reportability, and Corrective Actions That Are Subject to Enforcement Discretion.

IV. Plant Support

P1 Conduct of EP Activities

P1.1 Annual Emergency Plan Drill (71750)

The inspectors participated in the licensee's annual emergency plan (EP) drill conducted on October 14, 1998, in the Training Center Simulator, the Technical Support Center (TSC), and the Emergency Operations Facility (EOF). The inspectors observed that the drill scenario was challenging and fully exercised the licensee emergency response capability. Specific observations are discussed in Inspection Report 50-302/98-12.

F5 Fire Protection Staff Training and Qualification

F5.1 Routine Fire Brigade Drill (71750)

The inspectors observed the conduct of a routine fire brigade drill on October 19, 1998, by two members of the licensee training staff. The drill was administered to over 10 members of the fire brigade as an annual drill requirement. The inspector noted expectations for equipment status of responders had to be re-emphasized because brigade members arrived in various stages of dress and equipment readiness. The inspectors observed some minor technique errors, but these were identified by the drill instructors. The inspectors also attended the post-drill critique. While the critique was not conducted in a formal manner, the inspectors noted that the licensee adequately addressed the drill deficiencies.

F8 Miscellaneous Fire Protection Activities

F8.1 Actions on Previous Inspection Findings (64704, 92904)

(Closed) Inspection Follow-up Item (IFI) 50-302/97-11-10: Post Restart Fire Protection Inspection to Validate Completion of Fire Protection Enhancement Items. This item concerned 12 fire protection post restart commitment items identified during NRC inspections conducted in August and December 1997. These items were previously documented in Section F8.4 of NRC Integrated Inspection Report No. 50-302/97-18. The post restart commitment items were related to the update and enhancement of the Fire Protection Program, Appendix R documentation and the Thermo-Lag Resolution Program which the licensee scheduled to complete after the unit was restarted on February 10, 1998.

The inspector reviewed FPC's letter to the NRC dated April 10, 1998, "Notification of Revised Schedules for Completion of Appendix R Work Identified in NRC Inspection Report No. 50-302/97-13, NRC Inspection Report No. 50-302/96-15, and Revision of Thermo-Lag Resolution Schedules," NRC letters to FPC dated April 23, 1998, "Consent to Confirmatory Order Modifying License," and May 21, 1998, "Confirmatory Order Modifying License." These letters documented the licensee's schedule and NRC's Order for completion of actions committed to address the post restart commitment items and the Thermo-Lag Resolution Program.

The inspector verified that the licensee issued a discrepancy report (Precursor Card) on each of these items and corrective action was identified for each item. The evaluations for these corrective actions had been completed and the actions required to resolve each issue had been identified. The inspector reviewed the status of each of the licensee's identified post restart commitment items, reviewed the PC issued to track corrective actions for each item, and interviewed the responsible licensee fire protection engineers overseeing the Fire Protection/Appendix R Program. The inspector concluded that the resolution of these issues was either complete or in progress and scheduled for completion in accordance with committed completion dates. For those post restart items not completed, the licensee's tracking program was considered acceptable to assure that the corrective actions would be completed. The licensee's corrective action system remains adequate and appropriately documented the originally identified post restart items in IFI 50-302/97-11-10. This item is closed.

F8.2 (Closed) IFI 50-302/97-18-01: Evaluation of Fire Barrier Penetration Seal Enhancement Program. The issue related to the lack of available documentation to verify that fire barrier penetration seals were installed in accordance with design specifications bounded by configurations that had satisfactorily passed 3-hour fire resistance testing.

The inspector reviewed FPC's letter to the NRC dated April 10, 1998, "Notification of Revised Schedules for Completion of Appendix R Work Identified in NRC Integrated Inspection Report No. 50-302/97-18, NRC Integrated Inspection Report No. 50-302/96-15, and Revision of Thermo-Lag Resolution Schedules," that described the licensee's Penetration Seal Resolution Program (Commitment ID No. 3F0498-22-10). This program consisted of a three-phase project to: (I) verify the penetration seals are bounded by tested configurations/engineering analysis; (II) perform a design verification walkdown of penetration seals; and, (III) finalize engineering evaluation documentation for resolution of penetration seals not bounded by a tested configuration.

The inspector reviewed the scope of implementation for the Penetration Seal Resolution Program, and verified that the licensee's penetration seal design and installation parameters (to be verified during licensee walkdowns and documented in the facility penetration seal computer database) satisfied the guidance described in Sections 3.1 and 3.2 of GL 86-10. The inspector concluded that the scope of the Penetration Seal Resolution Program was sufficiently documented in the licensee tracking program to assure that the corrective actions identified in IFI 50-302/97-18-01 would be completed. This item is closed.

V. Management Meetings

X1 Exit Meeting Summary

The inspection scope and findings were summarized on October 26, 1998. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

PARTIAL LIST OF PERSONS CONTACTED

Licensees

S. Bernhoft, Manager, Nuclear Licensing
J. Cowan, Vice President, Nuclear Operations
R. Davis, Assistant Plant Director, Operations and Chemistry
R. Grazio, Director, Nuclear Regulatory Affairs
G. Halnon, Director, Nuclear Quality Programs
J. Holden, Director, Site Nuclear Operations
M. Marano, Director, Nuclear Site & Business Support
C. Pardee, Director, Nuclear Plant Operations
W. Pike, Manager, Nuclear Regulatory Compliance
M. Rencheck, Director, Nuclear Engineering & Projects
M. Schiavoni, Assistant Plant Director, Maintenance
R. Thurow, Acting Director, Nuclear Operations Training

NRC

C. Payne, Reactor Engineer, Region II (October 21 - 23, 1998)
G. Wiseman, Reactor Inspector, Region II (September 28 - October 2, 1998)

INSPECTION PROCEDURES USED

IP 37551:	Onsite Engineering
IP 61726:	Surveillance Observations
IP 62707:	Conduct of Maintenance
IP 64704	Fire Protection Program
IP 71001	Requalification Program
IP 71707:	Plant Operations
IP 71750:	Plant Support Activities
IP 92901:	Followup - Operations
IP 92903:	Followup - Engineering
IP 92904	Followup - Plant Support

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

Type	Item Number	Status	Description and Reference
None			

Closed

Type	Item Number	Status	Description and Reference
LER	50 302/97-42-00 and 97-42-01	Closed	Inadequate Engineering Evaluation Results in Loss of Diverse RCS Leak Detection Capability. (Section E8.1)
IFI	50-302/97-11-10	Closed	Post Restart Fire Protection Inspection to Validate Completion of Fire Protection Enhancement Items. (Section F8.1)
IFI	50-302/97-18-01	Closed	Evaluation of Fire Barrier Penetration Seal Enhancement Programs. (Section F8.2)

Discussed

Type	Item Number	Status	Description and Reference
VIO	50-302/97-14-13	Open	Failure to Take Adequate Corrective Actions to Identify and Correct Design Weaknesses Associated with Adequacy of Past 10 CFR 50.59 Review for Positioning of DHV-34 and DHV-35 During Normal Operation. (Section E1.1)
VIO	50-302/97-12-08	Open	Incorrect HPI Pump Purchase Order. (Section E1.1)
URI	50-302/97-12-09	Open	Failure to Normally Position LPI Injection Valves DHV-5 and DHV-6 Open. (Section E1.1)
URI	50-302/98-02-08	Open	LPI Crossover Cooling Non-Single Failure Proof. (Section E1.1)
NCV	50-302/97-21-01	Closed	Examples of Noncompliances in Design Control, 50.59 Evaluations, Procedure Adequacy, Reportability, and Corrective Actions That Are Subject to Enforcement Discretion. (Section E8.1)