

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-293/88-02

Docket No. 50-293

License No. DPR-35

Licensee: Boston Edison Company
800 Boylston Street
Boston, Massachusetts

Facility Name: Pilgrim Nuclear Power Station

Inspection At: Plymouth, Massachusetts

Inspection Conducted: January 25 - February 4, 1988

Inspectors: Thodore A. Rebelowski
T. Rebelowski, Senior Reactor Engineer, DRS

7/14/88
date

Approved by: N. Blumberg
N. Blumberg, Chief Operational Programs
Section, Operations Branch, DRS

4/14/88
date

Inspection Summary: Unannounced Inspection on January 25 - February 4, 1988
(Report No. 50-293/88-02)

Areas Inspected: The Boston Edison Company has committed to establish and implement its Material Condition Improvement Action Program (MCIAP). Administration, managerial and hardware changes addressed in this report have been classified into thirteen issues which include eighty-nine sections that are to be addressed prior to restart. Forty-three sections were reviewed during this inspection to determine the licensee's progress in the establishment of groundwork that will formulate progress, goals and policies that demonstrate management's control of the plant.

Results: This review of these MCIAP sections determined that the strengths of program include:

- The "Communication" issue, where stepping stones are now in place for Managers and First-line Supervisors to understand and implement Boston Edison goals.

- Housekeeping has shown dramatic improvements in area cleanup with a marked reduction in contaminated areas (i.e. 81% of areas below 1000 DPM).
- The Measurement and Test Equipment Control Program that includes a new computer program that will monitor instrument status.
- Staffing where additional permanent personnel have been added to address plant planning functions thus relieving first line supervision of this task.

The areas where additional management attention appears to be necessary are:

- Plans and schedules for performing post maintenance and post modification testing during system recovery and startup are not complete. Testing controls, including the determination of test requirements, scope of the testing program, test status tracking, documentation of test results and verification of data, are needed. This concern is addressed in MCIAP Issue 03-017, Post Maintenance Testing, which is discussed in paragraph 2.8 of this report.
- In addition, the completion of Maintenance Requests (MR) prior to restart is of concern due to the number that remain open. The outstanding MRs need additional licensee attention to allow an orderly approach to plant startup. (Paragraph 2.9)

Overall, the MCIAP was determined to be a viable program that will encompass programmatic improvements and it is being effectively implemented.

DETAILS

1.0 Persons Contacted

Boston Edison Company

- Mr. R. Bird, Senior Vice President-Nuclear
- *Mr. K. Highfill, Station Director
- Mr. M. Brosee, Maintenance Manager
- *Mr. J. Flanningan, MCIAP Review Staff Leader
- Mr. R. Sherry, Chief Maintenance Engineer
- Mr. P. Moraites, Assistant Chief Maintenance Engineer
- *Mr. B. Lunn, Sr., Compliance Engineer
- Mr. J. Mattia, QA Surveillance Group Leader
- *Mr. R. Ledgett, Director Special Programs and Executive Assistant to
Senior Vice President
- Mr. D. Sukanch, Station Facility Manager
- Mr. B. Deacon, Assistant to Senior Vice President Nuclear
- *Mr. P. Hamilton, Compliance Engineer
- *Mr. L. Dooly, Technical Training
- *Mr. J. Quinn, Sr., QA Engineer
- *Mr. E. Ziemianski, Nuclear Training Manager
- *Mr. K. Barrett, Plant Manager
- *Mr. E. Kraft, Plant Support Manager
- *Mr. R. Anderson, Outage Manager

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- *Mr. N. Blumberg, Chief, Operational Programs Section, DRS
- *Mr. C. Warren, Senior Resident Engineer

*In attendance at exit meeting

The inspector also held discussion with other licensee personnel during the course of the inspection

2.0 Material Condition Improvement Action Program (MCIAP)

The licensee has developed a Material Condition Improvement Action Program (MCIAP) that addresses maintenance planning, schedule preparation, work assignments, work progress, workforce supervision and discipline, workmanship practices, material condition and management control. The action plan consists of thirteen (13) issues with eighty nine (89) individual items to be addressed and completed prior to restart.

The initial NRC inspection of MCIAP program is documented in NRC Inspection Report 50-293/87-42. The program was found to address many of the areas of improvement necessary to conduct the activities of maintenance management. A review of the restart items follows.

2.1 Issue 03-001 - Organization and Staffing (Restart Items)

This area of organization and staffing is addressed in the following subsections:

2.1.1 Section 03-001-01 - Promulgate Organization

Licensee Action: Distribute the current nuclear organization structure.

Licensee Closure Requirements: Memorandum distributing copies of nuclear organization.

Inspector Review: On November 16, 1987, Document NOM 87-315 distributed a number of figures that depicted the BECo Nuclear organization. Recent revisions to BECo organization were addressed in a January 7, 1988, BECo letter to USNRC identifying changes instituted, including a new position of Station Director, and the replacement of the Plant Support Manager and Planning and Outage Manager. These changes have been promulgated to first line management personnel. This item is complete.

2.1.2 Section 03-001-02 - Brief Managers and Supervisors

Licensee Action: Section Managers to brief all management and senior supervisory personnel on current organization structure and the assignment of responsibilities.

Licensee Closure Requirement: Completion of briefings with documentation of participants.

Inspector Review: The licensee has briefed managers as to the organization and responsibilities of individuals in the nuclear organization. The lectures and the distributed position charts were revised and updated and pertinent portions were discussed with supervisors. The licensee closed this item on August 24, 1987. A recent letter (January 7, 1988) from the Senior Vice President-Nuclear to NRC, documented ongoing changes of positions. The inspector's discussions with first line supervision indicated a satisfactory level of knowledge of the present nuclear organization. This item is complete.

2.1.3 Section 03-001-03 Management Maintenance Organization

Licensee Action: Conduct a comprehensive review of the functions, responsibilities, processes and procedures of the NUORG organizational structure which should be in place to effectively maintain the station at the required level of material condition and to plan for and manage scheduled and unscheduled outages. This review is to encompass planned improvements in processes and procedures and focus on strengthening control and discipline. The above action was to be started at full power and 90 days.

Licensee Closure Requirements: The following tasks are to be addressed:

1. Report describing proposed realignment of major functions and responsibilities of NUORG organizational units.
2. Proposed NUORG organizational chart.
3. Matrix showing assignment of functions and responsibilities in the current organization and the proposed organization.
4. Matrix showing assignment of similar functions and responsibilities in at least three other operating nuclear power stations.
5. Discussion of changes to existing processes and procedures necessary to implement the proposed organizational changes with advantages and disadvantages clearly stated.
6. Proposed implementation plan with schedule.
7. Formal Senior VP Nuclear disposition of recommendations.

Inspector Review: The licensee has addressed items 1, 2, 3 and 5. This early start on the establishment of the organization goals for the management of licensee plant, indicates a determined effort to bring about meaningful staff changes with a comprehensive program of self assessment. Although not complete, the changes are the early steps in the establishment of managements control of the self identified existing problems.

2.2 Issue 03-004 - Administrative Demands

This area of "Administrative Demands" is addressed as a MCIAP restart item in the following subsections.

2.2.1 Section 03-004-01 - Assign Contractor Authority

Licensee Action: Issue administrative authority to contractors filling BECo supervisory positions.

Licensee Closure Requirements: Issue documentation for requisition validation.

Inspector Review: The authority for requisition and procurement has been issued and items closed on July 31, 1987. Based on a reduction of maintenance contractor supervision this item has a reduced impact. This item is complete.

2.2.2 Section 03-004-02 - Identify Inappropriate Activities

Licensee Action: Interview and observe first line supervision to identify administrative functions and other inappropriate activities which divert supervision from the primary responsibilities on job site of directing workforce.

Licensee Closure Requirements: Complete evaluation and list functions that deter first line supervision from direct work supervision.

Inspector Review: The licensee has surveyed first line supervisors and determined the areas where additional administrative aid could bring forth on-site workforce direct supervision in the field. Areas identified that should be removed from first line supervision involvement includes procurement support, material expediting, the need for additional planners with the responsibilities in areas of maintenance request support, the maintaining of workers timesheets to specific modules of work and the required attendance of supervision at meetings. Actions have been taken by licensee to address these identified problem areas. This item is complete.

2.2.3 Section 03-004-03 - Reduce Supervisors Activities

Licensee Actions: Transfer the major inappropriate supervision activities to a different individual or organization element to enable supervisors to fulfill their primary responsibilities.

Licensee Closure Requirements: Identify the major inappropriate activities transferred and how each activity will be performed in the future.

Inspector Review: The licensee has performed a work study of first line supervisors daily activities. The conclusions reached were that over 50% of the time of the first line supervisor was utilized in a search for proper paperwork and lack of support from other organizations (obtaining work packages, parts, operational review, etc). Additional staff engineers in maintenance have been added for planning.

Relocation of outage managers office to supply direct support to supervisors has been accomplished. Contractors have been added to relieve first line supervisors of the administration functions of overtime management and to expedite materials. Permanent staff increases have been requested for the 1988 budget, so as to secure a permanent staff to replace contractors.

The inspector interviewed several first line supervisors to determine if they have been able to utilize this freedom from administrative functions and all believed they have been able to spend more time in the field, monitoring work activities. This item is complete.

2.3 Issue 03-005 - Work Performance Standards

The licensee has identified areas that require additional emphasis regarding station and contractor maintenance personnel lack of adhering to good industry practices. The specific topics addressed include the standard for high quality work performance, personnel safety, equipment and system protection and plant safety and reliability. Eight subissues are to be addressed prior to restart. The following issues were reviewed.

2.3.1 Section 03-005-01 - Prepare Briefing Materials

Licensee Action: Prepare briefing materials and handouts which set forth the responsibilities of first line supervisors for enforcing performance standards.

Licensee Closure Requirements: Issue copy of briefing materials.

Inspector Review: No formal briefing material was prepared. A General Maintenance Checklist addressing personnel responsibilities was used to train personnel on some of the required attributes. This item is under licensee's review to provide additional material to aid in briefing maintenance management in supervisory skills. This item is not yet completed.

2.3.2 Section 03-005-02 - Brief Supervisors

Licensee Action: Formally brief all first line supervisors in BECo's maintenance organization and emphasize to each what management expects from them, including how much time of each day they should spend at the worksite.

Licensee Closure Requirements: Certify completion of these briefings and include a listing of personnel briefed and their positions.

Inspector Review: The licensee has briefed the first line supervisors of BECo and Contractor personnel on their duties of using a maintenance check list. In addition, surveys were taken during a one month interval that concluded that more than 50% of supervisors time per day was spent on administration of timekeeping, material requisition and procurement. Recent charges to management assures that additional attention has been placed on the recognition of the lines of authority and the need to monitor field performance. Observations made during tours on January 27, 1988 of the plant identified a first line supervisor engaged in direct supervision of a work task on an air operated valve. Discussions with the supervisor found him to be knowledgeable of the task being performed, and the required documentation was at the worksite. This item is complete.

2.3.3 Section 03-005-03 - Manager Worksite Tours

Licensee Action: Establish the practice of having cognizant maintenance managers tour worksites with first line supervisor on a periodic but random schedule.

Licensee Closure Requirements: Maintenance managers required to tour worksites with first line supervisor on a periodic but random schedule.

Inspector Review: The licensee has developed and instituted a policy of Station Inspection Tour Plans. The plan designates supervisors to tour the plant during certain intervals. Review of the documentation indicates that the tours have varied in their results. One third of scheduled tours were not performed. The licensee is presently revising the tour plan. The licensee is taking additional action. This item is not complete.

2.3.4 Section 03-005-04 - Senior Manager Worksite Tour

Licensee Action: Establish the practice of having senior managers in the nuclear organization tour accessible worksites in the plant on a regular but random basis.

Licensee Closure Requirements: Licensee to issue memorandum on specific senior management tours.

Inspector Review: The licensee has issued the required memorandum designating tours (9/8/87). The licensee's monthly check of implementation of senior management tours for the periods of 9/14/87, 9/28 to 10/2 and 11/2 to 11/5 documented no senior management tours. As of 1/88 a new management staff has been assigned to site. A new memorandum has not been issued to implement the required tours. The inspector's review of entries

into worksites by the present station director, plant manager, planning and outage manager and plant support manager noted numerous entries had been made into the power block during the month of January. Based on present management's regular but random tours of worksites, this item is complete.

2.3.5 Section 03-005-05 - Contractor Worksite Tours

Licensee Action: Establish the policy of having BECo managers tour contractor worksites on a regular basis.

Licensee Closure Requirements: Memorandum to be issued to BECo managers and onsite contractor representatives on conducting tours of worksites, in addition to maintaining a log of such tours.

Inspector Review: This section is similar to Section 03-005-03. No memorandum was issued requiring contractor accompaniment with BECo management, due to reduction of contractor supervision on site (80 to 39) and an incomplete section (03-005-03) that will address this section's requirements. This item is complete.

2.3.6 Section 03-005-06 - INPO Observation Training

Licensee Action: Complete INPO observation training for first line supervisors to improve their skills in identification of unsatisfactory worksite practice.

Licensee Closure Requirements: Completion of INPO observation training and document the attendance of the supervisors.

Inspector Review: The licensee has presented the observation training to eighty (80) first line supervisors. The training has been incorporated in the BECo training lesson plan TDC-01-01. The inspector reviewed the instructor's guide and student presentation documents and found them satisfactory. During tours of the reactor building the licensee's observer accompanying the inspector did identify a number of minor discrepancies. Interviews with several of the first-line supervisors indicated that the training did aid in identifying the housekeeping problems. Based on training documentation, the contents of the training materials and observations in field, this item is complete.

2.3.7 Section 03-005-07 - Assign Maintenance Coach

Licensee Action: Assign an experienced, maintenance oriented individual, to tour worksites to observe work practices and worksite conditions.

Licensee Closure Requirements: An individual is to be designated, responsibilities outlined and the individual relieved of all other responsibilities (intended to be full time position).

Inspector Review: The licensee designated an individual on 7/3/87 for the position of maintenance coach. This individual is presently supervising 80 maintenance/cleaning type personnel. His assistant has been delegated to observe work sites during his normal tours of the plant (daily). The inspector toured the Reactor Building with the "maintenance coach" and found him to be knowledgeable of methods to maintain cleanliness of areas during performance of maintenance. The present maintenance coach's assistant tours all areas and is in the containment and the reactor building enclosures several times a day (approximately 4 hours a day). The contamination levels have been significantly reduced. Areas are clean and well organized, e.g. cleaning tents were in place. This item is complete.

2.3.8 Section 03-005-08 - Prepare Visual Displays

Licensee Action: Prepare a visual display which illustrates the quality standards expected as well as examples of conditions which are not acceptable.

Licensee Closure Requirements: To install a photographic display illustrating current and desired housekeeping.

Inspector Review: The licensee has installed a display cabinet with photographs illustrating unacceptable standards vs. acceptable standards. In addition, observations of good working practice exhibiting contamination control is on display in the lobby of the administration annex exhibiting contamination control. During a tour of the reactor building the inspector noted the use of a glove box similar to one displayed. The photo display is changed on approximately a monthly basis. The licensee has met the action item closure requirements. This item is complete.

2.3.9 Section 03-005-12 - Revisit Closed Items

Licensee Action: Establish a method to revisit MCIAP items that have been closed. The purpose of this revisit is to ensure continuance of the implementation of MCIAP sections.

Licensee Closeout Requirements: Prepare and implement methods used for selection of MCIAP items to be reviewed, determine interval and reporting mechanism.

Inspector Review: The licensee has established an acceptable method for documenting his revisits to the previously completed MICAP items. A monthly check on MCIAP items has been instituted by the licensee. Several previous completed MCIAP items were revisited and found to be acceptable, or where they were unacceptable followup was implemented with the cognizant department managers. This item is complete.

2.4 Issue 03-008 - Material Condition

The licensee has recognized that the station material condition and housekeeping need improvement. The desired standards have not been defined, established or communicated to station personnel.

Four subissues are to be addressed prior to restart. The following issues were reviewed:

2.4.1 Section 03-008-01 - Material Condition and Housekeeping

Licensee Action: Prepare a schedule, which considers other ongoing outage work, to systematically remove loose surface contamination from all reasonably accessible plant areas including ventilation lines, cableways, overhead framing, grating, etc. The schedule is to list specific areas to be cleaned, room by room and provide dates for cleaning each area. The priority shall be on those areas not routinely accessible during plant operation and areas where loose contamination is easily spread to other areas.

Licensee Closure Requirements: A copy of the area decontamination schedule and memorandum from the outage manager reporting that the decontamination plan has been included in the Plan of the Day.

Inspector Review: A routine plant decontamination and support schedule was reviewed on 1/20/88. The priorities assigned for the areas to be cleaned is first the nonroutine accessible spaces and then those areas of loose contamination that can be easily spread; a frequency of cleaning (Daily, Weekly, etc.) is noted in schedule. A walk through of plant areas indicates that the areas viewed were acceptable. This item is complete.

2.4.2 Section 03-008-02 - Decontamination Priority Areas

Licensee Action: Complete the cleaning and decontamination of priority areas, prior to the completion of refueling outage-7

Licensee Closure Requirements: Memorandum reporting completion of cleaning and decontamination of designated priority areas.

Inspector Review: The licensee's commitment of bringing 90% of the targeted areas to a level of less than 1000 DPM has not been completed. Results of the scheduled cleaning indicates 81% of the areas targeted were completed out of the 90% required. The licensee has expended a major commitment in resources to attain this high level of (81%) of the areas decontaminated. Areas requiring protective clothing measures have been reduced. The licensee is to take further action. This item is incomplete.

2.4.3 Section 03-008-03 - Leak Repair and Decontamination Policy

Licensee Action: Issue a policy directive requiring that the repair of all leaks be accomplished on a priority basis and that loose surface contamination is to be removed immediately after the repair of leaks and prior to closure of the work item.

Licensee Closure Requirements: Copy of issued policy directive.

Inspector Review: The licensee issued a directive on the removal of loose surface contamination and the MCIAP was closed. The follow up closure action check has identified the need to rewrite the decontamination and leak identification procedure. In addition the licensee identified on 9/9/87 the fact that no policy exists for requiring repair of all leaks on a priority basis. As of the fourth monthly check no action from the maintenance manager was provided and a memorandum has been directed to the plant manager.

The licensee addressed this concern with a preliminary procedure developed to detail specific actions that will address immediate investigation of reported leaks, to isolate or prevent additional damage from occurring. Once a leak is identified the prioritization of repair will be performed and leak containment will be instituted.

The monitoring group on MCIAP-CAC (Closure Action Check) has identified the lack of a policy. This action indicates a lack of timely response to MCIAP followup from a department manager. This item requires further licensee action.

2.4.4 Section 03-008-04 - Decontamination Process Indicator

Licensee Actions: Establish a visual management indicator which displays progress towards achieving the plant decontamination goal for the current outage and for long term goals.

Licensee Closure Requirements: Establish a progress indicator with a specified update frequency.

Inspector Review: The license has issued on a monthly basis the percent of areas that are considered clean. Criteria used include a process indicator used for tracking progress. This indicator has been observed on the bulletin boards. One of the maintenance department goals is to reduce and maintain 90% of the plant's area inside process buildings to levels that would permit access in street clothes by the time the plant restarts. The percent completion of the controlled area decontaminated has reached 81%. The establishment of a visual management tool is complete.

2.5 Issue 03-009 - Performance Goals

Boston Edison personnel and contractor management should have a clear understanding of the goals established for Pilgrim Station. These goals should provide sufficient direction so that employee work efforts are focused and individual can sense accomplishment when goals are achieved. The following two subissues are to be addressed prior to restart.

2.5.1 Section 03-009-01 - Brief All Hands On Goal

Licensee Action: Formally issue the current Nuclear Organization Goals. (NUORG)

Licensee Closure Requirements: Official copy of NUORG goals are distributed.

Inspector Review: The licensee NUORG as established by the Senior VP-Nuclear was distributed to a limited number of managers (9) of which several are no longer associated with the attainment of NUORG. The licensee's "All Hands Goals Information" is addressed in newsletters such as "Nuclear Newsbreak", and FYI "For Your Information" to inform station personnel of ongoing issues. Presently the "FYI" is published on a twice a month schedule. A one day turnaround schedule will be implemented when important issues are to be addressed. Discussions with newly appointed managers verified that they were cognizant of NUORG's. This item is complete.

2.5.2 Section 03-009-02 - Goals Achievement Criteria

Licensee Action: Provide an official means to periodically inform employees of management assessment of progress toward achieving specific goals.

Licensee Closure Requirements: Memorandum outlining means to be used, topics covered, how assessment is to be made and how the information is to be disseminated.

Inspector Review: The licensee has developed and issued a number of information letters including "For Your Information" newsletter and "Nuclear Newsbreak." General information on the BECo goals that each individual must set to achieve the Pilgrim Restart Schedule and a assessment of the progress has been addressed and has appeared in these publications.

The memorandum that was issued that included as a attachment the NUORG for 1987 and 1988 listed each nuclear department organizations specific goals. This memorandum which was issued on June 1987, instituted monthly meetings on achievement of goals. The Senior Vice President-Nuclear has met with the department managers and a review of the audit packages indicated that an aggressive program to meet goals was in force. This year's goals have been discussed with a scheduled issuance to the various departments in late February, 1988. This item is complete.

2.6 Issue 03-010 - Communications

The licensee's self assessment recognized the need for both horizontal and vertical communication within the plant. Effective communications are needed to facilitate teamwork and implementation of management guidance and feedback.

Six subissues are to be addressed prior to restart. The following issues were reviewed.

2.6.1 Section 03-010-01 Issue Action Plans

Licensee Action: Emphasize within the nuclear organization the three primary focal points for communication within the nuclear organization with respect to maintenance activities.

Licensee Closure Requirement: Issue the restart plan and MCIAP.

Inspector Review: The Senior VP- Nuclear has issued a memorandum that instituted the MCIAP with due dates for completion. In addition the restart program plan was distributed to managers with specific responsibilities delineated. This item is complete.

2.6.2 Section 03-010-02 - Short Range Maintenance Request (MR) Schedule

Licensee Action: Establish the practice of utilizing the Plan-of-the-Day (POD) with short range schedules to coordinate and assign work to the first line supervisor.

Licensee Closure Requirements: Provide short range schedules.

Inspector Review: The Plan of the Day combined with the four day look ahead listing the "Maintenance Request Packages" by department designation, with the generated system schedule availability, allows planners to schedule work from the master schedule. Although a number of inputs are necessary to attain the final work assignments, based on review of the four day look ahead schedule and POD, the licensee has a process to assign work to first line supervisor. The inspector attended a Plan-of-the-Day meeting on 1/29/88 and discussions centered on schedules of MR's and additional nuclear systems status. This item is complete.

2.6.3 Section 03-010-03 - Restart Progress Assessment

Licensee Action: Issue a memorandum informing cognizant managers and supervisors of the method to be used for closure of Restart Plan actions.

Licensee Closure Requirements: Issuance of memorandum delineating the method to be used to effect closure of action items.

Inspector Review: A memorandum describing the method of closure of restart plan action items was issued on 8/7/87. The memorandum denotes responsibilities, review of the data base and management administrative guidelines. This item is complete.

2.6.4 Section 03-010-04- Performance Excellence Team (PET)

Licensee Action: Establish a PET representing each functional area of the Nuclear Organization to identify and remove obstacles that hinder performance and to improve the flow of information within the NUORG.

Licensee Closure Requirement: Copy of memorandum establishing PET, its purpose, areas of responsibility and requirement for periodic assessment.

Inspector Review: The PET team was established on 5/14/87 and had met on a weekly basis. Review of minutes in closeout package exhibits determined that a wide range of topics were discussed. There was no method of periodic assessment other

than weekly reports on PET accomplishments. The PET presently has not continued to meet on any specific frequency. Discussion with management indicated that only limited results were obtained from PET and that it would be dissolved. This item is currently under licensee evaluation.

2.6.5 System 03-010-05 - Shift Coordinators

Licensee Action: Designate a single individual as the point contact on each shift to coordinate communications and resolve problems affecting maintenance and/or construction work. Distribute the names and telephone numbers of these personnel to all supervisors.

Licensee Closure Requirements: Document the assignments of the coordinators to the management personnel on all shifts. Inform individuals of their duties and responsibilities. Brief BECO and contractors of these individuals to resolve holdups and have management evaluate effectiveness of the role of shift coordinator.

Inspector Review: Documentation indicated successful performance of the shift coordinator in resolving inter-trade and inter-departmental problems. The inspector inspected logs and interviewed the ADOOMS (Assistant Director of Outage Management) shift coordinator. His responsibilities for coordinating the production schedule and resolving immediate problems or conflicts in the implementation of the Plan of the Day (POD) was understood. Interviews with personnel were conducted and logs were found to reflect solutions to numerous interface problems. This item is complete.

2.6.6 Section 03-010-06 - Daily Reviews of Maintenance Requests (MRs)

Licensee Action: Establish a daily routine for the Chief Operating Engineer and the Chief Maintenance Engineer to review all Maintenance Requests (MR) originated during the previous 24 hours. The purpose of this review is to classify and establish the relative priority of each MR, and help ensure that second and third priority work is planned and scheduled.

Licensee Closure Requirement: Issue directive initiating the daily routines; change MR procedure to reflect daily requirements; and establish criteria for prioritizing MRs and evaluating effectiveness.

Inspector Review: The licensee has incorporated the MR daily review process in Revision 21 to the Maintenance Request Procedure which established the method of prioritization. This routine has resulted in a marked decrease in priority one items. The overall MR's still remain numerically high and additional management attention to lower the backlog of MR's is necessary. This item is complete.

2.7 Issue 03-013 Maintenance Requests

The licensee's maintenance requests have not identified the type of work, tagging procedure prior to diagnosis of components; nor the specific problems requiring maintenance. In addition the work control system could not readily identify redundant MR's. A revision to work control should be instituted that will accurately identify the plant deficiencies and the work to be accomplished. Two subissues were reviewed during this inspection.

2.7.1 Section 03-013-02 Maintenance Planning

Licensee Action: Issue a revision to Procedure Number 1.5.3, "Maintenance Request," to improve classification, prioritizing, tracking and managing deficiency items and maintenance actions.

Licensee Closure Requirements: Revise Procedure Number 1.5.3, Maintenance Requests

Inspector Review: Prior to the outage the licensee did revise Procedure 1.5.3 (Revision 21) that did address immediate concerns of classification, prioritization and tracking. Additional areas of retest of systems, reviews of retests were addressed in a subsequent revision to the procedure (present Revision 24) and additional management review is continuing to improve system control. This item is complete.

2.7.2 Section 03-013-03 Maintenance Request Process Training

Licensee Action: Reindoctrinate personnel in the changes made to the MR process for the current outage as well as existing requirements which are incorrectly interpreted or not followed.

Licensee Closure Requirements: A copy of briefing materials and handouts and certification that personnel have been briefed.

Inspector Review: The briefing paper included the procedure "Maintenance Work Request 1.5.3, Rev. 21." Sections that were changed were identified and discussed during the briefings. Documentation of the training conducted was acceptable. The licensee issued Revision 24 to procedure 1.5.3 during this

inspection. No documented formal training or the need for training existed. Interviews indicated that maintenance personnel were informally indoctrinated thru supervisors' meetings. Continuing training appears warranted in this area. This section is complete.

2.8 Issue 03-017 Post Maintenance Testing

The licensee has recognized that plans and schedules for performing post maintenance and post modification testing during system recovery and start up are not complete. Post maintenance testing controls, including the determination of test requirements, scope of testing program, status tracking, documentation of results and verification of data, are needed. Five subissues were reviewed by the inspector.

2.8.1 Section 03-017-01 - Review Testing Program

Licensee Action: Commission an independent review team to determine the extent of problems in the existing condition of Issue 03-017 and establish short term and long term actions required to put in place an effective post maintenance - post modification testing program.

Licensee Closure Requirement: Establish a review team and report disposition of review team recommendations.

Inspector Review: The licensee established two teams, a Post Work Testing Team and a "Tiger Team" to determine policies to pursue in addressing Post Work Testing (PWT). The teams provided policies and other benefits. A PWT review with various attributes was developed to assure that proper testing was being performed and with the ability to track and audit testing. A PWT Short Term Program that instituted a "ready to test Maintenance Request (MR) file" with review teams that classified and reduced the total inventory of MR's. An additional problem area identified was the lack of guidance to identify testing requirements. The (INP MA-3055) matrix of generic test activities was used as guidance and required that responsibilities be clearly defined, addressed the assignment of qualified personnel and the updating of testing requirements. The guidance satisfies the section. This item is complete.

2.8.2 Section 03-017-02 Prepare Testing Schedule

Licensee Action: Develop an integrated test schedule to complete all testing evolutions sufficiently in advance of the scheduled restart date to allow for minor deficiency correction and system certification. This schedule shall be worked backward from the restart date.

Licensee Closure Requirements: Copy of current schedule that intergrates all post maintenance and surveillance testing.

Inspector Review: A Maintenance Request (MR) Test Schedule. Plant Design Change/Test Procedure and MR data base exist. Recently (January 1988) the licensee's MRs were reviewed to determine the need to complete items prior to the system turnover and/or power ascension. Present data systems require individual review of each data system output to ascertain status of MR items to be tested. A power ascension testing schedule is presently being developed.

The schedules are not totally integrated. Discussions with management indicate that increased attention has been given to scheduling the completion of MRs thus increasing the need for retesting with proper scheduling to equalize man-hours over the period prior to plant startup. Licensee continued review of the scheduling and completion of MRs with a marked reduction in total uncompleted items is needed. This item is incomplete.

2.8.3 Section 03-017-03 Revise Testing Procedure

Licensees Action: Revise Station Procedure 1.53, "Maintenance Request," to include specific guidance for post work testing.

Licensee Closure Action: Copy of Approved Procedure.

Inspector's Review: Revision 22 to the Station Procedure 1.5.3 "Maintenance Request" addresses Post Work Testing (PWT) and referenced Nuclear Operation Department Procedure No. 3.M.1-30, Post Work Testing Guidance. The PWT guidance is a generic procedure that guides the staff thru a matrix of component repair versus test requirements. This procedure can be used as the minimum test requirements where no Technical Specification (T.S.) or regulatory requirements are to be addressed. Revisions to Post Work Testing and continued development of this matrix are being pursued by maintenance managers. This item is incomplete.

2.8.4 Section 03-017-04 Establish "Tiger Team"

Licensee Action: Establish a "Tiger Team" of personnel from Maintenance, Operations and the Technical Section to review all active MR's for testing adequacy and consistency.

Licensee Closure Requirement: Establish the team listing individuals assigned, their responsibilities and reporting structure.

Inspector Review: A "Tiger Team" was established to review Post Work Testing (PWT) of Maintenance Requests in the present test-file. Initial review of the test file by the team determined that there were initially 400 MR's required for core reload. A Post Work Testing review sheet was formulated with testing parameters for required review. The "Tiger Team" concept was a short term program which was dissolved after reload. The need for a long term program is under management review. No "Tiger Team" exists today. This items is complete.

2.8.5 Section 03-017-05 Establish Testing Requirements

Licensee Action: Review active MR's to ensure that post refueling work and technical specification (TS) requirements are identified and rescheduled for accomplishment.

Licensee Closure Requirements: Verification that active MR's have been reviewed and post work testing and required TS testing has been identified and placed in the "MR Testing and Outage Schedule."

Inspection Review: Initial action has been taken. The completion and integration of a program that will monitor MRs with inputs from failed MR tests has not been completed. The licensee is to take further action on this item.

2.9 Issue 03-019 Centralize Planning

The Maintenance Department Planning Group is not assigned the responsibilities for all planning. Many planning activities are performed by the staff engineer and operations personnel. Maintenance planning should be assigned to a centralized planning group. Twenty restart sections were formulated to address the above issue. One issue was reviewed.

Section 03-019-15 - Resolve Restart Items

Licensee Action: Review all open items in the below listed tracking systems for issues which have the potential of affecting construction and/or maintenance work on systems supporting plant restart. The following tracking systems were reviewed.

- MCARs - Management Corrective Action Request Deficiency Reports
- DRs - Deficiency Reports
- MRs - Maintenance Requests
- ESRs - Emergency Service Requests
- PDCs - Plant Design Changes
- PCAO - Potential Condition Adverse to Quality
- NRCC - NRC Commitments

OERP - Operational Experience Review Program
 F&MR - Failure and Malfunction Report

License Closure Requirements: Review tracking systems.

Inspector Review: A computer generated listing of items necessary for restart is available. Meetings are presently held on a bi-weekly basis to update these items. Individuals assigned to each computer input consist of operations & maintenance management and start up staff members. Comparisons of deleted and entered items have been monitored by the senior resident inspector. The licensee's review meets the requirement of MCIAP. The present listing exceeds 1000 items. One area that was not initially addressed was the required preventive and corrective maintenance surveillances and was added to the reviewed documents later. This item is complete.

2.10 Issue 03-028 - Preventive Maintenance

The existing preventive maintenance program is not based on a systematic review of station equipment that includes engineering and economic consideration. Stand alone procedures and the scheduling and distribution of work loads are necessary ingredients not presently found in the preventive maintenance program.

2.10.1 Section 03-028-01 - Schedule Preventive Maintenance

Licensee Action: Include equipment preventive maintenance work item in the outage schedule established by the Plan of the Day.

Licensee Closure Requirements: Practices have been established to routinely include preventive maintenance work items in the short range outage schedule.

Inspector Review: The short outage schedule includes in the Plan of the Day a list of preventive maintenance items and tests. Procedures, including No. 1.8.2, Preventive Maintenance Tracking Program, identifies the preventive maintenance (PM) item list for work performance. In addition group tests (electrical, mechanical, & IC) are sorted by due date. If tests are not performed or missed a Variance Report (VR) is generated, that documents the cause of the failure of licensee to perform the tests. The licensee has 38 overdue surveillance tests as of end of the report period. The system to document reasons for failure to perform tests is acceptable. This item is complete.

2.10.2 Section 03-028-02 Schedule Preventive Maintenance for Restart

Licensee Action: Include scheduled P.M. items in the scope of work which is scheduled by the Planning and Restart organization.

Licensee Closure Requirements: Issue memorandum reporting that the practice has been established to routinely include preventive maintenance work items in the short range outage schedule.

Inspector Review: The precritical Test/Plant Startup (Checklist #6) does not directly address the area of tracking maintenance tasks with the Preventive Maintenance Check List (PMCL). This contains 2788 items of which 38 PM items are overdue. The present system will allow traceability of the status of preventive maintenance program. Additional attention is necessary in the areas of scheduling and planning for the performance of preventive maintenance tasks. This item is incomplete.

2.11 Issue 03-029 Measuring and Test Equipment

This issue addresses the need to assign clear accountability for the control, calibration and maintenance of measuring and test equipment (M&TE).

2.11.1 Section 03-029-01 Maintenance Calibration

Licensee Action: Conduct a complete inventory of M&TE in the maintenance area and enter the basic information required for calibration recall into an automated data base.

Licensee Closure Requirement: Complete inventory and data entry.

Inspection Review: The licensee has completed the inventory of instruments and has identified numerous out-of-calibration instruments and a review of the use of these instruments is underway. A number of instruments are missing and were replaced. The use of hand logging is prevalent but with greater issuance control. Observations by the inspector did not identify any discrepancies in a sampling review of data. Data entry into a computer based system was ongoing but not complete. Management's surveillance of instruments in use in the field is ongoing by supervisors. This item is complete.

2.11.2 Section 03-029-02 Temporary Staff

Licensee Action: Establish a temporary staff to centrally control the issue and calibration of M&TE.

Licensee Closure Requirements: Copy of organizational chart and description of the function and responsibilities of the staff.

Inspection Review: The licensee has assigned four technicians on an interim basis. Permanent positions have not been formulated. Present staff (contractors) were interviewed and observation of the methods of control determined them to be adequate. Management continuing review of the program is necessary. This item is incomplete.

2.11.3 Section 03-029-03-Maintenance Management-Storage Area

Licensee Action: Identify space convenient to the maintenance, operation, centralized storage and inventory control (issue and receipt) of M&TE.

Licensee Closure Requirements: Memorandum reporting that centralized storage and inventory control has been established.

Inspection Review: Observation of present M&TE storage areas was performed. Procedural controls and physical controls have been established to preclude the previous uncontrolled issuance of equipment. A walkthrough of areas that have been designated as storage areas will be adequate when proper shelving and storage bins have been installed. The areas are to be renovated to accommodate issuance of equipment while maintaining preventive measures to preclude unauthorized withdrawal of equipment. This item is incomplete.

3.0 Conclusion:

The individual reviews of the Material Condition Improvement Action Program has denoted where the licensee is to take further action. The program requires completion of all issues with accompanying management controls over all phases of the planning, maintenance and operational aspects of the Pilgrim Nuclear Station.

4.0 Exit Meeting

The inspector met with licensee representatives on February 4, 1988, to summarize the scope and findings of the inspection. The areas of concerns were discussed and licensee's responses are addressed under each section of this report. At no time during the inspection was written material provided to the licensee by the inspectors. Also the licensee did not indicate that any proprietary information was contained within the scope of this inspection.