U. S. NUCLEAR REGULATORY COMMISSION

Region I

Meeting No.: 50-293/88-26

Docket No.: 50-293

License No.: DPR-35

Licensee: Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199

Facility Name: Pilgrim Nuclear Power Station

Meeting At: USNRC, Region I, King of Prussia, Pennsylvania

Meeting Conducted: June 27, 1988

Reviewed By: Lawrence T. Doerflein 6/30/88
Lawrence T. Doerflein, Project Engineer Date

Approved By: 6-30-88
A. Randy Blough, Chief Date
Reactor Projects Section No. 3B
Division of Reactor Projects

Meeting Summary:

A management meeting was held at NRC Region I on June 27, 1988, to discuss the following issues: (1) Boston Edison Company's (BECo's) response to NRC Maintenance Team Inspection 50-293/88-17, (2) the status of BECo's evaluation of RHR valve yoke cracking, and (3) the status of BECo actions in followup of its Self-Assessment of Readiness for Restart. The meeting lasted about two hours. The Massachusetts Office of Public Safety, the Massachusetts Civil Defense Agency, and Massachusetts Attorney General's Office observed the meeting.

DETAILS

1.0 Purpose

The management meeting was held at the request of the Boston Edison Company (BECo) to discuss the following issues: (1) BECo's response to NRC Maintenance Team Inspection 50-293/88-17, (2) the status of BECo's evaluation of RHR Valve Yoke Cracking, and (3) the status of BECo actions in followup of its Self-Assessment of Readiness for Restart.

2.0 Meeting Summary

The meeting was attended by those persons listed in Attachment I.

The meeting was opened with brief comments by NRC Region I Acting Director, Division of Reactor Projects, Mr. Samuel J. Collins. Mr. R. Bird opened BECo's presentation and stated that BECo had finalized and was delivering the following pertinent letters.

-- NRC Inspection Report 50-293/88-17 (Response), dated June 25, 1988; and,

-- Pilgrim Nuclear Power Station Request for Commencement of NRC Integrated Assessment Team Inspection and Transmittal of Schedules for Actions Prior to Restart, dated June 25, 1988.

These letters are enclosed as Attachments II and III, respectively.

Mr. Bird indicated that the licensee was requesting the team inspection to commence on July 11, 1988. Mr. R. Anderson, Plant Manager, outlined BECo's actions in response to the NRC Maintenance Team Inspection. He indicated that the selection of maintenance program upgrades to be completed before restart was based on licensee evaluation of self-assessment results, Material Condition Improvement Action Plan feedback, INPO findings, and NRC inspection findings. Relative to maintenance staffing, Mr. Anderson indicated that full staffing had been achieved and current efforts were focusing on hiring to permanently fill those positions currently staffed by contractors.

Mr. Anderson discussed the licensee's ongoing evaluations of cracking identified on June 7, 1988, in two motor-operated valves in the Residual Heat Removal System. Mr. Anderson indicated that BECo would notify the industry of the problem, as well as keeping NRC informed of the progress of evaluations and repairs.

Mr. Ledgett provided an overview of the self-assessment process and stated that the June 25, 1988 letter (Attachment III) provides status and schedule for those self-assessment followup actions to be performed before restart. Mr. Anderson outlined additional work, including extensive testing, to be conducted before restart. He also stated that NRC Bulletin 88-05 response was an emergent issue under licensee evaluation.

3.0 Concluding Statement

After a private caucus with the NRC participants, Mr. William T. Russell, NRC Region I Administrator, summarized the meeting, thanked the licensee for the information provided, and indicated that NRC would complete its review of the information and inform the licensee of the results within two weeks.

Attachments:
1. Meeting Attendees
2. BECo Letter to NRC dated June 25, 1988, NRC Inspection Report 50-293/88-17 (Response)
3. BECo Letter to NRC dated June 25, 1988, Pilgrim Nuclear Power Station Request for Commencement of Integrated Assessment Team Inspection and Transmittal of Schedules for Actions Prior to Restart

ATTACHMENT 1

Meeting Attendees

U.S. Nuclear Regulatory Commission

W. Russell, Regional Administrator (Summary Only)
S. Collins, Deputy Director, Division of Reactor Projects (DRP)
R. Gallo, Chief, Operations Branch, Division of Reactor Safety (DRS)
J. Wiggins, Chief, Reactor Projects Branch No. 3, DRP
A. Blough, Chief, Reactor Projects Section No. 3B, DRP
L. Doerflein, Project Engineer, RPS 3B, DRP
B. Boger, Assistant Director for Region I Reactor, Office of Nuclear Reactor Regulation (NRR)
D. Haverkamp, Chief, Reactor Projects Section No. 3C, DRP
N. Blumberg, Chief, Operational Programs Section, DRS
C. Warren, Senior Resident Inspector

Boston Edison Company

R. Bird, Senior Vice President - Nuclear
K. Highfill, Pilgrim Station Director
R. Anderson, Plant Manager
R. Swanson, Nuclear Engineering Manager
P. Hamilton, Compliance Division Manager
R. Ledgett, Director, Special Projects
E. Robinson, Manager, Nuclear Information

Commonwealth of Massachusetts

P. Agnes, Assistant Secretary of Public Safety
J. Hausner, Director, Nuclear Safety Emergency Preparedness Program
G. Dean, Assistant Attorney General

Other Attendees

S. Sholly, MHB Associates
F. Jan, ASTA Engineering, Inc.

ATTACHMENT 2

BOSTON EDISON

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

Ralph G. Bird
Senior Vice President — Nuclear

June 25, 1988
BECo Ltr. #88-98

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

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

Subject: NRC Inspection Report 50-293/88-17 (Response)

Dear Sir:

Attached is Boston Edison Company's response to the NRC Region I Maintenance Assessment Team Inspection conducted from April 25 through May 5, 1988, at the Pilgrim Nuclear Power Station (PNPS), Plymouth, Massachusetts and at the Braintree, Massachusetts engineering office.

Boston Edison Company concurs with the NRC Assessment Team conclusions that:

1. No violations of regulatory requirements were identified during the inspection.

2. Several program and performance strengths were identified.

3. Certain concerns, including some that were considered significant, were identified.

These conclusions are consistent with the actions mandated by our Material Condition Improvement Action Plan (MCIAP) and the independent conclusions of our Restart Readiness Self-Assessment (RRSA) conducted between April 18, 1988 and May 2, 1988. Boston Edison Company has accelerated the actions necessary to implement those MCIAP and RRSA items which will resolve the significant NRC Assessment Team concerns.

Boston Edison Company will address prior to restart, concerns identified in the areas of (1) maintenance program, (2) staffing, and (3) program performance. The details and status of our corrective actions are discussed in Attachment A. R. Ledgett and R. Blough agreed on 6/23/88 that submittal of this letter by 6/27/88 is acceptable.

 TPP.

Please do not hesitate to contact me if there are questions or comments regarding the attached response.

R.G. Bird

RLC/bl

Attachment

cc: Mr. William Russell
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Rd.
King of Prussia, PA 19406

Sr. Resident Inspector - Pilgrim Station

Standard BECo Distribution

ATTACHMENT 'A'

Boston Edison Company
Pilgrim Nuclear Power Station

BECo Ltr: 88-98
Docket No. 50-293
License No. DPR-35

Inspection Report 88-17 Response

Boston Edison has reviewed the concerns discussed in Section 1.2 of the NRC Maintenance Assessment Team Report and concurs with the NRC Assessment Team conclusions. These conclusions are consistent with the independent actions and conclusions of our Material Condition Improvement Action Plan (MCIAP) and our Restart Readiness Self-Assessment (RRSA) conducted during the period of April 18, 1988 to May 2, 1988. Boston Edison has accelerated the implementation of those MCIAP and RRSA actions necessary to resolve the significant NRC Assessment Team concerns. The areas of concern are:

- Maintenance Program
- Maintenance Staffing
- Program Performance

I. Maintenance Program

The following is a summary of the actions taken in the area of the Maintenance Program:

- Boston Edison has taken action to more clearly define work control practices in approved plant and department procedures as well as to formalize the current plant work control practices for Maintenance.
  - To accomplish this, the ongoing comprehensive rewrite of the PNPS Maintenance Section Manual was completed to more clearly describe its purpose, intent, structure, and its relationship to other station directives and procedures. This rewrite incorporates INPO Guidelines 85-038, "Conduct of Maintenance at Nuclear Power Station", to enhance maintenance practices at Pilgrim Station. Additionally, Boston Edison performed a major rewrite of PNPS Procedure 1.5.3, "Maintenance Requests", to incorporate improved administrative controls. A new procedure, PNPS Procedure 1.5.3.1, "Maintenance Work Plan", was developed to be utilized in conjunction with the Maintenance Request (MR) as an administrative tool to provide a Work Plan which further defines (details) the maintenance activity to be performed.
- Boston Edison has taken action to provide improved specifications for unique and routine maintenance previously covered by Procedure 3.M.1-11, "Routine Maintenance", to ensure adequate preparation of work packages for such tasks.

- To accomplish this, Boston Edison prepared, approved, and implemented Procedure 1.5.3.1, "Maintenance Work Plan". This procedure, used in conjunction with the revised Procedure 1.5.3, "Maintenance Requests", provides an effective means to specify unique instructions for routine maintenance tasks formerly covered by Procedure 3.M.1-11. Maintenance Work Plans are now required to contain specifically defined steps for the performance and documentation of maintenance activities. MRs written prior to the implementation of the revised maintenance program, and which referenced Procedure 3.M.1-11, are reviewed and approved by the Plant Maintenance Section Manager prior to implementation to ensure that the intent of the revised maintenance procedures is met.

II. Maintenance Staffing

Boston Edison conducted a review in the last quarter of 1987 of the authorized staffing level. An integral part of this review included an estimate of manpower resources required to meet and maintain the established performance goals of the Maintenance Section.

Based on this review, the permanent full-time Maintenance complement has been increased. Ten of these positions are supervisory positions. Revised job descriptions have been developed for this expanded organization and hiring efforts are aggressively underway.

Attention to the plant's material condition has been increased by the expansion of the permanent complement of maintenance personnel. Attention has been further enhanced by assignment of the Systems Engineering Division (SED) to provide increased support to individual maintenance activities thereby reducing the burden on maintenance personnel. The SED conducts in-depth research for the majority of individual Failure and Malfunction Reports (F&MRs).

The overall knowledge, experience, and performance levels of the Maintenance staff is being improved. This is being accomplished by:

- Recruitment of personnel with greater experience levels to fill vacant and new positions.
- Improved training.
- Development of well-defined job descriptions.
- Improved Maintenance management and supervision.

The experience level of the Maintenance staff has been further enhanced by creating the position of Deputy to the Maintenance Section Manager. This position has been filled by an individual with approximately 25 years of experience in production and planning for nuclear repair, overhaul, and refueling work.

III. Maintenance Performance

Boston Edison, through programmatic changes, is implementing actions which will increase attention to detail as well as improve familiarity with various elements of the work control process. The improvement in the maintenance program described in Section I above, in conjunction with the staffing increase and upgrades, is designed to result in improved maintenance performance.

The following is a summary of the actions taken to improve performance:

- Boston Edison has taken action to ensure that MRs are both complete and correct.

  - The revision of Procedure 1.5.3 incorporated additional guidance and requirements regarding the preparation, review, and approval of MRs to ensure correctness and completeness. The Maintenance Summary Control (MSC) form has been deleted. The function of the MSC has been integrated into the new Maintenance Work Plan (Procedure 1.5.3.1). Training has been conducted, with emphasis on the appropriate method of processing a work plan and the need for the documentation to be complete and accurate.

- Boston Edison has taken action to control expansion or revision of the original work scope during maintenance in the field and to require documentation of the actual work performed.

  - To accomplish this, Procedure 1.5.3.1 specifies the controls necessary to make revisions to the work package. Additionally, any revision to the Work Plan must be reviewed and approved in the same manner as the original document. The work performed will be documented and will become a part of the completed maintenance package.

- Boston Edison has taken action to ensure that complete work packages, including necessary instructions, are available at the work site.

  - The revised maintenance program now provides the necessary guidance and program controls to ensure that work packages, including the necessary instructions, are available at the applicable work site when maintenance activities are being performed.

- Boston Edison has taken action to ensure that Maintenance provides documentation of material used, maintenance and test equipment information, and work performed (including torque values).

  - The Work Plan now requires this information to be documented by the maintenance personnel and becomes a part of the completed work package. The process develops a chronological history of the individual activities.

- Boston Edison has taken action to improve storage and retention of maintenance records.

- Upon completion of a maintenance task, the final work package is returned to the responsible Staffing/Planning Engineer for review and closure. It is then processed by Document Control for retention as a complete package.

- Boston Edison has taken action to ensure proper documentation of post work testing.

  - The Work Plan now requires the maintenance post work testing to be identified, reviewed for adequacy, and results documented as part of the completed work package.

These program improvements, coupled with the increased management focus and direction, will ensure continued program improvement.

IV. Overview of the Revised Maintenance Program

The comprehensive rewrite of the Maintenance Section Manual for PNPS is complete. The changes and additions more clearly describe its purpose, intent, structure, and its relationship to other station directives and procedures. This rewrite incorporates INPO Guidelines 85-038, Conduct of Maintenance at Nuclear Power Stations, to enhance maintenance practices at Pilgrim Station.

Boston Edison also performed a major rewrite (revision) of PNPS Procedure 1.5.3 "Maintenance Request" (MR) to incorporate stronger administrative controls to identify problems, initiate, plan, track and accomplish station maintenance with precise supervisory control on both safety-related and nonsafety-related components, equipment, or structures. A new procedure, PNPS Procedure 1.5.3.1 "Maintenance Work Plan" (MWP), was developed to be utilized in conjunction with the Maintenance Request as an administrative tool to provide a Work Plan which further defines (details) the work to be performed including special tools, equipment, procedures, instructions, technical documentation, expected exposure levels (if applicable) and to provide feedback when work is completed. Revisions to MWPs will not change the intent of the work scope originally approved. Revisions to the Work Plan will be reviewed and approved in the same manner as the original document. The Work Plan and the parent MR are the controlling documents for installation of a modification or performance of a maintenance work activity. The Work Plan specifies the requirements for examination, and testing, and includes the applicable instructions, procedures and drawings. It also specifies hold/witness points and provides for controlling the work in the event of a nonconformance.

The highlights of these major revisions to PNPS Maintenance procedures are: (1) the work documents are incorporated into a single work package for each work activity, (2) the process of the Maintenance Work Package provides increased control in that the engineer who develops the package maintains control during the process, (3) Management level review and approval of revisions, including Quality Control and Operations, are part of the process, and (4) the final package, along with copies of the required documentation is returned to the engineer for review, closure, and processing to Document Control. These procedure revisions have been completed, reviewed, approved and implemented.

Boston Edison has conducted a series of formal training sessions for the Maintenance Managers, Supervisors, Maintenance Craft and selected personnel from other sections that are directly or indirectly involved in the processing, review, or examination of the new MR/MWP process. This training was completed on June 17, 1988, with program implementation on June 20, 1988.

To reduce the impact on production, and provide a smoother transition, management oversight of the new MR process is being increased during the implementation phase. In addition, the Quality Assurance Surveillance Division will be conducting surveillance on the revised Maintenance Program to monitor implementation and performance.

This response focuses primarily on the corrective actions taken to resolve the concerns described in Section 1.2 of the Team Report. Other corrective actions and program improvements have also been identified and are being addressed by Boston Edison Management. Although some items are not designated as RESTART actions, these items are incorporated into long term programs such as the "Material Condition Improvement Action Plan" (MCIAP). Boston Edison is continuing these actions/improvements with the goal of achieving and sustaining the highest standards of maintenance performance.

ATTACHMENT 3

BOSTON EDISON

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

Ralph G. Bird
Senior Vice President -- Nuclear

June 25, 1988
BECo Letter #88-099

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

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

Pilgrim Nuclear Power Station Request for Commencement of NRC Integrated Assessment Team Inspection and Transmittal of Schedules for Actions Prior to Restart

Dear Sir:

Boston Edison Company hereby requests that the Nuclear Regulatory Commission (NRC) commence its Integrated Assessment Team Inspection (IATI) of Pilgrim Nuclear Power Station on July 11, 1988.

Boston Edison provided the NRC with the results of its Restart Readiness Self-Assessment (RRSA) on May 26, 1988. This letter provides the schedule for those matters identified in the RRSA which require completion of specific, well defined actions for restart.

Attachment I contains summaries of RRSA Chapter II.A items and schedules for remaining actions to be done before restart. Attachment II is an integrated summary-level schedule for the remaining work and testing before restart. This schedule is also the Target Schedule to be inserted into the Restart Plan, Volume 2, Rev. 2 as Appendix 2.

Attachment III is an errata sheet for the RRSA. This sheet should be inserted into each of the copies of the report in your possession.

Please contact me or R. A. Ledgett if you have any questions about the schedules and status information provided in Attachments 1 and 2 or if you need additional information in preparation for commencing the IATI.

R. G. Bird

/Attachments

cc: Mr. William T. Russell
Regional Administrator
U.S. Nuclear Regulatory Commission - Region I
475 Allendale Road
King of Prussia, PA 19406

Mr. D. G. McDonald
Project Manager
Division of Reactor Projects I/II
U.S. Nuclear Regulatory Commission
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One White Flint North
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Rockville, MD 20852

Senior NRC Resident Inspector
Pilgrim Nuclear Power Station

Matters that Require Specific Action Before Restart Identified in Chapter II.A of the Self-Assessment for Restart Report

The most important matters identified during the RRSA relating to plant and equipment performance, operational performance, management and organization that require specific action before restart were described in Chapter II.A of the Self-Assessment for Restart Report. Specific plans or actions to be implemented prior to restart are summarized below.

Actions already completed are designated "Complete." Dates under "Complete" annotations indicate the date the action was completed or the time frame in which the actions were taken. Actions scheduled for completion between the date of this letter and restart have the completion date designated.

RRSA SECTION

II.A.1.a "The first portion of the process [for reporting deficiencies and initiating corrective action] --a single reporting form and a corrective action clearinghouse -- will be initiated prior to restart. In the longer term, this activity will be expanded and integrated with PNPS information systems with the objectives of: a) reducing the number of redundant corrective action tracking systems; and b) providing more readily accessible and usable management information tools."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.a

1.	The PNPS Housekeeping Manual has been issued and implemented. Expanded specific area owner assignments are contained in the manual.	Complete (May, 1988)
2.	"Clearing house" was formed and began operation to screen personnel, administrative and material deficiencies and to generate necessary documentation to effect correction (e.g. MR, PCAQ, DR, NCR, etc.). The initial efforts of the clearing house are being focused on dealing with the backlog of items generated in the course of the self assessment as delineated in a and b below.	Complete (Jun 13, 1988)
	a. Document presently known material deficiencies (Management Oversight and Assessment Team Field Notes, Peer Evaluator reports). This is being accomplished by the Systems Engineering Division working with clearing house personnel.	Aug 01, 1988
	b. Categorize and document non-material deficiencies.	Aug 01, 1988

c.	Following the initial trial period, this organization will be formally proceduralized. The first part of the proceduralizing process will be to create a single reporting form based on the experiences gained in processing the work to date.	Aug 31, 1988
3.	QA Surveillance Upgrade Program will be implemented. The scope of this upgrade program will extend beyond the established Appendix B requirements.	
a.	Draft QA Action Plan to upgrade the audit/surveillance process.	Complete
b.	Train QA Division Manager in the upgraded program.	Complete (Jun 1988)
c.	Train remaining QA Department personnel in upgrade program.	Sep 1988

RRSA SECTION

II.A.1.b

"Priority actions are being directed to filling 32 [29] newly authorized, permanent Boston Edison positions within the Maintenance Section that are now staffed on an interim basis by contractors. Ten of the positions are designated for supervisors and work planners. Management has given advance approval and the highest priority for hiring in order to more effectively support team building within the Maintenance Section.

Additional items scheduled before restart include: (a) issuance of an improved/updated Maintenance Control [Section] Manual, which will formalize many of the improvements presently in place, (b) revising the troubleshooting procedure to more clearly document work activities during and subsequent to a troubleshooting task; and (c) capturing remaining improvements in appropriate formal PNPS documents.

The Station Director and Plant Manager will continue to exercise close oversight of the maintenance function through restart, power ascension, and initial power operation to assure that management control is effectively maintained and improved. In this regard, particular emphasis will be placed upon training and monitoring of responsible organizational elements to increase their familiarity with and attention to the work control process."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.b

A. Initiate priority actions to fill Boston Edison positions in the Maintenance Section. As of June 23, 1988 eleven new employees have been hired in this effort.

B. Revise/Issue Maintenance Control Procedures

1. Procedure 1.5.3 (Maintenance Request Procedure).

a.	Prepare draft	Complete
b.	Formulate and conduct training	Complete
c.	Implement procedure	Complete (Jun 20, 1988)

2. Procedure 1.5.3.1 (Maintenance Work Plan)

a.	Prepare draft	Complete
b.	Formulate and conduct training	Complete
c.	Implement procedure	Complete (Jun 20, 1988)

3. Rewrite Maintenance Section Manual

a.	Prepare drafts	Complete
b.	Review drafts	Complete
c.	Develop training	Complete
d.	Conduct training	Jul 1, 1988
e.	Develop Plan of Action for implementation	Complete (Jun 24, 1988)

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.b

4.	Implement Instrumentation and Control (I&C) valve line up procedure.	
	a. Draft procedure	Complete
	b. Install Phase I tags	Complete
	c. Develop and conduct training	Complete
	d. Issue procedure	Complete
	e. Develop plan of action for complete tagging	Complete (Jun 23, 1988)
5.	Upgrade Environmental Qualification (EQ) procedure.	
	a. Approve draft procedure	Complete
	b. Develop training	Complete
	c. Conduct training	Complete
	d. Issue procedure	Complete
	e. Lift stop work order	Complete (Jun 20, 1988)
6.	Implement Lifted Leads Procedure (1.5.9.1)	
	a. Approve draft procedure	Complete
	b. Develop training	Complete
	c. Conduct training	Complete
	d. Issue procedure	Complete (Jun 1, 1988)

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.b

7.	Implement torquing procedure	
	a. Determine scope and receive engineering input	Complete
	b. Prepare draft procedure	Complete
	c. Review draft procedure	Jun 27, 1988
	d. Develop and conduct training	Jul 8, 1988
	e. Issue procedure	Jul 15, 1988
8.	Implement valve stem lubrication procedure	
	a. Determine scope	Complete
	b. Determine lube types	Jun 27, 1988
	c. Develop procedure	Jun 27, 1988
	d. Develop and conduct training	Jul 1988
	e. Issue procedure	Aug 1, 1988
	f. Revise PM schedules	Aug 1988
9.	Revise the troubleshooting procedure to more clearly document work activities during and subsequent to troubleshooting.	Aug 1, 1988

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR BOTH II.A.1.a & b

The Work Prioritization Team function has been proceduralized in the recently completed revision of PNPS 1.5.3, Maintenance Requests (MRs). In combination with the Rotating Window concept, each system's status is periodically reviewed and station management focuses on the system's deficiencies. Thus MRs of all priorities are evaluated and the items scheduled are those that support system performance and address plant reliability.	Complete
The Maintenance Section Manager has addressed the issue of qualification to perform maintenance with Division Managers and Supervisors. Maintenance tasks are assigned based on the satisfactory completion of the applicable training or the previous experience of the individuals.	Complete

RRSA SECTION		
II.A.1.c	"a. Continue the process for hiring. b. Develop an integrated schedule for remaining surveillance and testing to meet restart using an inter-disciplinary team. c. Continue addressing remaining maintenance work required for restart in the Plan-of-the-Day and assure that resources are focused on meeting scheduled dates."	
II.A.1.d	"Complete reviews, sequence, and schedule any additional testing identified by these reviews for completion prior to restart or during power ascension testing."	

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.c & d

1.	A detailed schedule for accomplishment of fire barrier surveillances has been issued and has been incorporated into the integrated schedule for work and testing.	Complete (May 26, 1988)
2.	NED periodically issues a report to address "issues that could potentially delay restart."	Latest version dated: Jun 20, 1988
3.	An integrated schedule for work and testing has been issued in summary schedule form and is included as a separate attachment to the cover letter for this document. The schedule incorporates remaining maintenance work, Logic System Functional Tests [LSFTs], fire barrier surveillances, and other surveillances and controlling paths.	Complete (Jun 23, 1988)
4.	The process for hiring of personnel has been continued. As of June 23, 1988 sixteen personnel have been hired for this department.	

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.c & d

5. Review of testing for plant equipment and systems are being completed to confirm their readiness for reactor operation.

   a. Reviews of Logic Systems Functional Tests (LSFT), Simulated Automatic Actuation Tests and Plant Design Change post work test procedures for adequacy. — Aug 22, 1988

   b. Review to verify the scope of planned power ascension dynamic testing. The review process is as follows: — Jul 7, 1988

      - Select relevant dynamic events, (operating transients).

      - Define expected transient response, (system component and plant parameter).

      - Identify changes made, (Plant Design changes, major maintenance and emergent problems) which could potentially affect plant transient response.

      - Predict and evaluate potential impact on plant response due to failures, malfunctions or installation errors.

      - Evaluate completeness and adequacy of tests done or planned during power ascension to assure adverse impact, if any, could be detected.

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.1.c & d

c.	Review to verify that plant systems will be tested and are operable before restart. A list of surveillance and test procedures is being prepared for selected systems. The list includes Technical Specification surveillances and non-Technical Specification required procedures which support operability. The complete list of procedures will be reviewed to ascertain which procedures should be performed before restart. Considerations will include date last performed and whether work has been performed since the last test.	Jul 22, 1988

RRSA SECTION
II.A.2.a

"a. Prior to restart, complete reviews and any necessary changes to provide improved control over valve position and to enable operators to more readily determine valve position status.

b. Prior to restart, revise the tagout procedure to limit the types and clarify the uses of specific tags.

c. Prior to restart, develop a plan to implement the INPO good practices for valve lineups and labelling in regard to instrument isolation valves.

d. Prior to startup, develop instrument-specific valve lineup sheets for all safety system and critical Balance of Plant systems

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.2.a

1. Revision to PNPS Procedure 1.4.5, Equipment Tagout, is in progress. Some specific improvements include: Aug 1, 1988

   a. Elimination of the use of red danger tags to mark lifted leads.

   b. Improved control over NWE and test tagging.

   c. Requirements to perform lineups following removal of equipment clearance tags.

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.2.

2.	Operations has completed reviews of the valve position control procedure. Prior to startup, each operating system will be given a complete valve lineup as close as practical to the actual startup date. Subsequent to that lineup, periodic lineups at specified frequencies will be performed on all accessible components. Additional improvements will be considered and implemented whenever necessary to improve operator control over and knowledge of valve positions.	Aug 15, 1988
3.	An instrument specific instrumentation and control (I&C) valve lineup procedure has been issued for safety systems and selected Balance of Plant instruments. This procedure was based on INPO good practices for valve lineups.	Complete (Jun 22, 1988)

RRSA SECTION

II.A.2.b "Complete the review of the ESF actuation study and initiate positive actions to reduce the occurrence of unplanned ESF actuations."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.2.b

1.	Complete a pre-restart test review to identify those tests needed to minimize problems most likely after start-up from a long outage.	Jul 1, 1988
2.	Conduct the pre-restart tests identified during the review of 1 above.	Aug 19, 1988
3.	Conduct a review of "Management Lessons" in NUREG 1275 and evaluate for applicability to PNPS.	Complete (May 23, 1988)
4.	A review has been performed of training conducted on industry operating experience. Training on thermal binding of large gate valves has now been included in the operator training program to be completed before restart.	Aug 19, 1988
5.	Inadvertent ESF Actuation Task Force will complete analysis, and corrective actions to disseminate lessons learned and prevent recurrence will be completed.	Aug 1, 1988
6.	Anti-spill Task Force will complete analysis of spill events and corrective actions will be implemented.	
	a. Complete analysis of all spills in 1988.	Jun 27, 1988
	b. Conven task force to establish corrective actions and develop schedule to implement corrective actions.	Aug 1, 1988

RRSA SECTION

II.A.2.c "No additional actions [to improve the formality of communications] are required for restart, although Boston Edison will initiate steps to apply appropriate portions of the standards for Control Room communication to I&C and other personnel identified for improvement."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.2.c

1.	Communications training for licensed operators is complete.	Complete (Apr 1988)
2.	Communications training for non-licensed operators is in progress.	Aug 19, 1988
3.	A Station Instruction (SI-OP.0006) has been established for standards of communications in the Control Room.	Complete (Nov 4, 1987)

RI A SECTION
II.A.2.d "Validate procedures revised during RFO-7. Prior to restart, complete training on procedures revised for modifications and implement the writers guide. An upgrade of Operations procedures by the Procedures group is scheduled as a long-term effort."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.2.d

1.	Procedure validation is in progress. As of 6/17/88, it is approximately 60% complete for all procedures revised since April 1986.	Jul 15, 1988
2.	Conduct training on operations procedures revised for modifications implemented during RFO-7.	Aug 19, 1988
3.	Issue the Procedure Writer's Guide.	Jun 29, 1988
4.	The validation process has been defined in TP 88-07.	Complete (Jan 30, 1988)
5.	Specific procedural deficiencies as delineated in the MO&AT Field Notes will be dispositioned.	Aug 1, 1988
6.	Improve human factors in EOPs and satellite procedures.	Complete
7.	Human factors improvements in other procedures is not a restart issue and will be completed as a longer term project.	

RRSA SECTION

II.A.2.e "Resolve deficiency reports [on Priority A drawings] prior to restart."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.2.e

1.	Independent review of Priority A drawings was completed by the Surveillance Monitoring Group. Two DR's were issued.	Complete (May 20, 1988)
2.	Conduct a survey of all Priority A drawings and associated messages in "SEEK."	Complete
3.	NED review the accuracy and validity of each message in "SEEK" for Priority A drawings.	Jul 22, 1988
4.	Request removal of unnecessary 'SEEK" messages.	Jul 22, 1988
5.	Complete drawings update.	Aug 15, 1988
6.	The effectiveness of having Priority A drawings updated and issued prior to operational turnover of a modification is the subject of a DR, (See Item #1 under II.A.2.e above). The resolution of the DR, including completion of corrective actions constitutes the verification of adequacy of the process.	Aug 15, 1988

RRSA SECTION
II.A.3

"Prior to restart begin actions to institutionalize practices involving:

a. Planning, scheduling, assignment, pre-job briefing, and control of maintenance; and

b. The event investigation and critique process, including the process for determination of underlying causes, and assigning and accomplishing identified actions.

After power ascension, efforts will be directed to institutionalizing the peer evaluator process, and developing a long-term, issue oriented data base."

DETAILED PLAN or ACTION AND SCHEDULE DATE FOR II.A.3

Good practices in use that will be formally proceduralized:

1.	Specification of permissable or required times to conduct post work testing in Maintenance Requests.	Jun 27, 1988
2.	System Window Concept for maintenance.	Aug 30, 1988
3.	Describe work flow process.	Complete (Jun 20, 1988)
4.	Work Package Development Checklist.	Complete (Jun 20, 1988)
5.	MR Data Base accessability via the Prime computer at 12 terminal locations.	Jun 27, 1988
6.	Define Work Prioritization Team concept.	Complete (Jun 20, 1988)
7.	ALARA aspects of development of preoperational tests.	Jul 15, 1988
8.	System turnover process.	Jul 15, 1988
9.	New training material on NPA trash compactor operations.	Jul 1, 1988

10.	Refresher academic training for license candidates.	Jul 1, 1988
11.	The practice of giving 6 hour NRC style written practice exams.	Jul 1, 1988
12.	Methodology to deal with testing of special projects such as Hydrogen Water Chemistry Control.	Jul 15, 1988
13.	The practice of providing NTD instructors on-shift for NRC license candidates.	Jul 1, 1988
14.	The practice of giving NRC license candidate NRC style walkthrough and oral practice exams.	Jul 1, 1988
15.	Glove bag use.	Aug 15, 1988
16.	Excavation practices.	Aug 15, 1988
17.	Prevention of excavations in the buffer zone.	Aug 15, 1988
18.	Pre-job briefings (in excess of RWP requirements).	Complete (Jun 20, 1988)
19.	Conduct of spill drills.	Jun 30, 1988
20.	The Fire Protection System status boards.	Jul 22, 1988
21.	Requirements for medical attention off-site.	Aug 15, 1988
22.	Inspections of work sites by supervisors.	Aug 15, 1988
23.	Personal safety responsibilities.	Aug 15, 1988
24.	Station overtime policy.	Jul 15, 1988
25.	Event critique procedure.	Complete (Jun 20, 1988)

JECT RFO#7+
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E 1 SHEET 1
RT 1APR86
ISH 8SEP89
A DATE 23JUN88

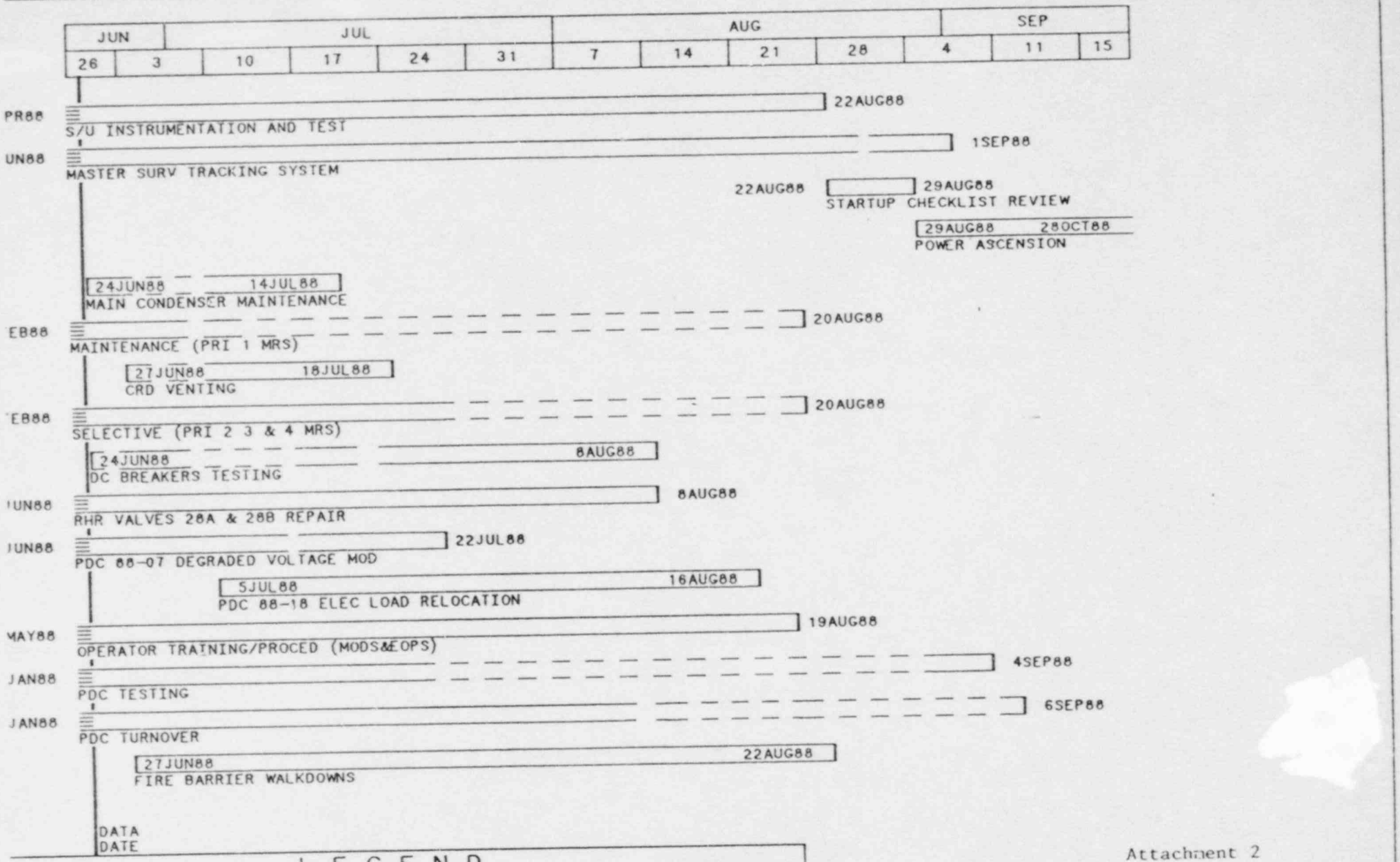
*** RFO #7+ SCHEDULE ***

SUMMARY W O R K I N G SCHEDULE

SUMMARY BREAK ON MAJOR WORK ITEMS

MODE C/BE
INTERVAL: 1 WEEK(S)

RUN 25JUN88 12.42
PROJECT/2 86A2
SCHEDULE BAR CHART



L E G E N D

SCHEDULE BARS

PORTED PROGRESS

RKING SCHEDULE

EVENT

DISCONTINUITY

Attachment 2

Attachment 3

Self-Assessment of Readiness for Restart Report Errata

Page	Line	Changes	
		Report	Correction
I-13	16	32	29
II-4	21	32	29
II-29	4	32	29
IV-9	21	32	29
IV-10	6	120	160
IV-12	19	32	29
V-13	13	32	29
V-15	2	120	160
V-18	16	23	27