



**BOSTON EDISON**

Pilgrim Nuclear Power Station  
Rocky Hill Road  
Plymouth, Massachusetts 02360

**Ralph G. Bird**  
Senior Vice President — Nuclear

BECo Ltr. #88-140  
September 28, 1988

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

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

**SUBJECT: Pilgrim Nuclear Power Station**  
Readiness for Operation

Dear Sir:

This letter transmits the final results of Boston Edison's programs, plans, and actions to prepare Pilgrim Station for safe and reliable restart and continued operation. Through this letter, Boston Edison requests the Nuclear Regulatory Commission's agreement that Pilgrim is ready for restart.

Boston Edison has taken a careful and deliberate approach throughout the outage to prepare Pilgrim for the resumption of power operation. The Company has upgraded plant systems, expanded and improved its Nuclear Organization, and assisted the Commonwealth of Massachusetts in improving offsite emergency plans. Now, as Boston Edison prepares to begin operation, the same careful and deliberate approach is being applied to final operational readiness preparations and the Power Ascension Program.

During the course of the outage, Boston Edison has developed and implemented a voluntary Safety Enhancement Program. This program, which exceeds current regulatory requirements, consists of a set of improvements to Pilgrim systems, procedures and training which prevent, reduce the probability of, or further mitigate the consequences of postulated accidents. This program has been recognized by the NRC as an industry-leading initiative to enhance the safety of an operating nuclear plant.

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P PDR

Boston Edison has also done extensive plant maintenance work during the outage, including substantial work on the Residual Heat Removal pumps, and the completion of thousands of work items on systems throughout Pilgrim Station to assure that the plant is in top physical condition.

Boston Edison expanded and improved its Nuclear Organization by recruiting top nuclear personnel from throughout the country which, when combined with the very capable long-term Boston Edison staff, has produced a strong and effective management team. The careful, sequenced transition to a permanent organizational structure is further evidence of the deliberate, cautious approach utilized throughout the outage.

Boston Edison has expended more than \$15 million to assist the Commonwealth of Massachusetts and local towns in improving their offsite emergency plans for Pilgrim Station. These expenditures have enabled and will enable the Commonwealth and towns to make substantial improvements in offsite emergency preparedness.

As Boston Edison moves into operational phases of Pilgrim restart, it will undertake a cautious, highly structured Power Ascension Program to bring Pilgrim Station to power over a period of approximately four months. This program will also confirm and demonstrate the readiness of the personnel and plant for continued safe and reliable power operation. There are five power levels in the Power Ascension Program at which NRC approval will be required to proceed to the next highest power level - 0%, 5%, 25%, 50%, and finally 75%. At each level, operator training and related assessments will be conducted. Boston Edison will provide an extra Senior Reactor Operator on each shift, and will have an experienced senior management oversight team in place. Operation at each power level will take as long as several weeks or more and ascension to the next level will not be permitted until the results of Boston Edison's assessment justify it and the NRC has approved it.

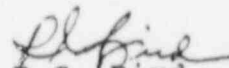
Completion of Pilgrim Restart Plan actions is documented in the enclosed Restart Plan, Volume 2, Rev. 3. The limited number of Restart Plan actions not yet closed are listed in Attachment 1 to this letter.

Actions in support of restart taken in response to the Restart Readiness Self-Assessment (RRSA) have been completed with a limited number of exceptions as documented in Attachment 2. Similarly, the actions in support of restart taken in response to the Integrated Assessment Team Inspection (IATI) have been completed with only a few exceptions as documented in Attachment 3. Finally, the physical work, including surveillance and precriticality testing, has been completed with the exception of the items listed in Attachment 4.

The schedule for completion of each outstanding item listed in Attachments 1 through 3 is set forth in the respective Attachments. Appendix 2, Volume 2, Revision 3 of the Restart Plan provides the schedule for completion of the outstanding items identified in Attachment 4.

The Boston Edison performance indicators, as reported in Appendix 5 to Volume 2, Revision 3 of the Restart Plan, indicate positive long term trends toward established goals, and with the limited exception of certain indicators relating to maintenance work backlog, show attainment of those goals at this time. As indicated on Attachment 5, Boston Edison actions will assure that the positive long term trends continue and that by October 14, 1988 these maintenance indicators will fall reasonably within the range of their respective goals.

Based upon implementation of its Restart Plan and the results of its Restart Readiness Self-Assessment, Boston Edison concludes that the necessary conditions for restart set forth in Confirmatory Action Letter 86-10 and the August, 1986 supplement thereto have been satisfied and that Pilgrim is ready to proceed into the Power Ascension Program. Accordingly, Boston Edison requests the Nuclear Regulatory Commission's agreement that Pilgrim is ready to restart.

  
R.G. Bird

Enclosure: Restart Plan, Volume 2, Rev. 3  
Attachments

cc: U.S.N.R.C. - Region I  
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Senior NRC Resident Inspector  
Pilgrim Nuclear Power Station

## RESTART PLAN ITEMS NOT CLOSED

AS OF SEPTEMBER 26, 1988

Restart Plan Appendix 7 (Radiological Action Plan)

<u>ITEM</u>	<u>SCHEDULED CLOSURE DATE</u>
1. Establish radiation health advisory board.	September 30, 1988

Restart Plan Appendix 10 (Regulatory Commitments)

<u>ITEM</u>	<u>SCHEDULED CLOSURE DATE</u>
1. Presentation to ORC of Plant Condition Change Checklist 6.	October 6, 1988
2. Certification by line management that restart prerequisites are closed.	October 14, 1988
3. Complete installation of the "Blackout Diesel."	October 5, 1988
4. Provide means for RHR vent valve access by operators.	October 5, 1988
5. Interconnect RHR and fire water systems.	October 5, 1988
6. Provide to NRC, Senior Resident Inspector status of fire protection work and compensatory measures outstanding as of startup.	October 7, 1988
7. Upgrade P&IDs to show RFO #7 PDCs.	October 6, 1988
8. Repair degraded seals and install new seals where required in Appendix R barriers.	Complete. (Only paper closure remains.)

RESTART READINESS SELF ASSESSMENT ITEMS NOT CLOSED  
AS OF SEPTEMBER 26, 1988

	<u>ITEM</u>	<u>SCHEDULED CLOSURE DATE</u>
1.	Revise preventive maintenance schedules concerning new valve stem lubrication requirements.	September 30, 1988
2.	Complete reviews of valve position controls and complete final valve lineups.	October 12, 1988
3.	Complete system pre-operability tests.	October 8, 1988
4.	Spill Task Force develop corrective actions and schedule implementation.	September 30, 1988.
5.	Complete validation of procedures revised in RFO #7.	October 14, 1988
6.	Issue procedure on excavation practices.	October 5, 1988
7.	Issue procedure on excavations in the buffer zone.	October 5, 1988
8.	Train personnel on use of the term "Engineering."	September 30, 1988
9.	Assign responsibility for the Vendor Technical Information Program (VETIP)	October 11, 1988
10.	Confirm VETIP satisfactory for startup.	October 6, 1988
11.	Issue document retention policy.	September 30, 1988

IATI INSPECTION ITEMS NOT CLOSED  
AS OF SEPTEMBER 23, 1988

<u>ITEM</u>	<u>SCHEDULED CLOSURE DATE</u>
1. Validation of EOP satellite and other off-normal procedures substantially revised during this outage.	September 30, 1988
2. Resolve PCAQ and schedule preventive action on Commercial Quality Item specifications.	September 30, 1988
3. Provide basis for not re-scheduling certain surveillances, with a once-per-refueling-outage frequency.	October 3, 1988
4. Provide training to appropriate personnel prior to H <sub>2</sub> injection.	October 10, 1988
5. Issue revised Organization Policies (MOP).	September 30, 1988
6. Resolve PCAQ on use of "non-Q" oil in "Q" equipment.	October 3, 1988
7. Evaluate Control Room human performance factors during the Power Ascension Program and include an update regarding schedule and scope of "paint, label and tape" items in the report to the NRC at the completion of the Power Ascension Program.	End of Power Ascension Program

PHYSICAL WORK FOR CRITICALITY AND OPERATION  
ITEMS NOT CLOSED  
AS OF SEPTEMBER 26, 1988

- |    |   |     |
|----|---|-----|
| 1. | Open Maintenance Requests required for restart  | 130 |
| 2. | Remaining surveillances for restart<br>(Plus any additional surveillance testing necessary<br>to maintain MSTP current) | 139 |
| 3. | Remaining pre-criticality or pre-operational tests  | 6   |

For scheduled completion of work in this Attachment, see Restart Plan, Volume 2, Revision 3, Appendix 2.

## STATUS OF MAINTENANCE-RELATED PERFORMANCE INDICATORS

<u>Indicator</u>	<u>July ' 87 Open MRS</u>	<u>Current Open MRS</u>	<u>Boston Edison Goal</u>
Total Open MRS	3500	*1770 (1248)	1000
Power Block MRS	650	300	500 (INPO Guideline) 400 (Recently Adopted Boston Edison Goal)
Restart MRS	933	*** 123	≈ 0
Fire Protection	80	** 92	40
NCRS	300	*** 53 Total/ 22 Power Block	≈ 0 Total and Power Block

- \* This includes MRS in test and turnover, 522 of which cannot be tested until startup.
- \*\* Fire Protection MRS had been reduced to the goal by June of 1988. Implementation of a new Boston Edison work control process in July 1988 result in an expansion of the MR count to include many minor items not previously subject to the MR system.
- \*\*\* A substantial number of restart MRS and associated NCRs are the product of recent snubber surveillances that have resulted in rework.

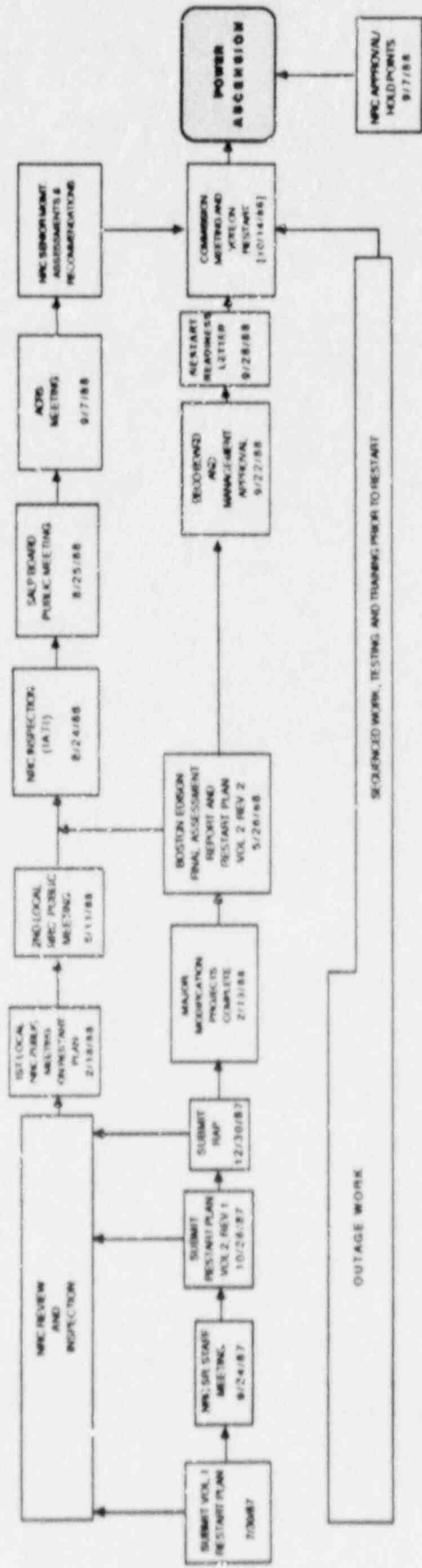
Data from PET Indicator database of September 27, 1988.



## LIST OF APPENDICES

1. Restart Plan Flow Chart
2. Level I RFO-7 Schedule
3. Licensed Reactor Operator Complement Projection
4. Staffing Levels in Key Areas
5. Performance Excellence Indicators
6. Summary Status of Restart Actions in MCIAP
7. Summary Status of Restart Actions in RAP
8. Status of CAL No. 86-10 Items
9. Status of Management Meeting 86-41 Items
10. Restart Regulatory Responses
11. Proposed Changes to Regulatory Commitments
12. Systems Group Review Summary Reports

# PILGRIM NUCLEAR POWER STATION RESTART PLAN FLOW CHART



Dates in brackets [ ] are projected.

PROJECT RFO#7+  
 PLOT RFO#7+  
 PAGE 1 SHEET 1  
 START 1 APR 88  
 FINISH 14 JAN 89  
 DATA DATE 25 SEP 88

\*\*\* RFO #7+ SCHEDULE \*\*\*  
 SUMMARY WORKING SCHEDULE  
 SUMMARY BREAK ON MAJOR WORK ITEMS

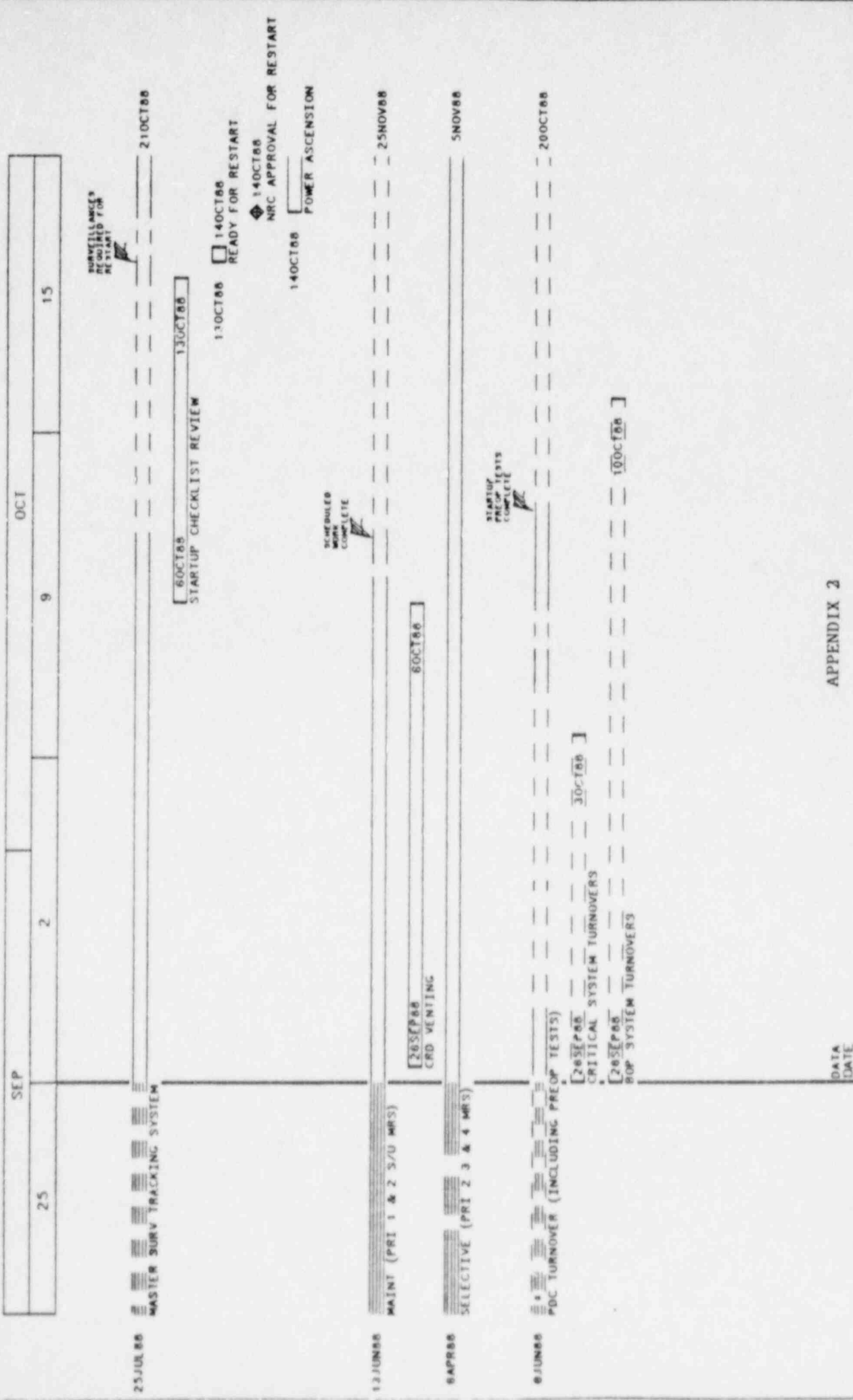
MODE C/BE  
 INTERVAL 1 WEEK(S)

25 JUL 88  
 MASTER SURV TRACKING SYSTEM

12 JUN 88  
 MAINT (PRI 1 & 2 S/U MRS)

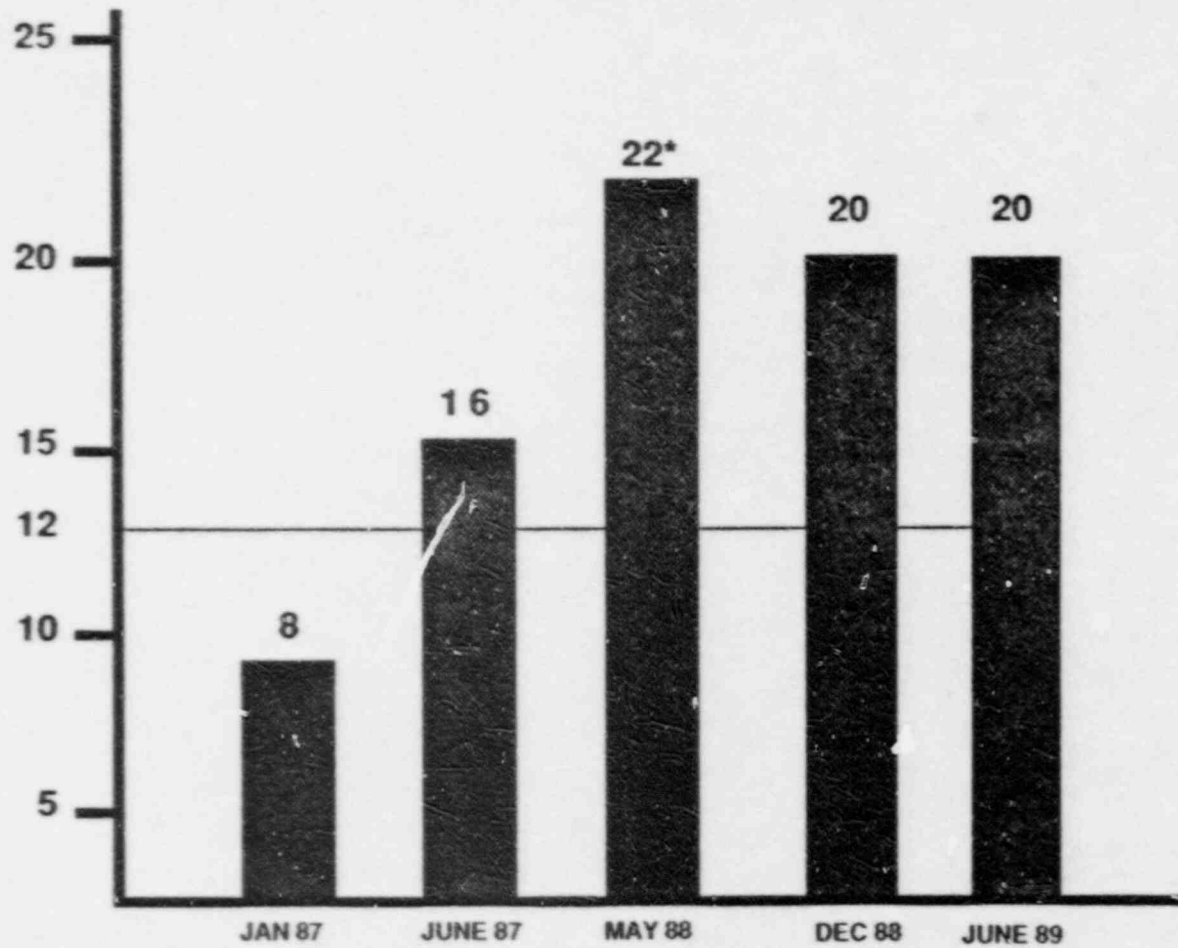
6 APR 88  
 SELECTIVE (PRI 2, 3 & 4 MRS)

8 JUN 88  
 PDC TURNOVER (INCLUDING PREP TESTS)  
 CRITICAL SYSTEM TURNOVERS  
 POP SYSTEM TURNOVERS



APPENDIX 3

Licensed Reactor Operator Complement Projection



\* 14 LIMITED UNTIL THEY OPERATE UNDER FORMAL INSTRUCTION FOR 20 DAYS AT GREATER THAN 20% POWER

## APPENDIX 4

	BECo Complement 1/1/86	BECo Complement 10/26/87	BECo Employees 5/11/88	BECo Complement 9/14/88	Contractor in BECo Position 9/14/88	Positions Unmanned 9/14/88
Maintenance Section (First Line Supervisors and above)	26	25*	23	36	7	0
Security Group	11	20	20	18	2	4
Fire Protection Group	1	6	6	5	0	0
Radiological Protection Section	53	76	95	96	2	3**
Technical Section	26	58	55	59	4	1

\* This number reported on 10/26/87 was higher because Station Services and Construction Management were originally shown in Maintenance (18 Men).

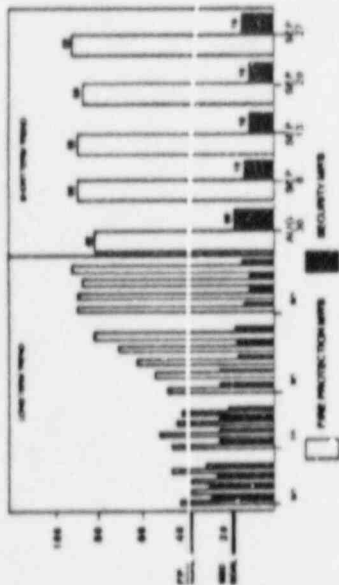
\*\* Help requisitions have been approved, personnel search in progress.

# PILGRIM NUCLEAR POWER STATION PERFORMANCE CHARACTERISTICS

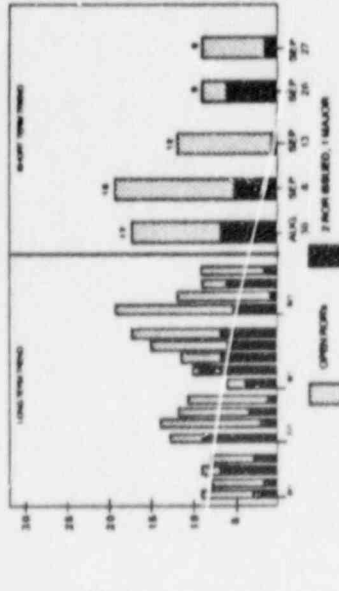
(STATUS AS OF SEPTEMBER 27, 1988)

9/28/88

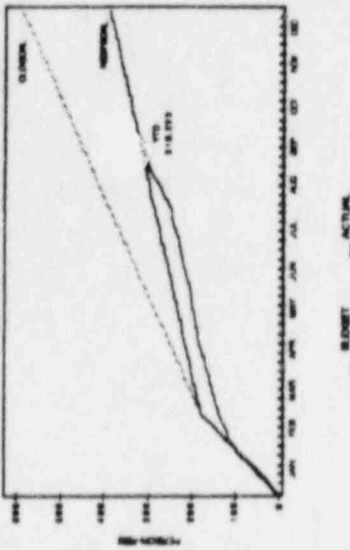
**OPEN FINE PARTICULATE & SECURITY MPTS**



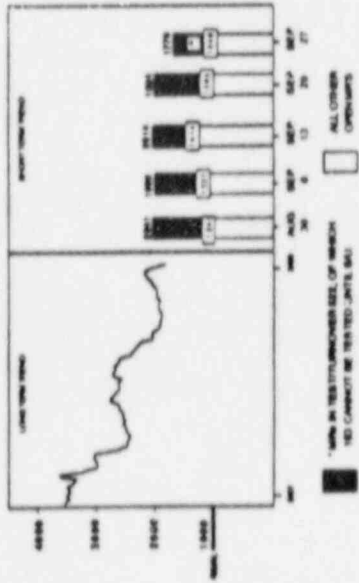
**RADIOLOGICAL OCCURRENCE REPORTS (ROR)**



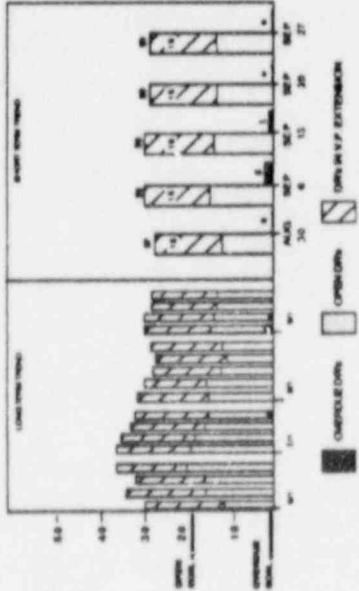
**ALPHA TRANSDUCER**



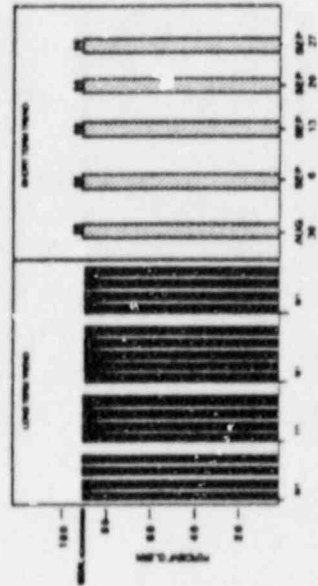
**TOTAL OPEN MPTS**



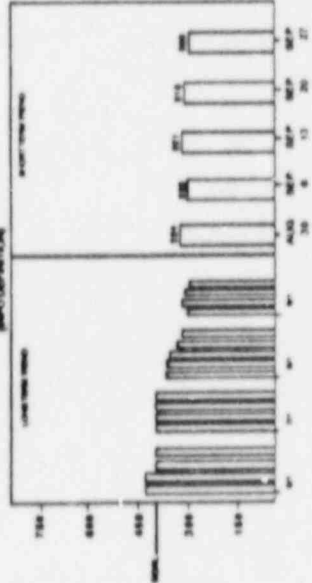
**OPEN DEFICIENCY REPORTS (ODR)**



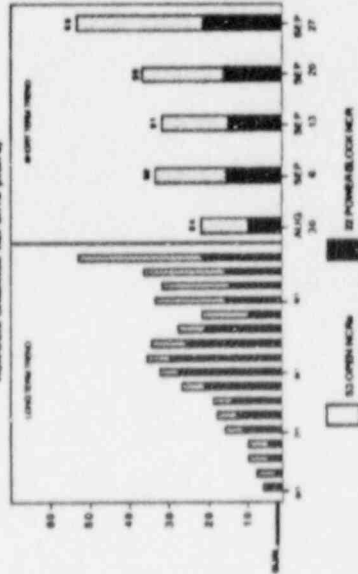
**PLANT DECONTAMINATION**



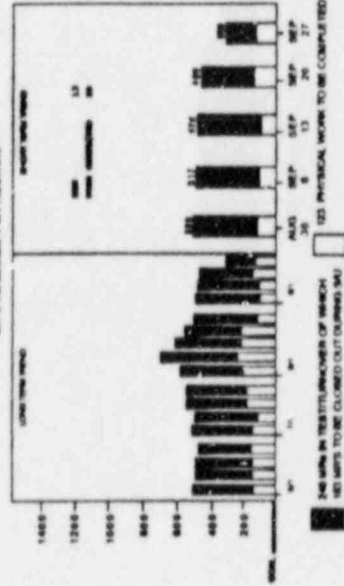
**OPEN POWER BLOCK RELATED MPTS (MPTS) IDENTIFICATION**



**NON-COMPLIANCE REPORTS (NCR)**



**MPTS REQUIRED FOR INSTANT**



DOES NOT INCLUDE MPTS IN TESTING AND CLOSE OUT

APPENDIX 6 EXECUTIVE SUMMARY

A numerical summary of the status of Material Condition Improvement Action Plan items follows:

- o Total items in Appendix 6:.....89  
(All are designated Restart)
- o Total items "COMPLETED":.....0
- o Total items "CLOSED":.....89

## APPENDIX 6

### SUMMARY STATUS OF RESTART ACTIONS IN MCIAP

This appendix summarizes the status of those items in the Material Condition Improvement Action Plan that are required to be completed prior to or in conjunction with startup.

Notation in the "DUE/STATUS" is used as follows:

- CLOSED Means that senior management review has been completed, the actions have received final approval and the documentation has been retained in an item closure file.

The numbering system for action items contained in this appendix uses as the first two digits "03", (03-XXX-XX) which indicates the action is related to some maintenance function. Appendices 8, 9 and 10 also contain maintenance related items and also use the "03" prefix, but in those appendices the actions are limited to those which involve a regulatory commitment. To differentiate between the two groups of maintenance items (non-regulatory and regulatory), the second set of digits in the action number of a regulatory maintenance item begins with "9" (i.e. 03-9XX-XX). Maintenance items in Appendix 6 use "0" as the first of the second set of digits, (i.e. 03-0XX-XX).



Date: September 13, 1988

SUMMARY STATUS OF RESTART ACTION IN  
MCIAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
<b>03-001</b>	<b>ORGANIZATION AND STAFFING</b>	
03-001-01-TR	PROMULGATE ORGANIZATION	CLOSED
03-001-02-TR	BRIEF MANAGERS & SUPERVISORS	CLOSED
-----		
<b>03-004</b>	<b>ADMINISTRATIVE DEMANDS</b>	
03-004-01-MA	ASSIGN CONTRACTOR AUTHORITY	CLOSED
03-004-02-MA	IDENTIFY INAPPROPRIATE ACTIVITIES	CLOSED
03-004-03-MA	REDUCE SUPERVISOR ACTIVITIES	CLOSED
-----		
<b>03-005</b>	<b>WORK PERFORMANCE STANDARDS</b>	
03-005-01-TR	PREPARE BRIEFING MATERIALS	CLOSED
03-005-02-TR	BRIEF SUPERVISORS	CLOSED
03-005-03-MA	MANAGER WORKSITE TOURS	CLOSED
03-005-04-MA	SR MANAGER WORKSITE TOURS	CLOSED
03-005-05-CL	CONTRACTOR WORKSITE TOURS	CLOSED
03-005-06-TR	INPO OBSERVATION TRAINING	CLOSED
03-005-07-MC	ASSIGN MAINTENANCE COACH	CLOSED
03-005-08-MC	PREPARE VISUAL DISPLAY	CLOSED
03-005-12-MA	REVISIT CLOSED ITEMS	CLOSED
-----		
<b>03-007</b>	<b>PROCEDURE VALIDATION</b>	
03-007-01-PS	IMPLEMENT PROCEDURE COVER SHEET	CLOSED
03-007-02-PS	PROCEDURE VALIDATION RESP	CLOSED
-----		

Date: September 13, 1988

SUMMARY STATUS OF RESTART ACTION IN  
MCIAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
<b>03-008</b>	<b>MATERIAL CONDITION &amp; HOUSEKEEPING</b>	
03-008-01-MC	DECONTAMINATION SCHEDULE	CLOSED
03-008-02-MC	DECON PRIORITY AREAS	CLOSED
03-008-03-MC	LEAK REPAIR AND DECON POLICY	CLOSED
03-008-04-MA	DECON PROGRESS INDICATOR	CLOSED
-----		
<b>03-009</b>	<b>PERFORMANCE GOALS</b>	
03-009-01-HR	BRIEF ALL HANDS ON GOALS	CLOSED
03-009-02-HR	GOALS ACHIEVEMENT CRITERIA	CLOSED
-----		
<b>03-010</b>	<b>COMMUNICATIONS</b>	
03-010-01-MA	ISSUE ACTION PLANS	CLOSED
03-010-02-MA	SHORT RANGE MR SCHEDULE	CLOSED
03-010-03-MA	RESTART PROGRESS ASSESSMENT	CLOSED
03-010-04-MA	PERFORMANCE EXCELLENCE TEAM	CLOSED
03-010-05-MA	SHIFT COORDINATORS	CLOSED
03-010-06-MA	DAILY REVIEW OF MRS	CLOSED
-----		
<b>03-012</b>	<b>MANAGEMENT FEEDBACK</b>	
03-012-01-MA	PUBLISH OUTAGE SCHEDULE	CLOSED
03-012-02-OM	USE THREE-WEEK SCHEDULE	CLOSED
03-012-03-OM	WORK PROGRESSING GROUP	CLOSED
03-012-04-OM	PROGRESS FEEDBACK	CLOSED
-----		

Date: September 13, 1988

SUMMARY STATUS OF RESTART ACTION IN  
MCIAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
<b>03-013</b>	<b>MAINTENANCE REQUESTS</b>	
03-013-01-MA	ASSIGN MR REVIEW TEAM	CLOSED
03-013-02-PL	REVISE MR PROCEDURE	CLOSED
03-013-03-TR	MR PROCESS TRAINING	CLOSED
-----		
<b>03-015</b>	<b>MAINTENANCE PROCEDURE CONTROL</b>	
03-015-01-PS	MAINTENANCE PROCEDURE ISSUE	CLOSED
03-015-02-PS	SRO PROCEDURE CHANGES	CLOSED
-----		
<b>03-016</b>	<b>MAINTENANCE PLANNING</b>	
03-016-01-PL	RFO-7 APPROVED TASK LIST	CLOSED
03-016-02-PL	RFO-7 WORK SCOPE REVIEW COMMITTEE	CLOSED
03-016-03-PL	RFO-7 WORK SCOPE CHANGES	CLOSED
03-016-04-PL	RFO-7 MASTER SCHEDULE	CLOSED
-----		
<b>03-017</b>	<b>POST-MAINTENANCE TESTING</b>	
03-017-01-TE	REVIEW TESTING PROGRAM	CLOSED
03-017-02-TE	PREPARE TESTING SCHEDULE	CLOSED
03-017-03-PS	REVISE TESTING PROCEDURE	CLOSED
03-017-04-TE	ESTABLISH "TIGER TEAM"	CLOSED
03-017-05-TE	IDENTIFY TESTING REQUIREMENTS	CLOSED
-----		
<b>03-019</b>	<b>CENTRALIZE PLANNING FUNCTIONS</b>	
03-019-01-OR	ESTABLISH PLANNING AND RESTART GRP	CLOSED

Date: September 13, 1988

SUMMARY STATUS OF RESTART ACTION IN  
MCIAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
03-019-02-PL	RFO-7 APPROVED TASK LIST	CLOSED
03-019-03-PL	RESOLVE RELOAD ITEMS	CLOSED
03-019-04-PL	PLAN RFO-7 WORK ITEMS	CLOSED
03-019-05-PU	ASSIGN MATERIAL EXPEDITORS	CLOSED
03-019-06-PL	AUGMENT MAINTENANCE PLANNERS	CLOSED
03-019-07-PL	PACKAGE WORK ITEMS	CLOSED
03-019-15-PL	RESOLVE RESTART ITEMS	CLOSED
03-019-16-PL	RESOLVE RESTART ITEMS (QA)	CLOSED
03-019-17-PL	RESOLVE RESTART ITEMS (NSRAC)	CLOSED
03-019-18-PL	RESOLVE RESTART ITEMS (RA&P)	CLOSED
03-019-19-PL	RESOLVE RESTART ITEMS (INPO&SALP)	CLOSED
03-019-20-PL	RESOLVE RESTART ITEMS (ORC)	CLOSED
03-019-21-PL	RESOLVE RESTART ITEMS (EP)	CLOSED
03-019-22-PL	RESOLVE RESTART ITEMS (MAT'L)	CLOSED
03-019-23-PL	RESOLVE RESTART ITEMS (TEMP MODS)	CLOSED
03-019-24-PL	RESOLVE RESTART ITEMS (PIP'S)	CLOSED
03-019-25-PL	RESOLVE RESTART ITEMS (HP)	CLOSED
03-019-26-PL	RESOLVE RESTART ITEMS (LER)	CLOSED
03-019-27-PL	RESOLVE RESTART ITEMS (SPI)	CLOSED
-----		
<b>03-020</b>	<b>WORK ASSIGNMENT PRACTICES</b>	
03-020-01-WC	ASSIGN WORK FROM SCHEDULE	CLOSED
03-020-02-TR	TRAIN PLANNING PERSONNEL	CLOSED

Date: September 13, 1988

SUMMARY STATUS OF RESTART ACTION IN  
MCIAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
03-020-03-MA	ASSIGN ALL PERSONNEL TO WORK	CLOSED
-----		
<b>03-021</b>	<b>PROCUREMENT CONTROL</b>	
03-021-01-ST	TEMPORARY PURCHASING AGENTS	CLOSED
03-021-02-ST	TEMPORARY UNIT CONTROL CLERK	CLOSED
03-021-03-OR	TEMPORARY REPORTING STRUCTURE	CLOSED
03-021-04-ST	EXPEDITOR STAFFING RQRMTS	CLOSED
-----		
<b>03-022</b>	<b>PROCUREMENT INITIATION</b>	
03-022-01-PU	PDC RELATED SPARES	CLOSED
03-022-02-PU	PROVIDE RDD AND MR NUMBER	CLOSED
-----		
<b>03-023</b>	<b>PROCUREMENT TRACKING</b>	
03-023-01-MM	ESTABLISH MMAPPS TASK GROUP	CLOSED
03-023-02-MM	MMAPPS IMPROVEMENT PLAN	CLOSED
03-023-03-MM	INTERIM MATERIAL TRACKING	CLOSED
03-023-04-MM	MMAPPS TRAINING	CLOSED
-----		
<b>03-024</b>	<b>MATERIAL HANDLING &amp; ISSUE</b>	
03-024-01-MM	ESTABLISH STAGING FUNCTION	CLOSED
03-024-02-MM	MMAPPS USERS GUIDE	CLOSED
-----		
<b>03-027</b>	<b>MAINTENANCE DATA BASE DEVELOPMENT</b>	
03-027-01-MA	INTERIM REVISION TO MR PROCESS	CLOSED
03-027-02-MA	EXPAND MR DATA BASE	CLOSED

APPENDIX 6

Date: September 13, 1988

SUMMARY STATUS OF RESTART ACTION IN  
MCIAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
-----		
<b>03-028</b>	<b>PREVENTIVE MAINTENANCE</b>	
03-028-01-PM	SCHEDULE PREVENTIVE MAINTENANCE	CLOSED
03-028-02-PM	PROGRESS PM WORK ITEMS	CLOSED
03-028-03-PM	REPORT PM PERFORMANCE WEEKLY	CLOSED
-----		
<b>03-029</b>	<b>MEASURING &amp; TEST EQUIPMENT</b>	
03-029-01-CA	INVENTORY M&TE	CLOSED
03-029-02-ST	ASSIGN TEMPORARY M&TE STAFF	CLOSED
03-029-03-MA	ESTABLISH CENTRAL CONTROL OF M&TE	CLOSED
-----		

APPENDIX 7 EXECUTIVE SUMMARY

A numerical summary of the status of Radiological Action Plan items follows:

- o Total items in Appendix 7:.....14
- c Total items "COMPLETED":.....0
- o Total items "CLOSED":.....13

Note: Four action items are determined as not required for restart and are excluded from this issuance. This explains the difference between the 18 total items reported in Vol. 2 and the 14 total items reported in this issuance.

APPENDIX 7

RADIOLOGICAL ACTION PLAN

Notation in the "DUE/STATUS" are used as follows:

- (DATE) Means that work on the item is not finished and the date indicates when the action is expected to be complete and ready for senior management review.
  
- CLOSED Means that senior management review has been completed, the actions have received final approval and the documentation has been retained in an item closure file.



Date: September 28, 1988

SUMMARY STATUS OF RESTART ACTION IN  
RAP

<u>ISSUE/ACTION</u>	<u>DESCRIPTION</u>	<u>DUE/STATUS</u>
<b>02-601</b>	<b>SENIOR MGM'T AWARENESS</b>	
02-601-01-TR	MGMT AWARENESS TRNG	CLOSED
02-601-02-MA	DEPT. RADCON GOALS	CLOSED
02-601-03-MA	INDIV. RESPONS.	CLOSED
02-601-04-MA	ALARA OVERSIGHT	CLOSED
-----		
<b>02-602</b>	<b>MIDDLE MGM'T AWARENESS</b>	
02-602-01-TR	RAD AWARENESS TRNG.	CLOSED
02-602-02-TR	RAD SERVICES TRNG.	CLOSED
02-602-03-WC	RAD WORK CONTROL	CLOSED
02-602-04-PL	RAD PLANNING	CLOSED
-----		
<b>02-603</b>	<b>RAD WORKER AWARENESS</b>	
02-603-01-TR	AWARENESS TRNG.	CLOSED
-----		
<b>02-604</b>	<b>RADIATION HEALTH</b>	
02-604-01-TR	RAD HEALTH TRNG.	CLOSED
02-604-02-OR	ADVISORY BOARD	30 SEP 88
-----		
<b>02-605</b>	<b>RADIOLOGICAL STAFFING</b>	
02-605-01 ST	INCREASE STAFFING	CLOSED
02-605-02-HR	JOB DESCRIPTIONS	CLOSED
-----		
<b>02-606</b>	<b>PLANT OPERATIONS</b>	
02-606-01-PS	SYSTEMS MGMT PLAN	CLOSED
-----		

APPENDIX 8 EXECUTIVE SUMMARY

A numerical summary of the status of action items undertaken in response to CAL NO 86-10 follows:

- o Total items in Appendix 8:.....37
- o Total items designated required for restart..35
- o Total items "COMPLETED":.....0
- o Total items "CLOSED":.....37

APPENDIX 8

STATUS OF CAL NO 86-10 ITEMS

This appendix consists of those items that were carried out to address the commitments contained in Boston Edison's three written responses to Cal No 86-10. For convenience of review they are grouped by the response letter from which they are drawn and listed in the order that the commitments appear in the letter.

Notation in the "DUE/STATUS" is used as follows:

- CLOSED Means that senior management review has been completed, the actions have received final approval and the documentation has been retained in an item closure file.

## CAL NO. 86-10 First Response

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-909-02 Reassemble, inspect and rebuild MSIVs.
CLOSED	03-937-01 Investigate root cause and perform permanent modification of MSIV pilot poppets to ensure poppets remain screwed to poppet nuts during long term operation.
CLOSED	11-006-01 Develop a procedure to conduct a limited power ascent and descent through the portion of power ascension when the reactor mode switch is repositioned from run mode to start-up mode. This test may confirm the root cause analysis if anomalies recur.
CLOSED	03-909-01 Install GETARs to monitor primary containment isolation system during comprehensive testing during next startup.
CLOSED	09-002-03 Evaluate and report MSIV leakage rates.
CLOSED	04-005-04 Perform leakage test, across RHRs 68 check valves in accordance with Procedure 8.5.2.7 every refueling outage.
CLOSED	03-917-01 Install additional pressure gauges in RHR system per PDC 86-30.
CLOSED	01-004-12 Develop RHR system venting program. Include adequate vent location for local high points and a method to control venting frequency by venting results.
CLOSED	03-917-02 Provide means for system temperature monitoring.
CLOSED	03-917-03 Remove pressure gauge installed on RHR injection

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line to allow for a vent path.

CLOSED

01-004-10

Revise alarm response procedure 2.3.2.1 on panel C903-left annunciator B-7 RHR high pressure alarm.

CLOSED

03-909-04

Replace Mode Switch with G.E. recommended model.

CLOSED

03-933-01

Write PDC to install EPIC computer system to monitor the RPS and PCIS systems.

APPENDIX 8

## CAL NO. 86-10 Second Response

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	10-001-04 Train operations staff on RHR intersystem leakage issue.
CLOSED	11-005-02 Determine the test configuration and the acceptance criteria for test of pressure drop capability of the RHRS 1001-68A and 68B check valves.
CLOSED	-- Same action as CAL 86-10 First Response 04-005-04.
CLOSED	04-005-03 Schedule RHRs pressure gauge calibration every refueling outage.
CLOSED	03-917-16 After trial use as a temporary procedure evaluate and change as required TP 86-85 and incorporate it as a part of the RHR system operating procedure.
CLOSED	04-005-01 Place the RHR high pressure alarm switches on a once per cycle calibration schedule.
CLOSED	04-005-02 Prepare and utilize a procedure to periodically monitor RHRS pressures and temperatures.
CLOSED	11-005-01 Evaluate the feasibility of replacing or redesigning RHRS and Core Spray check valves to provide positive position indication.
CLOSED	03-917-15 Schedule accomplishment of resultant design modifications on check valve position indicators, via the long term program.
CLOSED	09-001-07 Submit Technical Specification change request to reduce frequency of MO 1001-28B and 29B valve stroking.

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CLOSED 03-909-06  
Evaluate the loose neutral wiring of RPS/PCIS system.

CLOSED 03-909-05  
Close out the following MRs to correct various circuit problems: 86-45-189, 86-45-190, 86-45-191, 86-45-192, 86-45-193, 86-300, 86-301, 86-302.

CLOSED 11-004-01  
Resolve identified specific wiring and print discrepancies.

CLOSED 03-917-04  
Remove valve disk and evaluate or restore to confirm the wear rate.

CLOSED --  
Same action as CAL 86-10 First Response 03-933-01.

CLOSED 11-005-03  
Conduct the pressure drop capability test of the RHRS 1001-68A and 68B check valves.

APPENDIX 8

## CAL NO. 86-10 Third Response

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	11-002-02 Evaluate new RHRS and core spray check valve position monitoring system options as an improvement over the original designs.
CLOSED	01-004-11 Revise EHR system surveillance procedure to include results and venting locations.
CLOSED	-- Same action as CAL 86-10 Second Response 04-005-02
CLOSED	03-917-06 Retest the boundary valves of the RHR vessel injection line for Appendix J criteria and for high pressure water leakage. Conduct engineering evaluation of results.
CLOSED	11-002-01 Revise safety evaluation #1959 to clarify intent (address reduction in RHR flow).
CLOSED	01-004-09 Revise procedures to establish proper positions of the RHRS isolation injection MO 1001-29A and B and MO 1001 28A and B valves. (Procedure numbers 2.2.19, 2.2.86, 2.2.125, 8.5.2.2, 8.5.2.3, 8.5.2.6 and 8.7.1.4.1).
CLOSED	03-917-05 Local venting in RHR to be performed once a week for four weeks per TP 86-84.
CLOSED	-- Same action as CAL 86 10 Second Response 03-917-15.



APPENDIX 9 EXECUTIVE SUMMARY

A numerical summary of the status of Management Meeting 86-41 items follows:

- o Total items in Appendix 9:.....270
- o Total items designated required for restart..258
- o Total items "COMPLETED":.....3
- o Total items "CLOSED":.....256

APPENDIX 9

STATUS OF MANAGEMENT MEETING 86-41 ITEMS

This appendix is provided as a separate consolidation of Management Meeting 86-41 items, for ease of review by those concerned primarily with that material.

The information presented here is grouped by the same paragraph numbers used in Attachment 1 to the NRC letter dated 31 December 1986, contains the actions taken to address specific concerns and the status of those actions.

Notation in the "DUE/STATUS" are used as follows:

- (DATE) Means that work on the item is not finished and the date indicates when the action is expected to be complete and ready for senior management review.
  
- COMPLETED Means that the cognizant manager considers the results achieved satisfy the action requirements, but that senior management is conducting a review before approving final closure of the item.
  
- CLOSED Means that senior management review has been completed, the actions have received final approval and the documentation has been retained in an item closure file.

Some actions are necessarily keyed to milestones and cannot be assigned a specific date, but are dependent upon the sequence of events surrounding that milestone. The status of such actions are indicated by the following conventions:

- RESTART Means that the action is part of or directly tied to the actual reactor startup evolution or power ascension program.
- RFO 8 Means that the action is scheduled as part of the work to be done while the plant is shut down for the next refueling outage.
- (RS + \_\_\_) Means that the action is scheduled for Restart plus some period of time which will always be expressed in days. EXAMPLE: RS+120 means that the action is scheduled to be completed 120 days after the reactor has been started up. This convention may be used with the other milestones in a similar manner. EXAMPLE: RFO 8-60 means that the action is to be completed sixty days before the scheduled beginning of refueling outage number eight. ILRT+90 means that the item is scheduled for completion ninety days after the completion of the integrated leak rate test.

## NRC 86-41 SECTION 1.A.1

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**Low Number of Licensed Operators**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-001-07 Increase authorized complement of operators (total of equipment and reactor operators ) to 45.
CLOSED	01-001-09 Recruit and train licensed reactor operators to support a six section watchbill by the end of 1987.
CLOSED	01-001-10 Assign an experienced Watch Engineer to assist training.

## NRC 86-41 SECTION 1.A.2

---

**Lack of Staff Support for Operations Department**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-001-01 Hire Operations Section Manager.
CLOSED	01-001-03 Assign two Operations Engineers to the Chief Operating Engineer as technical staff assistants.
CLOSED	01-001-04 Assign full time Planner to Operations Section.
CLOSED	01-001-05 Transfer Shift Technical Advisor function to Operations.
CLOSED	01-001-06 Fill six STA positions.

## NRC 86-41 SECTION 1.A.3

---

**Worker Overtime Control**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-002-01 Establish an overtime policy for all personnel. Require the department manager's approval of work exceeding 60 hours/week.
CLOSED	01-002-02 Establish operation of a real-time, computer-based monitor to improve control of operator overtime (including seven-day rolling average).

## NRC 86-41 SECTION 1.A.4

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Unreadable Station Drawings

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	06-003-01 Publish drawing legibility standards.
CLOSED	06-003-02 Implement a quality check of all new vendor drawings and reject illegible drawings.
CLOSED	06-003-03 Upgrade existing drawings as drawing revisions occur.
CLOSED	06-003-04 Examine prints made from all existing aperture cards and identify poor quality aperture cards and poor quality original prints.
CLOSED	06-003-05 Prioritizing poor quality original drawings for restoration.
CLOSED	06-003-06 Prepare plan and schedule for drawing restoration work.
CLOSED	06-003-07 Upgrade quality of all equipment in the drawing processing cycle.
CLOSED	06-003-08 Implement 100% quality inspection of new aperture cards sent to the Document Control Center.

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NRC 83-41 SECTION 1.A.4

CLOSED

06-003-09

Train clerical staff in drawing legibility requirements.

CLOSED

06-003-10

Issue Work instructions and initiate monthly random sampling of DCC issued drawings to monitor operator and equipment performance.

1



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NRC 86-41 SECTION 2.A.1

---

Continuing Weakness in Follow-up to Radiological Problems

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-008-01 Upgrade Radiological Occurrence Report (ROR) procedure to improve categorization of ROR's by severity level.
CLOSED	02-008-02 Assign a full time ROR coordinator.
CLOSED	02-008-03 Assign where possible ROR's to Group Leader level or above.
CLOSED	02-008-04 Establish a computerized ROR tracking system.

## NRC 86-41 SECTION 2.A.2

---

**Worker Attitude Towards Radiation Protection & Accountability**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-007-01 Develop ALARA program procedures.
CLOSED	02-007-02 Establish radiation exposure goals and track and report results.
CLOSED	02-007-03 Revise annual performance evaluation form to include ALARA performance.
CLOSED	02-007-04 Determine that the radiation exposure goals are effective.
CLOSED	02-007-05 Implement a continuing program to identify better methods (including the purchase of additional equipment) to minimize, control and remove contamination.
CLOSED	02-007-06 Monitor effectiveness of purchased devices by tracking the number of times such devices are used and its effectiveness in controlling the spread of contamination. Use this effectiveness monitoring to identify better methods, as needed.
CLOSED	02-007-07 Establish Nuclear Plant Manager as chairman of ALARA committee.
CLOSED	02-007-08 Monitor effectiveness of the ALARA program by

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NRC 86-41 SECTION 2.A.2

closely tracking collective station exposure and by assessing the effectiveness of the ALARA committee and its recommendations.

CLOSED

02-007-09

Establish an ALARA Employee of the Month award for achievements in exposure reduction.

CLOSED

02-007-10

Complete training on ALARA program and fully implement the program.

CLOSED

02-009-01

Involve Line Managers in routine reinforcement of radiological requirements.

CLOSED

02-009-02

Reassign responsibility for implementing disciplinary action for radiation protection violations from Radiological Section Manager to individual supervisors.

CLOSED

02-009-03

Revise GET program to emphasize that the basis for radiological protection is to ensure the health and safety of individual workers.

CLOSED

02-009-04

Conduct formal training programs in contamination control techniques for operations, maintenance and radiological supervisors, workers and technicians.

## NRC 86-41 SECTION 2.A.3

---

Implementation & QC of New Environmental TLD Program

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-010-01 Replace existing environmental TLD system by Panasonic Environmental TLD System.
CLOSED	02-010-02 Implement procedures to send Panasonic Environmental TLDs to an independent laboratory for irradiation on a quarterly basis.
CLOSED	02-010-03 Continue to participate in the International Environmental Dosimeter Intercomparison Project.
CLOSED	02-010-04 Develop a QA procedure for the new Environmental TLD System program.
CLOSED	02-010-05 Evaluate Environmental TLD program effectiveness using TLD intercomparison studies.

## NRC 86-41 SECTION 2.A.4

---

Communication Between Health Physics Group & Other Licensee Depts

---

DUE/STATUSACTION

CLOSED

02-001-03

Assign Health Physics Coordinators to the maintenance section for groups which have work loads which require substantial numbers of Radiological Work Permits.

CLOSED

02-003-04

Section Managers include in plant tours observations of communications between the Radiological Protection Section and other station sections.

## NRC 86-41 SECTION 3.A.1

---

**Maintenance Supervision Staffing Vacancies**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-901-01 Fill existing supervisory vacancies.
CLOSED	03-901-02 Computerize administration of overtime control.
CLOSED	03-901-03 Establish and staff a Procurement Support Group (PSG) to facilitate processing of procurement documents.
CLOSED	03-901-04 Develop a centralized planning and scheduling function within the Maintenance Group to directly support the individual maintenance disciplines.
CLOSED	03-901-05 Hire three additional maintenance staff engineers.
CLOSED	03-901-06 Hire one HVAC supervisor.
CLOSED	03-901-07 Establish apprenticeship program in the three maintenance disciplines with twelve apprentice positions approved.
CLOSED	03-901-08 Accelerate the process of filling open Maintenance supervisory positions.

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- CLOSED            03-901-09  
Evaluate long-term Maintenance Section staffing  
plan.
- CLOSED            03-901-10  
Establish management tours to assess the  
effectiveness of supervisors in enforcing high  
standards.
- CLOSED            03-906-02  
Improve Maintenance Group performance trending  
system and include ways to identify and correct  
areas of weakness.
- CLOSED            10-003-01  
Develop, issue and use training module for field  
supervision/monitoring activities.

## NRC 86-41 SECTION 3.A.2

---

**Limited Maintenance - Operations Interface**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-903-02 Establish a method to prioritize MRs and inform affected departments of results.
CLOSED	03-903-03 Establish a plan-of-the-day work prioritization which includes all disciplines related to the approved schedule.
CLOSED	03-903-04 Attend industry conference on maintenance/operation interface.
CLOSED	03-903-05 Establish an MR feedback system to ensure that the cognizant organization is informed if the MR will not be worked as planned.



## NRC 86-41 SECTION 3.A.3

---

**Implementation of Maintenance Planning Group (Backlog Disposition)**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-901-17 Improve the rate of reducing outstanding maintenance backlog by increasing contractor work force (including engineers, supervisors and craft).
CLOSED	03-902-01 Establish maintenance planning group with full time planners.
CLOSED	03-902-02 Centralize maintenance planning and scheduling activities.
CLOSED	03-902-03 Develop weekly planning/scheduling effort for routine maintenance activities.
CLOSED	03-902-04 Correct the data contained in the administrative control system for MRs.
CLOSED	03-902-05 Coordinate maintenance activities between the various disciplines through weekly planning and scheduling meeting.
CLOSED	03-902-06 Implement new maintenance manual to provide guidance for conduct of planning/scheduling effort.
CLOSED	03-902-07 Restructure maintenance group to provide increased

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NRC 86-41 SECTION 3.A.3

management attention to both outage-related  
maintenance and backlog.

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NRC 86-41 SECTION 3.A.4

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Formalization & Implementation of Preventive Maintenance Program

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-905-02 Update preventive maintenance tracking list.
CLOSED	03-905-03 Have maintenance planners schedule PM activities and incorporate reviews and update status.
CLOSED	03-905-04 The Planning Group shall issue variance reports on PM activities in accordance with the procedure.
CLOSED	03-905-05 Clarify procedural requirements and increase effectiveness of tracking list by revising PM tracking procedure; increase management attention by notifying responsible group leader of failure to perform a PM. Elevate to Section Manager attention upon third consecutive non-performance.
CLOSED	03-905-06 Trend PM performance for each discipline in the maintenance group.
CLOSED	03-905-07 Develop and issue PM procedures for Limitorque motor operated valves.
01-NOV-88	03-905-08 Evaluate the failure analysis reports of motor operated valve failures to determine the adequacy of the motor operated valve PM program.
CLOSED	03-905-11 Develop and issue PM requirements for Limitorque

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NRC 86-41 SECTION 3.A.4

motor operated valves.

CLOSED

03-920-08

Review motor-operated valves for inconsistent sizing and oversizing of motor overload devices.

CLOSED

10-003-02

Conduct training and continuing education of maintenance personnel assigned to work on Limitorque MOVs.

## NRC 86-41 SECTION 3.B.1

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**ATWS Recirculation MG Set Field Breaker Failures**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-929-01 Perform root cause analysis of ATWS RECIRC MG set field breaker which failed in June 1986.
CLOSED	03-929-02 Perform root cause analysis of recurring breaker failures.
CLOSED	03-929-03 Conduct formal industry survey of failure history and corrective action.
CLOSED	03-929-04 Perform aging and testing of lubricant.
CLOSED	03-929-05 Investigate design change options (initiation of drive motor trip on ATWS signal - redundant to field trip; change spring design field breaker).
CLOSED	03-929-06 Investigate and recommend possible improvements to maintenance and testing practices.
CLOSED	03-929-07 Update breaker maintenance manual/procedure to define use of special lubricants and enhance steps for making breaker adjustments.
CLOSED	03-929-08 Update root cause analysis and risk and reliability analysis relating to recirc MG set trip breakers.

NRC 86-41 SECTION 3.B.1

CLOSED

03-929-09

Reassess corrective action to decide whether replacement of the recirc MG set field breaker would be more prudent than continuing trouble shooting and repair efforts.

CLOSED

03-929-10

Install PDC 87-30 to upgrade recirc MG set trip breakers.

CLOSED

03-929-11

Implement improvements to maintenance and testing practices recommended by Nuclear Engineering Department investigation.

## NRC 86-41 SECTION 3.B.2

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Breaker Setting & Coordination Implications of the Safety Bus B10

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-931-01 Initiate a temporary modification to correct immediate breaker coordination problem which was not addressed in the original design.
CLOSED	03-931-02 Initiate a full review of the breaker coordination issue.
CLOSED	03-931-03 Develop a new and more comprehensive design basis.
CLOSED	03-931-04 Implement required PDC 87-15 changes to resolve breaker coordination issue.
CLOSED	03-931-05 Implement the Temporary Modification to correct immediate breaker coordination problem which was not addressed in the original design.

## NRC 86-41 SECTION 3.B.3

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**Minimum Flow Protection for RHR Pumps**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-919-01 Revise safety evaluation for existing PDC 86-95 to establish minimum flow design basis, revise PDC 86-95 accordingly.
CLOSED	03-919-02 Correctly install orifice plate in RHR minflow line.
CLOSED	03-919-03 Review RHR minflow operating logic and issue appropriate design changes.
CLOSED	03-919-04 Install PDC 86-33 (MO 1001-18 A&B).
CLOSED	03-919-05 Install PDC 86-95 to establish minimum RHR flow.



## NRC 86-41 SECTION 3.B.4

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Cracked Welds & Loose Bolts in Low Pressure ECCS Systems

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-906-03 Review F&MR trend analysis to determine whether MCARs would be applicable/appropriate to address root cause of cracked welds and loose bolts in low pressure ECCS systems.
CLOSED	03-906-04 Implement corrective action training for NED personnel.
CLOSED	03-916-02 Review previous action taken on failure analysis for cracked welds and loose bolts in ECCS.
CLOSED	03-916-03 Investigate root cause of weld failures.
CLOSED	03-916-04 Perform root cause evaluation for bolt failures.
CLOSED	03-916-05 Install replacement yokes.
RFO-8	03-916-06 Implement corrective actions to address root causes of weld failures identified in Action Number 03-916-03.

## NRC 86-41 SECTION 3.B.5

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**Core Spray Check Valve & MOV**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-920-01 Evaluate scope and root cause of problem of core spray test check valve internal disc becoming disassociated from the swing lever arm.
CLOSED	03-920-02 Confirm no similar vertical installation.
CLOSED	03-920-03 Install new discs including anti rotation pins in disc of susceptible check valves temporarily until new discs with anti-rotation stops and improved materials are installed.
CLOSED	03-920-04 Verify continuing valve operability (CV1400-35 and 214) through routine system surveillance.
RFO-8	03-920-09 If necessary, implement the physical change and/or configuration necessary to resolve check valves designed for vertical service or reconfigure existing check valves for horizontal use.

## NRC 86-41 SECTION 3.B.6

---

**Heat Damage to Primary Containment Isolation System Cabling**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-930-01 Review operation of circuit involved and evaluate extent of damage.
CLOSED	03-930-02 Replace cable, relocate conduit and repack valve H00100-107.
CLOSED	03-930-03 Reinstall insulation on valve and affected steam lines.
CLOSED	03-930-04 Include in training an emphasis on importance of early identification and correction of material deficiencies.
CLOSED	03-930-05 Assess effectiveness of foregoing actions through continuing program of F&M trend analysis.

## NRC 86-41 SECTION 3.B.7

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**Secondary Containment Damper Failures**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-914-02 Identify and document root cause for secondary containment damper failures.
CLOSED	03-914-03 Develop list of secondary containment dampers affected by root cause.
CLOSED	03-914-04 Replace secondary containment dampers.

## NRC 86-41 SECTION 3.B.8

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**Salt Service Water Piping Corrosion**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-924-01 Establish scope of problem.
CLOSED	03-924-02 Perform root cause study of SSW corrosion in screenhouse and buried piping.
CLOSED	03-924-03 Replace salt water components as necessary per PDC 86-22. Install test material piping piece in screen wash piping.
CLOSED	03-924-04 Investigate integrity of salt water pumps.
CLOSED	03-924-05 Investigate integrity of salt water pipe (including screen wash piping.
RFO-8 - 60	03-924-06 Provide inspection criteria for routine inspections, 2 months before RFO-8.
CLOSED	03-924-07 Issue design change modification to replace/repair degraded components.
RFO-8 -180	03-924-08 Identify improved materials for SSW service 6 months before RFO-8.
CLOSED	03-924-09 Investigate cause of incorrect status report for

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NRC 86-41 SECTION 3.B.8

SSW piping and implement corrective action.

CLOSED

03-924-10

Repair/replace degraded components.

03-924-10  
N2

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NRC 86-41 SECTION 3.B.9

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Potential Corrosion of Primary Containment Isolation Valves

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-925-01 Develop list of Clow Corporation butterfly valves (wafer type) that are used at PNPS.
CLOSED	03-925-02 Examine one of the eight Clow valves and review results with the valve vendor, and respond to ESR 87-590.
CLOSED	03-925-03 Continue normal monitoring of valve operation during LLRT and valve timing tests.

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NRC 86-41 SECTION 3.B.10

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Design Deficiency in Intermediate Range Neutron Monitor Power Supply

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-910-01 Evaluate SIL 445, INPO SER and GE RIC SIL 007 for application to PNPS IRM designs.
CLOSED	03-910-02 Functionally test IRMs.
CLOSED	03-910-03 Increase existing fuse capacity by 100%.
CLOSED	03-910-04 Evaluate SIL 445 recommendation to add voltage sensing relays.



## NRC 86-41 SECTION 3.B.11

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**Residual Heat Removal & Core Spray Pump Inspection Results**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-917-09 Disassemble, inspect and conduct preventive maintenance program on RHR pumps.
CLOSED	03-917-10 Replace RHR pump impeller wear rings.
CLOSED	03-917-11 Visually inspect RHR pump wear rings for cracking.
CLOSED	03-917-12 Conduct metallurgical evaluation of RHR pump impeller wear rings.
CLOSED	03-917-13 Transmit results of RHR and core spray pump inspection to NRC.
CLOSED	03-917-14 Disassemble, inspect and rebuild core spray pumps.

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NRC 86-41 SECTION 3.B.12

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Design Deficiency in the Standby Gas Treatment (SBGT) Systems

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DUE/STATUS

ACTION

CLOSED

03-926-01

Correct SBGT deluge system to preclude inadvertent actuation. Modify SBGT to eliminate remaining design deficiencies and single active failures, including SBGT heaters monitoring for failure.

## NRC 86-41 SECTION 3.B.13

---

**Potential Concrete Wall Issue**

---

DUE/STATUSACTION

CLOSED

03-927-01

Contact the original PNPS contractor for a search of construction records to establish that reinforcing bars were installed in safety related concrete walls in accordance with design drawings.

CLOSED

03-927-02

Use experience in mapping embedded steel reinforcing bars in concrete walls and in drilling for expansion anchor installation to validate design drawings for concrete walls.

## NRC 86-41 SECTION 3.B.14

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Design Deficiency in the HPCI Turbine Exhaust System

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-915-01 Perform root cause analysis of HPCI turbine exhaust water hammer problem.
CLOSED	03-915-02 Implement HPCI exhaust line vacuum breaker upgrade.
CLOSED	03-915-03 Conduct post construction operability testing to verify HPCI turbine exhaust modification effectiveness.

## NRC 86-41 SECTION 3.B.15

---

**Loose Wiring**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-909-06 Evaluate the loose neutral wiring of RPS/PCIS system.
CLOSED	03-909-07 Identify prior similar termination problem events (similar to loose neutral wiring of Action Number 03-909-06).
CLOSED	03-909-08 Analyze termination deficiency events and recommend corrective actions concerning loose wire problems.
CLOSED	03-909-09 Revise Station procedures requiring removal of fuses in performance of tests and specify method of checking fuse tightness.
CLOSED	03-909-10 Investigate applicability of new incipient failure detection techniques to provide early detection of loose wires and termination deficiencies.
CLOSED	03-909-11 Assess the effectiveness of the correction of electrical connector tightness problems. Monitor F&MR reports to determine trends.

## NRC 86-41 SECTION 3.B.16

---

Use of Fuses & Metal Links in Control Circuits

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-913-01 Determine where links are used in safety related motor control circuits.
CLOSED	03-913-02 Perform Engineering evaluation to replace metal links with fuses in Appendix R related motor control circuits.
RS + 270	03-913-03 Correct drawings to reflect fuses/links based on walkdown/Engineering evaluation.
CLOSED	03-913-04 Implement plant design changes (based on Engineering evaluation 86-41-3.B.16-2.1) to replace Appendix R related metal links.
RS + 150	03-913-05 Perform engineering evaluation to replace metal links with fuses in non-safety related motor control circuits.
RS + 270	03-913-06 Implement plant design changes (based on Engineering evaluation 86-41-3.B.16-2.1) to replace non-safety related metal links.
RS + 150	03-913-07 Review non-safety related motor control circuit drawings for metal links that require replacement with fuses.

## NRC 86-41 SECTION 3.B.17

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Seismic Qualification of HGA Relays

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-928-02 Identify HGA relays in use in safety related applications.
CLOSED	03-928-03 Evaluate safety significance of HGA relay installations, and issue design change modification to replace unacceptable relays with qualified substitutes.
CLOSED	03-928-04 Replace unacceptable HGA relays with qualified substitutes.

## NRC 86-41 SECTION 4.A.1

---

**Surveillance Scheduling Weaknesses**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-001-01 Centralize the control of the surveillance data base and future changes within the Technical Section. The Surveillance Test Program will be managed by the Technical Section Systems Group Leader.
CLOSED	04-001-05 Revise the MSTP based on INPO Good Practice TS-410 to address missed surveillance tests, conflicting definitions of once/cycle, inability of the surveillance tracking system to compensate for plant mode or for multiple component testing and clarification of line responsibility.
CLOSED	04-001-06 Identify and suggest corrective actions to problems with surveillance requirements resulting from ambiguous operating cycle related to Technical Specification surveillance requirements.
CLOSED	04-001-07 Improve and simplify MSTP database.
01-DEC-88	04-001-08 Train personnel on the upgraded MSTP program and procedures.
CLOSED	04-001-09 Direct the implementation of procedural changes to address ambiguous operating cycle relative to Technical Specification surveillance requirements identified by surveillance requirement study.



## NRC 86-41 SECTION 4.A.2

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**ECCS Test Adequacy**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-007-01 Revise as necessary ECCS Logic System functional tests and procedures required for various mode switch positions.
CLOSED	04-007-02 Determine adequacy of simulated automatic actuation testing approach.
CLOSED	04-007-03 Revise simulated automatic actuation testing to incorporate the recommendations contained in the evaluation of adequacy report.
CLOSED	04-007-04 Make appropriate ECCS Logic System functional test procedure changes to incorporate simulated automatic actuation testing.

## NRC 86-41 SECTION 4.A.3

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Calibration & Testing of Protective Relays & Breakers

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-005-06 Evaluate protective relay setting and test criteria and provide written criteria to the Maintenance Section.
CLOSED	04-005-07 Revise and update controlled documents for all 4KV circuits and 480V load centers to reflect protective relay/breaker setting and testing.
RS + 60	04-005-08 Revise and update controlled documents for all 480V motor control centers to reflect protective relay/breaker setting and testing.

## NRC 86-41 SECTION 4.A.4

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**Control of Measuring & Test Equipment (M&TE)**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-006-01 Establish central M&TE issue areas for each discipline within maintenance.
CLOSED	04-006-02 Segregate out of calibration M&TE equipment from other M&TE equipment to prevent inadvertent use.
CLOSED	04-006-03 Assign maintenance staff to manage the M&TE issue areas.
CLOSED	04-006-04 Station management spot check M&TE equipment through implementation of the management monitor Watch Program.
CLOSED	04-006-05 Implement a program for assessing the effectiveness of M&TE control using plant management tours emphasizing that function.
CLOSED	04-006-06 Evaluate the effectiveness of M&TE control using a program of M&TE audits.

## NRC 86-41 SECTION 4.A.5

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Local Leak Rate Test (LLRT) Program Administration

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-003-01 Submit a letter to the NRC requesting a clarification of the two year interval set forth in 10CFR50 App. J "Containment Leakage Control".
CLOSED	04-003-02 Two year maximum test interval will be established for each LLRT component and included in master surveillance tracking program until clarification is obtained.
CLOSED	04-003-03 Update MSTP to include all components requiring LLRT and insure two year maximum interval between tests of each component is properly controlled.
CLOSED	04-003-04 Complete LLRT Surveillance Tests for LLRTs that exceed the two year requirement.
COMPLETED	04-003-13 Provide a Technical Specification clarification memo defining once per operating cycle.

## NRC 86-41 SECTION 4.B.1

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**Recurring Local Leak Rate Test Failures**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-003-06 Establish an LLRT Failure Analysis Team as a standing entity to conduct root cause analysis and make recommendations to correct problems and prevent future failures.
CLOSED	04-003-07 Analyze cause of leaking Containment Isolation Valves and develop corrective/preventative maintenance actions.
CLOSED	04-003-08 Revise the LLRT Surveillance Procedures to add a precaution regarding prior approval and documentation of test connection valve packing adjustments.
CLOSED	04-003-09 Initiate a Valve Betterment Program to upgrade valves that have a history of maintenance or spare parts availability problems.
CLOSED	04-003-14 Implement the corrective/preventative maintenance actions developed by the Valve Betterment Team and approved by management to correct the cause of leaking Containment Isolation Valves.

28-Sep-88

NRC 86-41 SECTION 5.A.1

---

Emergency Action Level Review

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	06-005-01 Review EALs against NUREG-0654.
CLOSED	06-005-02 Revise Procedures 5.7.1.1, 5.7.1.2, 5.7.1.3, 5.7.1.4 and 5.7.1.5 to comply with NUREG-0654.
CLOSED	06-005-03 Revise lesson plans as necessary for operator training on EALs.
CLOSED	06-005-04 Conduct operator training on revised EAL procedures.
CLOSED	06-005-05 Revise, print and distribute wall mounted EAL displays.

## NRC 86-41 SECTION 6.A.1

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**Continuing Weaknesses in Following-Up on Problems**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	07-001-02 Establish Security Operations Group.
CLOSED	07-001-03 Add one BECo Security Supervisor per shift.
CLOSED	07-001-04 Establish Administration, Compliance and Technical specialist positions and fill positions with permanent BECo employees.
CLOSED	07-001-05 Establish three new supervisory positions in the plant areas of Main Gate Access, Central Alarm Station and Secondary Alarm Station.
CLOSED	07-001-06 Increase the total security force.
CLOSED	07-001-07 Reduce the supervisor-to-patrolman ratio from 1-20 to 1-10 or less.
CLOSED	07-001-08 Perform root cause analysis of continued weaknesses in follow-up on problems.
CLOSED	07-003-01 Review and update/revise security procedures and instructions.

## NRC 86-41 SECTION 6.A.2

---

Prioritization of Security Maintenance

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	07-002-01 Conduct a system level requirements analysis to identify improvements required in the hardware.
CLOSED	07-002-03 Monitor the material status of the security system. A security staff technical specialist will track the outstanding maintenance items, monitor preventive maintenance and surveillance status and establish the primary focus for major modifications of the security systems.
CLOSED	07-002-04 Prioritize the Security maintenance requests. Establish controls to ensure proper prioritization of future security maintenance requests.
CLOSED	07-002-07 Develop a security equipment preventive maintenance program.



## NRC 86-41 SECTION 6.A.3

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**Termination of the Use of Long Term Compensatory Measures**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	07-002-08 Conduct an evaluation of the continual utilization of compensatory measures.
CLOSED	07-002-09 Increase management's awareness of the use of compensatory measures.
CLOSED	07-002-10 Discuss with the responsible individual any compensatory measures in existence greater than 30 days to ensure resolutions are promptly planned and scheduled.
CLOSED	07-002-11 Inform NRC of new dates on installation plans for security modifications.

## NRC 86-41 SECTION 7.A.1

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**Fire Brigade Training**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-001-01 Centralize Fire Protection function at site through establishment of new group leader position to provide centralized management of the Fire Protection program including direction of resources, budget planning and control and long term planning of the program.
CLOSED	05-005-01 Hire permanent BECO Fire Brigade Instructor.
CLOSED	05-005-02 Revise Nuclear Training Manual requiring mandatory quarterly attendance at fire brigade training.
CLOSED	05-005-03 Establish two drills per member each year, as requirement for fire brigade membership.
CLOSED	05-005-04 Establish and maintain Fire Brigade qualification files.
CLOSED	05-005-05 Provide written scenarios to Fire Brigade Leader for drills.
CLOSED	05-005-06 Conduct critique at end of each drill.
CLOSED	05-005-07 Revise the Fire Brigade Training Drill Procedure to evaluate the performance of the participating brigade members as a team.

28-Sep-88

NRC 86-41 SECTION 7.A.1

CLOSED

05-005-08

Perform QA audit to assure the Fire Brigade  
Training is being implemented in accordance with  
approved procedures.

## NRC 86-41 SECTION 7.A.2

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Inadequate Use of Corrective Action Program

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-006-05 Train appropriate station and engineering personnel in existing corrective action program including use of F&MRs.
CLOSED	05-006-06 Assess effectiveness of Corrective Action Program Training, (specifically F&MR use) using performance indicators.
CLOSED	05-006-07 Establish a Fire Protection Coordinator to assist Barrier Walkdown Team and Watch Engineer in identifying Fire Watch postings for identified deviations.

## NRC 86-41 SECTION 7.A.3

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Prioritization of Fire Protection Maintenance

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-002-01 Inoperative Fire Protection systems requiring compensatory measures are incorporated into the plan-of-the-day.
CLOSED	05-002-02 Inoperative systems requiring compensatory measures receive daily review and are assigned a priority level.
CLOSED	05-002-03 Inoperative systems requiring compensatory measures receive priority treatment in the Plan-of-the-Day meetings.
CLOSED	05-002-04 Establish fire watch compensatory measures action items report to assign ownership of problem solutions.
CLOSED	05-006-01 Use routine submittals from the Fire Protection Group and the Plan-of-the-Day process to establish priority treatment of Fire Protection Maintenance Requirements.
CLOSED	05-006-02 Establish a fire protection system status board in the Control Room area.
CLOSED	05-006-03 Establish a fire protection system Status Board for the Fire Protection Group Leader to assess operability.

28-Sep-88

NRC 86-41 SECTION 7.A.3

CLOSED

05-006-04

Assess program effectiveness in a formalized  
monthly report for upper management.

SEE

## NRC 86-41 SECTION 7.B.1

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**Identification of Fire Barriers & Resolution of Penetration Discrep.**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-004-01 Perform fire barriers walkdown to identify barriers and penetrations.
CLOSED	05-004-02 Establish tracking mechanisms for tracking of new penetrations and for procedure revision.
CLOSED	05-004-03 Prepare specifications for procurement of equipment and material for existing penetration seals.
CLOSED	05-004-04 Resolve (internally) which fire barriers are required by Appendix R, Appendix A and Licensing Commitments. Prepare drawings identifying boundaries to be maintained.
CLOSED	05-004-05 Submit Appendix R Licensing clarification if needed.
COMPLETED	05-004-06 Upgrade non-Appendix R barriers as required.
COMPLETED	05-007-01 Repair degraded seals and install new seals where required in Appendix R Barriers.

## NRC 86-41 SECTION 8.A.1

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**Weakness in Responding to QA Findings**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	08-001-04 Revise the BEQAM to include requirement for Vice-President notification 15 days before expiration of 90-day corrective action limit.
CLOSED	08-001-05 Revise BEQAM to include requirement that unresolved Corrective Action issues are automatically elevated to top management.
CLOSED	08-001-06 Vice-Presidents provide specific guidance to department managers regarding acceptable standards of responsiveness to DR's.
CLOSED	08-001-07 Revise Nuclear Organization Procedure (NOP) to incorporate BEQAM Corrective Action requirements.
CLOSED	08-001-08 Train nuclear organization personnel on the Corrective Action Program and associated NOP.
CLOSED	08-001-09 Revise QA department deficiency report procedure to conform to the BEQAM for the handling of second responses to deficiency reports.
CLOSED	08-001-10 Revise the QAD Deficiency Report procedure description to better define the term "significant".



28-Sep-88

NRC 86-41 SECTION 8.A.1

CLOSED

08-001-11

Assess organizational and corrective action program effectiveness by using key performance indicators and periodic QAD reports.

## NRC 86-41 SECTION 9.A.1

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**Housekeeping Control**

---

<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-901-11 Establish and fill five exempt (supervisory) positions in Station Services Group.
CLOSED	03-901-12 Fill the position of Assistant Station Services Group Leader.
CLOSED	03-901-13 Establish and fill thirty additional non-exempt positions in Station Services.
CLOSED	03-901-14 Authorize ten additional Nuclear Plant Attendant positions in Station Services.
CLOSED	03-901-15 Authorize hiring twenty utility workers in Station Services.
CLOSED	03-901-16 Maintain decontamination and housekeeping services at level of approximately 45 decontamination technicians.
CLOSED	03-904-01 Issue housekeeping, radioactive material control and contamination control policy.
CLOSED	03-904-02 Issue nuclear housekeeping procedure.

28-Sep-88

NRC 86-41 SECTION 9.A.1

CLOSED

03-904-03  
Assign area owners for housekeeping.

CLOSED

03-904-04  
Establish area owners training course in housekeeping policy and in deficiency identification techniques. Conduct training for area owners initially assigned. Course to be repeated as new owners are identified.

CLOSED

03-904-05  
Conduct frequent station tours by senior executive management to increase the awareness and demonstrate the importance of station cleanliness.

CLOSED

03-904-06  
Use nuclear organization morning meeting as a forum for addressing management issues concerning housekeeping deficiencies, areas of concern, and the decontamination plan for the day.

28-Sep-88

NRC 86-41 SECTION 9.B.1

---

Resolution of ISI NDE Indications on Safety Related Piping

---

DUE/STATUS

ACTION

CLOSED

04-004-01

Continue required ISI surface examination of safety related piping and identify unacceptable results in the NCR process.

CLOSED

04-004-02

Perform ISI of pipe supports including expanding the sample of supports to be inspected when service induced problems are found. Identify unacceptable conditions found and verify completion of corrective actions under NCRs.

CLOSED

04-004-03

Perform an overall assessment of the RFO-6 and RFO-7 ISI program results for root cause.

## NRC 86-41 SECTION 10.A.1

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**Technical Specification Changes to Support Plant Startup**

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	09-001-02 Establish a list of criteria for Technical Specification changes which will include clarity of basis, action statement/LCO agreement, precise wording.
CLOSED	09-001-03 Schedule Technical Specification review and upgrade for those Tech Spec amendments required before startup.
CLOSED	09-001-04 Develop schedule for streamlining Technical Specification review process.
CLOSED	09-001-05 Establish a schedule of post-startup Technical Specification changes prior to startup from RFO-7.
CLOSED	09-001-06 Submit Technical Specification change request to eliminate testing of redundant ECCS equipment.

APPENDIX 10 EXECUTIVE SUMMARY

A numerical summary of the status of action items related to known regulatory commitments follows:

- o Total items in Appendix 10:.....522
- o Total items designated required for restart..497
- o Total items directly tied to reactor startup or power ascension.....18
- o Total items with completion required prior to restart.....7
- o Total items "COMPLETED":.....7
- o Total items "CLOSED":.....467

NOTE: Appendix 10 is comprised of actions undertaken to address known regulatory commitments. Appendices 8 and 9 are not separate lists of actions, but are sub-sets of items which are contained in Appendix 10. They are grouped in separate appendices for ease of review by those concerned primarily with actions related to CAL NO 86-10 and Management Meeting 86-41.

APPENDIX 10

RESTART REGULATORY COMMITMENTS

Appendix 10 constitutes a consolidation of restart commitments from known sources. The principal source of the commitment is listed after each action item, although some action items may satisfy commitments made in more than one source document.

Notation in the "DUE/STATUS" are used as follows:

- (DATE) Means that work on the item is not finished and the date indicates when the action is expected to be complete and ready for senior management review.
  
- COMPLETED Means that the cognizant manager considers the results achieved satisfy the action requirements, but that senior management is conducting a review before approving final closure of the item.
  
- CLOSED Means that senior management review has been completed, the actions have received final approval and the documentation has been retained in an item closure file.

Some actions are necessarily keyed to milestones and cannot be assigned a specific date, but are dependent upon the sequence of events surrounding that milestone. The status of such actions are indicated by the following conventions:

- RESTART Means that the action is part of or directly tied to the actual reactor startup evolution or power ascension program.
- RFO 8 Means that the action is scheduled as part of the work to be done while the plant is shut down for the next refueling outage.
- (RS + \_\_\_) Means that the action is scheduled for Restart plus some period of time which will always be expressed in days. EXAMPLE: RS+120 means that the action is scheduled to be completed 120 days after the reactor has been started up. This convention may be used with the other milestones in a similar manner. EXAMPLE: RFO 8-60 means that the action is to be completed sixty days before the scheduled beginning of refueling outage number eight. ILRT+90 means that the item is scheduled for completion ninety days after the completion of the integrated leak rate test.



## OPERATIONS

ISSUE:	01-001 OPERATIONS SECTION STAFFING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-001-01 Hire Operations Section Manager. (SOURCE: NRC MM 86-41)
CLOSED	01-001-02 Hire Chief Chemical Engineer. (SOURCE: NRC MM 86-22)
CLOSED	01-001-03 Assign two Operations Engineers to the Chief Operating Engineer as technical staff assistants. (SOURCE: NRC MM 86-41)
CLOSED	01-001-04 Assign full time Planner to Operations Section. (SOURCE: NRC MM 86-41)
CLOSED	01-001-05 Transfer Shift Technical Advisor function to Operations. (SOURCE: NRC MM 86-41)
CLOSED	01-001-06 Fill six STA positions. (SOURCE: NRC MM 86-41)
CLOSED	01-001-07 Increase authorized complement of operators (total of equipment and reactor operators ) to 45. (SOURCE: NRC MM 86-41)
CLOSED	01-001-08 Man 4 shifts with one additional Senior Reactor Operator (SRO) assigned to each shift for startup. (SOURCE: NRC MM 86-30)

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OPERATIONS

CLOSED

01-001-09

Recruit and train licensed reactor operators to support a six section watchbill by the end of 1987.

(SOURCE: NRC MM 86-41)

CLOSED

01-001-10

Assign an experienced Watch Engineer to assist training.

(SOURCE: NRC MM 86-41)

## OPERATIONS

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ISSUE: 01-002  
CONTROL OF WORKER OVERTIME

---

DUE/STATUSACTION

CLOSED

01-002-01

Establish an overtime policy for all personnel.  
Require the department manager's approval of  
work exceeding 60 hours/week.

(SOURCE: NRC MM 86-41)

CLOSED

01-002-02

Establish operation of a real-time, computer-  
based monitor to improve control of operator  
overtime (including seven-day rolling  
average).

(SOURCE: NRC MM 86-41)

26-Sep-88

OPERATIONS

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ISSUE:	01-003 VALVE AND COMPONENT LABELING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-003-01 Complete labeling of station valves. (SOURCE: BECO LTR 86.091)

## OPERATIONS

ISSUE:	01-004 OPERATIONS PROCEDURES IMPROVEMENTS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-004-01 Revise Emergency Operating Procedures to incorporate Rev. 4 of the BWROG Technical Guidelines. (SOURCE: NRC MM 86-32)
CLOSED	01-004-02 Proceduralize requirements to log RHR high pressure alarms. (SOURCE: NRC EM 86-07)
CLOSED	01-004-03 Identify which instrument root and isolation valves need to be controlled. Establish how these valves will be controlled. (SOURCE: BECO LTR 86.091)
CLOSED	01-004-04 Revise procedure 2.4.143 "Shutdown From Outside Control Room" to include additional considerations addressed in NRC IR 85-30. (SOURCE: NRC IR 87-22)
CLOSED	01-004-05 Correct the errors identified in procedure 5.3.21, "Bypassing of selected interlocks and isolation signals and inhibit of Auto ADS". (SOURCE: NRC IR 85-30)
CLOSED	01-004-06 Revised procedures to include APRM functional and setdown tests. (SOURCE: NRC IR 86-07)
CLOSED	01-004-07 Develop procedures for use of breakers B310 and B410 including how these buses should be transferred. (SOURCE: NRC IR 84-26-01)

## OPERATIONS

- CLOSED 01-004-08  
Resolve the difference in valve positions between operating procedure 2.2.20 and drawings M242 and PSAR drawing Figure 7.4.8.  
(SOURCE: NRC IR 87-21)
- CLOSED 01-004-09  
Revise procedures to establish proper positions of the RHRs isolation injection MO 1001-29A and B and MO 1001 28A and B valves. (Procedure numbers 2.2.19, 2.2.86, 2.2.125, 8.5.2.2, 8.5.2.3, 8.5.2.6 and 8.7.1.4.1).  
(SOURCE: CAL 86-10)
- CLOSED 01-004-10  
Revise alarm response procedure 2.3.2.1 on panel C903-left annunciator B-7 RHR high pressure alarm.  
(SOURCE: CAL 86-10)
- CLOSED 01-004-11  
Revise RHR system surveillance procedure to include results and venting locations.  
(SOURCE: CAL 86-10)
- CLOSED 01-004-12  
Develop RHR system venting program. Include adequate vent location for local high points and a method to control venting frequency by venting results.  
(SOURCE: CAL 86-10)
- CLOSED 01-004-13  
Verify, validate and upgrade all EOP satellite procedures.  
(SOURCE: NRC IR 87-27)
- CLOSED 01-004-15  
Determine the required out-of-service time for the HPCI auxiliary oil system as a prerequisite for the HPCI cold start test.  
(SOURCE: NRC EC 87-51)

26-Sep-88

OPERATIONS

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ISSUE:	01-005 IMPROVE ATTENTION TO DETAIL IN REGULATORY MATTERS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-005-01 Review each recent NRC violation involving lack of attention to detail and analyze for common cause. Develop corrective action plans. (SOURCE: SALP 86-99)





26-Sep-88

OPERATIONS

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ISSUE:	01-007 IMPROVE LOG REVIEWS AND POST TRIP REVIEWS
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-007-01 Retrain technical staff personnel to conduct thorough post trip reviews to determine root cause, insuring that all such reviews are documented and that appropriate followup action is initiated. <p style="text-align: right;">(SOURCE: SALP 86-99)</p>

26-Sep-88

OPERATIONS

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ISSUE: 01-008  
IMPROVE WATCHSTANDER CONTROL OF HIGH RADIATION  
AREA ACCESS

---

DUE/STATUS

ACTION

CLOSED

01-008-01  
Train all personnel who handle High Radiation  
Area keys on the importance of maintaining  
control of keys to high radiation areas while  
insuring that controlled access for maintenance  
and surveillance inspections is allowed when  
appropriate without unnecessary delays.  
(SOURCE: SALP 86-99)

## OPERATIONS

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ISSUE: 01-009  
POWER ASCENSION PROGRAM

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-009-01 Develop performance standards and evaluation guidelines to be used in the Management Oversight and Assessment Process. (SOURCE: BECO LTR 87.163)
CLOSED	01-009-02 Develop guidelines for follow-up and feedback of lessons learned from performance assessment. (SOURCE: BECO LTR 87.163)
CLOSED	01-009-03 Provide training to the oversight and assessment team and peer evaluators on the standards and guidelines for follow-up, and feedback of performance. (SOURCE: BECO LTR 87.163)
RESTART	01-009-04 Line Managers conduct performance evaluations and assessments at each of the designated assessment points. (SOURCE: BECO LTR 87.163)
CLOSED	01-009-07 Establish the Oversight and Assessment Team to consist of: Senior V.P.- Nuclear V.P. Nuclear Engineering Executive Assistant to the Senior V.P.- Nuclear Director of Planning and Restart Nuclear Engineering Manager QA Manager (SOURCE: BECO LTR 87.163)
CLOSED	01-009-08 Identify the prerequisites for criticality and the individual responsible for each prerequisite. (SOURCE: BECO LTR 87.163)

27-Sep-88

OPERATIONS

(SOURCE: BECO LTR 87.163)

06-OCT-88

01-009-09

Present the operating condition checklist number 6 to the Operations Review Committee for approval.

(SOURCE: BECO LTR 87.163)

CLOSED

01-009-12

Evaluate the aux. boiler HPCI and RCIC test results, if satisfactory completed delete tests from the power ascension sequence.

(SOURCE: BECO LTR 87.163)

14-OCT-88

01-009-13

Responsible individuals and their line management will certify that the restart prerequisites are closed.

(SOURCE: BECO LTR 87.163)

CLOSED

01-009-18

Develop Nuclear Operations Department TP 87-114 containing a sequence of Restart tests required for startup from RFO-7, and a Power Ascension Test checklist.

(SOURCE: BECO LTR 87.163)

RESTART

01-009-20

Perform an independent review of test procedures used for the Power Ascension program.

(SOURCE: BECO LTR 87.163)

RESTART

01-009-21

Operations Section Manager approve the daily testing and Power Ascension schedules.

(SOURCE: BECO LTR 87.163)

RESTART

01-009-22

Plant Manager approve the Plan-of-the-Day and coordinate the Power Ascension Testing with the testing required by the Master Surveillance Tracking Program.

(SOURCE: BECO LTR 87.163)

## OPERATIONS

CLOSED 01-009-23  
Establish a four shift operations rotation during the Power Ascension Program.  
(SOURCE: BECO LTR 87.163)

RS +150 01-009-24  
Establish a six section watchbill for operators after power ascension.  
(SOURCE: BECO LTR 87.163)

RESTART 01-009-25  
Establish 24-hour Shift Maintenance Representatives coverage during power ascension.  
(SOURCE: BECO LTR 87.163)

RESTART 01-009-26  
During initial reactor heatup phase, test the Main Steam Isolation Valves to verify that they will open with normal differential pressure across the valves.  
(SOURCE: CAL 86-10)

RESTART 01-009-27  
Monitor the low pressure portions of the RMK system for in-leakage from the reactor, beginning with initial reactor heatup and continuing throughout the power ascension.  
(SOURCE: BECO LTR 87.163)

RESTART 01-009-28  
Perform a special test per procedure TP 86-81 to confirm that the mainsteam isolation valves remain open during reactor depressurization after mode switch is shifted from "run" to "startup".  
(SOURCE: BECO LTR 87.163)

RESTART 01-009-29  
During reactor power level increase to approximately 75%, perform the Turbine Valve Tests and the MSIV Tests.  
(SOURCE: BECO LTR 87.163)

RESTART 01-009-30  
Each Operating License candidate holding a provisional license is required to perform 5

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OPERATIONS

significant control manipulations and log one month experience with the plant operating at greater than 20% power. (One month is computed by serving 20 shifts of 8 hours each.)

(SOURCE: NRC IR 87-25)

RESTART

01-009-34

Following recovery from shutdown, move the scram setpoint to the 70% power level and gradually increase the reactor power level to approximately 50%.

(SOURCE: BECO LTR 87.163)

RESTART

01-009-37

Set the scram setpoint at 95% power level for power increase to approximately 75% power.

(SOURCE: BECO LTR 87.163)

CLOSED

01-009-44

Develop a master schedule of the Oversight and Assessment Program for the Power Ascension Program.

(SOURCE: NRC EM 87-51)

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OPERATIONS

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ISSUE:	01-010 DRYWELL SUMP TAGOUT
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-010-01 Evaluate the drywell sump tagout problem. (SOURCE: NRC EC 87-45)

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OPERATIONS

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ISSUE: 01-011  
OPERATION OF VITAL SYSTEMS REQUIRED DURING ALL  
PLANT CONDITIONS.

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	01-011-03 Determine root cause of fuse failures in the analog trip system. (SOURCE: NRC IR 87-53)
CLOSED	01-011-07 Inspect the "B" diesel generator prelube pump filter & strainer. (SOURCE: NRC EC 87-53-03)
CLOSED	01-011-08 Investigate the adequacy of the Maintenance procedure for repair of diesel generator fuel injectors. (SOURCE: EC 87-53-04)
05-OCT-88	01-011-14 Install a third diesel generator as backup for use during Station "Blackout". (SOURCE: NED 87-1100, 1)
CLOSED	01-011-15 Install backup instrument air compressor. (SOURCE: NRC IR 87-53)
CLOSED	01-011-16 Install additional instrumentation to analyze switchyard transients. (SOURCE: NRC EC 87-53-05)



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OPERATIONS

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ISSUE:	01-013 RHR vent valves.
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<u>DATE/STATUS</u>	<u>ACTION</u>
05-OCT-88	01-013-01 Provide means for operator access to vent valves in the RHR system or justification for delay to Cycle 8 refueling outage. (SOURCE: NRC IR 88-03-05)

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ISSUE: 02-001  
RADIATION PROTECTION ORGANIZATION AND STAFFING  
IMPROVEMENTS

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<u>DUE/STATUS</u>	<u>ACTION</u>
RS + 180	02-001-01 Develop a Radwaste Group. (SOURCE: NRC IR 86-19-02)
CLOSED	02-001-02 Develop and document functional responsibility descriptions for all Radiological Protection supervisors. (SOURCE: NRC IR 86-19-02)
CLOSED	02-001-03 Assign Health Physics Coordinators to the maintenance section for groups which have work loads which require substantial numbers of Radiological Work Permits. (SOURCE: NRC MM 86-41)

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RADIOLOGICAL

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ISSUE: 02-002  
PERSONNEL QUALIFICATIONS AND TRAINING  
IMPROVEMENTS

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DUE/STATUS

ACTION

CLOSED

02-002-01  
Relocate posting board at main control point to  
a more conspicuous location.  
(SOURCE: NRC IR 86-19-03)

CLOSED

02-002-02  
Revise the Training Manual to incorporate  
qualification requirements for Radiological  
Protection personnel which are in agreement  
with the current job descriptions.  
(SOURCE: NRC IR 86-19-03)

CLOSED

02-002-03  
Revise the Training Manual to resolve the  
discrepancies between the qualification  
requirements for Radiological Protection  
personnel and the requirements of 10 CFR 18.1.  
(SOURCE: NRC IR 86-19-03)

## RADIOLOGICAL

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ISSUE: 02-003  
 IMPROVE THE RELATIONSHIP AND COMMUNICATIONS  
 BETWEEN RADIOLOGICAL PROTECTION SECTION AND  
 OTHER STATION SECTIONS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-003-01 Assign radiological goals for each station section including tracking requirements and performance parameters. (SOURCE: SALP 86-99)
CLOSED	02-003-02 Recognize individual achievement by an ALARA Employee of the Month award. (SOURCE: SALP 86-99)
CLOSED	02-003-03 Include discussions of radiological protection groups interaction with other plant sections in the nuclear organizations daily and weekly meeting. (SOURCE: SALP 86-99)
CLOSED	02-003-04 Section Managers include in plant tours observations of communications between the Radiological Protection Section and other station sections. (SOURCE: NRC MM 86-41)

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ISSUE: 02-004  
DECONTAMINATION

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DUE/STATUS

ACTION

CLOSED

02-004-01  
Decontaminate areas in the Reactor Building quadrant rooms with safety related equipment so that these rooms can be toured without protective clothing.

(SOURCE: NRC MM 86-30)

CLOSED

02-004-02  
Hydroblast floor drains to reduce exposure by 151 Manrem and hydroblast CRD headers to reduce exposure by 60 Manrem.

(SOURCE: NRC MM 86-41)

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ISSUE: 02-005  
HP COUNTING LABORATORY EQUIPMENT AND IMPROVE  
PRACTICES

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-005-01 Conduct supervisor reviews of counting laboratory data, particularly QA daily data. (SOURCE: NRC IR 86-19-12)
CLOSED	02-005-02 Evaluate need for additional counting room equipment. (SOURCE: NRC IR 86-19-12)
CLOSED	02-005-03 Develop technical documentation or incorporate into procedures the technical basis for QC chart limits and LLD & MDA calculations. (SOURCE: NRC IR 86-19-12)

## RADIOLOGICAL

ISSUE:	02-006 IMPROVE RADIOLOGICAL PROTECTION PROCEDURES
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-006-01 Revise procedures for Alpha counting of smears and similar procedures to include self-absorption factor. (SOURCE: NRC IR 86-19)
COMPLETED	02-006-02 Ensure that procedure 6.9-197 includes all necessary reviews required by Generic Letter 81-38. (SOURCE: NRC IR 86-19)
RS + 90	02-006-03 Revise the Contaminated Material Control procedure to establish curie limits for temporary and permanent radioactive material storage areas. (SOURCE: NRC IR 86-19)
CLOSED	02-006-04 Develop and implement a procedure for decontamination, storage and issue of contaminated tools. (SOURCE: NRC IR 86-19)
CLOSED	02-006-05 Revise procedure 6.2-161 to incorporate appropriate guide and standards into procedural reference for in-vitro monitoring. (SOURCE: NRC IR 86-19)
CLOSED	02-006-06 Revise In-Vitro procedure to include specific instructions on obtaining fecal samples and appropriate analysis for beta emitters. (SOURCE: NRC IR 86-19)
CLOSED	02-006-07 Revise Internal Exposure Monitoring procedure to evaluate Whole Body Count results, respiratory protection adequacy, air sample and

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contamination survey results to ensure no  
undetected uptakes have occurred.

(SOURCE: NRC IR 86-19)



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ISSUE: 02-007  
IMPROVEMENTS IN THE ALARA PROGRAM

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-007-01 Develop ALARA program procedures. (SOURCE: NRC MM 86-41)
CLOSED	02-007-02 Establish radiation exposure goals and track and report results. (SOURCE: NRC MM 86-41)
CLOSED	02-007-03 Revise annual performance evaluation form to include ALARA performance. (SOURCE: NRC MM 86-41)
CLOSED	02-007-04 Determine that the radiation exposure goals are effective. (SOURCE: NRC MM 86-41)
CLOSED	02-007-05 Implement a continuing program to identify better methods (including the purchase of additional equipment) to minimize, control and remove contamination. (SOURCE: NRC MM 86-41)
CLOSED	02-007-06 Monitor effectiveness of purchased devices by tracking the number of times such devices are used and its effectiveness in controlling the spread of contamination. Use this effectiveness monitoring to identify better methods, as needed. (SOURCE: NRC MM 86-41)
CLOSED	02-007-07 Establish Nuclear Plant Manager as chairman of ALARA committee. (SOURCE: NRC MM 86-41)

APPENDIX 10

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CLOSED

02-007-08

Monitor effectiveness of the ALARA program by closely tracking collective station exposure and by assessing the effectiveness of the ALARA committee and its recommendations.

(SOURCE: NRC MM 86-41)

CLOSED

02-007-09

Establish an ALARA Employee of the Month award for achievements in exposure reduction.

(SOURCE: NRC MM 86-41)

CLOSED

02-007-10

Complete training on ALARA program and fully implement the program.

(SOURCE: NRC MM 86-41)

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ISSUE: 02-008  
IMPROVEMENTS IN THE RADIOLOGICAL OCCURRENCE  
REPORT (ROR) PROCEDURE

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-008-01 Upgrade Radiological Occurrence Report (ROR) procedure to improve categorization of ROR's by severity level. (SOURCE: NRC MM 86-41)
CLOSED	02-008-02 Assign a full time ROR coordinator. (SOURCE: NRC MM 86-41)
CLOSED	02-008-03 Assign where possible ROR's to Group Leader level or above. (SOURCE: NRC MM 86-41)
CLOSED	02-008-04 Establish a computerized ROR tracking system. (SOURCE: NRC MM 86-41)

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ISSUE: 02-009  
IMPROVE THE RADIOLOGICAL PERFORMANCE OF PILGRIM  
STATION PERSONNEL

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-009-01 Involve Line Managers in routine reinforcement of radiological requirements. (SOURCE: NRC MM 86-41)
CLOSED	02-009-02 Reassign responsibility for implementing disciplinary action for radiation protection violations from Radiological Section Manager to individual supervisors. (SOURCE: NRC MM 86-41)
CLOSED	02-009-03 Revise GET program to emphasize that the basis for radiological protection is to ensure the health and safety of individual workers. (SOURCE: NRC MM 86-41)
CLOSED	02-009-04 Conduct formal training programs in contamination control techniques for operations, maintenance and radiological supervisors, workers and technicians. (SOURCE: NRC MM 86-41)

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ISSUE: 02-010  
IMPROVEMENTS IN THE ENVIRONMENTAL TLD SYSTEM

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-010-01 Replace existing environmental TLD system by Panasonic Environmental TLD System. (SOURCE: NRC MM 86-41)
CLOSED	02-010-02 Implement procedures to send Panasonic Environmental TLDs to an independent laboratory for irradiation on a quarterly basis. (SOURCE: NRC MM 86-41)
CLOSED	02-010-03 Continue to participate in the International Environmental Dosimeter Intercomparison Project. (SOURCE: NRC MM 86-41)
CLOSED	02-010-04 Develop a QA procedure for the new Environmental TLD System program. (SOURCE: NRC MM 86-41)
CLOSED	02-010-05 Evaluate Environmental TLD program effectiveness using TLD intercomparison studies. (SOURCE: NRC MM 86-41)

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ISSUE:	02-012 DISPOSITION OF THE RADIOLOGICAL SECTION BACKLOG
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	02-012-01 Identify and dispose of Radiological Section backlog to a manageable level. (SOURCE: NRC MM 86-41)

## MAINTENANCE

ISSUE:	03-901 MAINTENANCE SECTION STAFFING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-901-01 Fill existing supervisory vacancies. (SOURCE: NRC MM 86-41)
CLOSED	03-901-02 Computerize administration of overtime control. (SOURCE: NRC MM 86-41)
CLOSED	03-901-03 Establish and staff a Procurement Support Group (PSG) to facilitate processing of procurement documents. (SOURCE: NRC MM 86-41)
CLOSED	03-901-04 Develop a centralized planning and scheduling function within the Maintenance Group to directly support the individual maintenance disciplines. (SOURCE: NRC MM 86-41)
CLOSED	03-901-05 Hire three additional maintenance staff engineers. (SOURCE: NRC MM 86-41)
CLOSED	03-901-06 Hire one HVAC supervisor. (SOURCE: NRC MM 86-41)
CLOSED	03-901-07 Establish apprenticeship program in the three maintenance disciplines with twelve apprentice positions approved. (SOURCE: NRC MM 86-41)
CLOSED	03-901-08 Accelerate the process of filling open Maintenance supervisory positions. (SOURCE: NRC MM 86-41)

## MAINTENANCE

- CLOSED 03-901-09  
Evaluate long-term Maintenance Section staffing plan.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-10  
Establish management tours to assess the effectiveness of supervisors in enforcing high standards.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-11  
Establish and fill five exempt (supervisory) positions in Station Services Group.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-12  
Fill the position of Assistant Station Services Group Leader.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-13  
Establish and fill thirty additional non-exempt positions in Station Services.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-14  
Authorize ten additional Nuclear Plant Attendant positions in Station Services.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-15  
Authorize hiring twenty utility workers in Station Services.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-16  
Maintain decontamination and housekeeping services at level of approximately 45 decontamination technicians.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-901-17  
Improve the rate of reducing outstanding maintenance backlog by increasing contractor work force (including engineers, supervisors and craft).



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(SOURCE: NRC MM 86-41)

CLOSED

03-901-18

Strengthen BECo oversight of maintenance contractors by ensuring First Line Supervisors observe the work in the field under their responsibility on a daily basis.

(SOURCE: SALP 86-99)

CLOSED

03-901-19

Replace the contractor personnel filling the positions of senior Mechanical Engineer and I&C Supervisor with permanent Boston Edison employees.

(SOURCE: BECO LTR 87.130)

CLOSED

03-901-20

Establish a Maintenance Apprentice Training Program with sufficient input to produce an average graduating class of about two electricians, three nuclear control technicians and four mechanics.

(SOURCE: BECO LTR 87.130)

## MAINTENANCE

ISSUE:	03-902 CENTRALIZED CONTROL OF MAINTENANCE PLANNING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-902-01 Establish maintenance planning group with full time planners. (SOURCE: NRC MM 86-30)
CLOSED	03-902-02 Centralize maintenance planning and scheduling activities. (SOURCE: NRC MM 86-41)
CLOSED	03-902-03 Develop weekly planning/scheduling effort for routine maintenance activities. (SOURCE: NRC MM 86-41)
CLOSED	03-902-04 Correct the data contained in the administrative control system for MRs. (SOURCE: NRC MM 86-41)
CLOSED	03-902-05 Coordinate maintenance activities between the various disciplines through weekly planning and scheduling meeting. (SOURCE: NRC MM 86-41)
CLOSED	03-902-06 Implement new maintenance manual to provide guidance for conduct of planning/scheduling effort. (SOURCE: NRC MM 86-41)
CLOSED	03-902-07 Restructure maintenance group to provide increased management attention to both outage-related maintenance and backlog. (SOURCE: NRC MM 86-41)
RS + 60	03-902-08 Prepare and issue the Long Term Plan (schedule) for accomplishing plant modifications. The LTP

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is to clearly show those portions of SEP mods  
and other design changes which have been  
deffered for accomplishment after RFO-7.

(SOURCE: SALP 86-99)

## MAINTENANCE

ISSUE:	03-903 COMMUNICATION BETWEEN MAINTENANCE AND OTHER SITE ORGANIZATIONS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-903-01 Discuss maintenance interaction with other plant sections at nuclear organization morning meeting and at weekly staff meetings. (SOURCE: SALP 86-99)
CLOSED	03-903-02 Establish a method to prioritize MRs and inform affected departments of results. (SOURCE: NRC MM 86-41)
CLOSED	03-903-03 Establish a plan-of-the-day work prioritization which includes all disciplines related to the approved schedule. (SOURCE: NRC MM 86-41)
CLOSED	03-903-04 Attend industry conference on maintenance/operation interface. (SOURCE: NRC MM 86-41)
CLOSED	03-903-05 Establish an MR feedback system to ensure that the cognizant organization is informed if the MR will not be worked as planned. (SOURCE: NRC MM 86-41)

## MAINTENANCE

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ISSUE:	03-904 HOUSEKEEPING CONTROL
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-904-01 Issue housekeeping, radioactive material control and contamination control policy. (SOURCE: NRC MM 86-41)
CLOSED	03-904-02 Issue nuclear housekeeping procedure. (SOURCE: NRC MM 86-41)
CLOSED	03-904-03 Assign area owners for housekeeping. (SOURCE: NRC MM 86-41)
CLOSED	03-904-04 Establish area owners training course in housekeeping policy and in deficiency identification techniques. Conduct training for area owners initially assigned. Course to be repeated as new owners are identified. (SOURCE: NRC MM 86-41)
CLOSED	03-904-05 Conduct frequent station tours by senior executive management to increase the awareness and demonstrate the importance of station cleanliness. (SOURCE: NRC MM 86-41)
CLOSED	03-904-06 Use nuclear organization morning meeting as a forum for addressing management issues concerning housekeeping deficiencies, areas of concern, and the decontamination plan for the day. (SOURCE: NRC MM 86-41)

## MAINTENANCE

ISSUE:	03-905 PREVENTIVE MAINTENANCE PROGRAM IMPROVEMENTS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-905-01 Use performance indicators to determine the effectiveness of program improvements in the area of preventive maintenance. (SOURCE: SALP 86-99)
CLOSED	03-905-02 Update preventive maintenance tracking list. (SOURCE: NRC MM 86-41)
CLOSED	03-905-03 Have maintenance planners schedule PM activities and incorporate reviews and update status. (SOURCE: NRC MM 86-41)
CLOSED	03-905-04 The Planning Group shall issue variance reports on PM activities in accordance with the procedure. (SOURCE: NRC MM 86-41)
CLOSED	03-905-05 Clarify procedural requirements and increase effectiveness of tracking list by revising PM tracking procedure; increase management attention by notifying responsible group leader of failure to perform a PM. Elevate to Section Manager attention upon third consecutive non-performance. (SOURCE: NRC MM 86-41)
CLOSED	03-905-06 Trend PM performance for each discipline in the maintenance group. (SOURCE: NRC MM 86-41)
CLOSED	03-905-07 Develop and issue PM procedures for Limitorque motor operated valves. (SOURCE: NRC MM 86-41)

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03-905-08

Evaluate the failure analysis reports of motor operated valve failures to determine the adequacy of the motor operated valve PM program.

(SOURCE: NRC MM 86-41)

CLOSED

03-905-09

Resolve the 125V and 250V DC battery preventive maintenance issues.

(SOURCE: NRC IR 87-09)

CLOSED

03-905-10

Provide the NRC plans and schedules for initiating a baseline PM program for safety related 480 VAC molded case breakers.

(SOURCE: NRC IR 86-06)

CLOSED

03-905-11

Develop and issue PM requirements for Limitorque motor operated valves.

(SOURCE: NRC MM 86-41)

CLOSED

03-905-12

Conduct maintenance, testing and acceptance of safety-related 480 VAC molded case circuit breakers using Procedure 8.Q.3-3 prior to startup.

(SOURCE: NRC IR 87-46)

## MAINTENANCE

ISSUE:	03-906 MAINTENANCE MONITORING AND TRENDING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-906-01 The Station Manager will utilize the key indicators to measure maintenance performance. Goals will be established and progress tracked monthly. (SOURCE: SALP 86-99)
CLOSED	03-906-02 Improve Maintenance Group performance trending system and include ways to identify and correct areas of weakness. (SOURCE: NRC MM 86-41)
CLOSED	03-906-03 Review F&MR trend analysis to determine whether MCARs would be applicable/appropriate to address root cause of cracked welds and loose bolts in low pressure ECCS systems. (SOURCE: NRC MM 86-41)
CLOSED	03-906-04 Implement corrective action training for NED personnel. (SOURCE: NRC MM 86-41)



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ISSUE: 03-908  
GENERAL TESTING ISSUE

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DUE/STATUS

ACTION

CLOSED

03-908-01  
Perform back-up scram valve testing each  
refueling outage.  
(SOURCE: NRC IR 86-21)

CLOSED

03-908-02  
Test PASS piping that was not replaced as a  
result of 1984 investigation for IGSCC.  
(SOURCE: NRC IR 87-01)

CLOSED

03-908-03  
Complete hydro testing schedule per long term  
program integration.  
(SOURCE: BECO LTR 86.148)

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ISSUE:	03-909 I & C:MSIV/MODE SWITCH PROBLEMS/LOOSE WIRES AND FUSE IN SAFETY RELATED SYSTEMS
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-909-01 Install GETARs to monitor primary containment isolation system during comprehensive testing during next startup. (SOURCE: LER 86-010)
CLOSED	03-909-02 Reassemble, inspect and rebuild MSIVs. (SOURCE: CAL 86-10)
CLOSED	03-909-04 Replace Mode Switch with G.E. recommended model. (SOURCE: CAL 86-10)
CLOSED	03-909-05 Close out the following MRs to correct various circuit problems: 86-45-189, 86-45-190, 86-45- 191, 86-45-192, 86-45-193, 86-300, 86-301, 86- 302. (SOURCE: CAL 86-10)
CLOSED	03-909-06 Evaluate the loose neutral wiring of RPS/PCIS system. (SOURCE: NRC MM 86-41)
CLOSED	03-909-07 Identify prior similar termination problem events (similar to loose neutral wiring of Action Number 03-909-06). (SOURCE: NRC MM 86-41)
CLOSED	03-909-08 Analyze termination deficiency events and recommend corrective actions concerning loose wire problems. (SOURCE: NRC MM 86-41)

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CLOSED

03-909-09

Revise Station procedures requiring removal of fuses in performance of tests and specify method of checking fuse tightness.

(SOURCE: NRC MM 86-41)

CLOSED

03-909-10

Investigate applicability of new incipient failure detection techniques to provide early detection of loose wires and termination deficiencies.

(SOURCE: NRC MM 86-41)

CLOSED

03-909-11

Assess the effectiveness of the correction of electrical connector tightness problems. Monitor F&MR reports to determine trends.

(SOURCE: NRC MM 86-41)

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ISSUE:	03-910 I&C IRM NEUTRON MONITOR PROBLEMS
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-910-01 Evaluate SIL 445, INPO SER and GE RIC SIL 007 for application to PNPS IRM designs. (SOURCE: NRC MM 86-41)
CLOSED	03-910-02 Functionally test IRMs. (SOURCE: NRC MM 86-41)
CLOSED	03-910-03 Increase existing fuse capacity by 100%. (SOURCE: NRC MM 86-41)
CLOSED	03-910-04 Evaluate SIL 445 recommendation to add voltage sensing relays. (SOURCE: NRC MM 86-41)

## MAINTENANCE

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ISSUE: 03-911  
I & C REACTOR WATER LEVEL AND TRIP SYSTEM

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-911-01 Install an analog trip system to reduce the probability of inadvertent scrams during surveillance testing. (SOURCE: LER 85-006)
CLOSED	03-911-02 Reroute reference legs in accordance with BWROG/GE recommended mod to eliminate "flashing" and resultant inaccurate water level indication. (SOURCE: BECO LTR 85.099)
CLOSED	03-911-03 Review instrument setpoints to ensure initiation of related safety system trips under abnormal drywell conditions. (SOURCE: BECO LTR 85.099)
CLOSED	03-911-04 Develop and issue a PDC to address the establishment of a common zero reference for reactor water level measurement. (SOURCE: BECO LTR 82.046)

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ISSUE:	03-912 I & C LOGIC SYSTEM FUNCTIONAL TEST WEAKNESSES
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-912-01 Resolve ECCS Logic System Functional Testing adequacy. (SOURCE: NRC IR 86-21)
CLOSED	03-912-02 Revise HPCI procedures for HPCI logic system functional tests. (SOURCE: NRC IR 86-21)

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MAINTENANCE

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ISSUE: 03-913  
ELECTRICAL USE OF FUSES AND METAL LINKS IN  
CONTROL CIRCUITRY

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-913-01 Determine where links are used in safety related motor control circuits. (SOURCE: NRC MM 86-41)
CLOSED	03-913-02 Perform Engineering evaluation to replace metal links with fuses in Appendix R related motor control circuits. (SOURCE: NRC MM 86-41)
RS + 270	03-913-03 Correct drawings to reflect fuses/links based on walkdown/Engineering evaluation. (SOURCE: NRC MM 86-41)
CLOSED	03-913-04 Implement plant design changes (based on Engineering evaluation 86-41-3.B.16-2.1) to replace Appendix R related metal links. (SOURCE: NRC MM 86-41)
RS + 150	03-913-05 Perform engineering evaluation to replace metal links with fuses in non-safety related motor control circuits. (SOURCE: NRC MM 86-41)
RS + 270	03-913-06 Implement plant design changes (based on Engineering evaluation 86-41-3.B.16-2.1) to replace non-safety related metal links. (SOURCE: NRC MM 86-41)
RS + 150	03-913-07 Review non-safety related motor control circuit drawings for metal links that require replacement with fuses. (SOURCE: NRC MM 86-41)

APPENDIX 10

## MAINTENANCE

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ISSUE: 03-914  
MECHANICAL SECONDARY CONTAINMENT DAMPERS AND  
SEALS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-914-01 Identify and replace defective rubber boots that seal secondary containment penetrations for feedwater lines. (SOURCE: NRC IR 86-07)
CLOSED	03-914-02 Identify and document root cause for secondary containment damper failures. (SOURCE: NRC MM 86-41)
CLOSED	03-914-03 Develop list of secondary containment dampers affected by root cause. (SOURCE: NRC MM 86-41)
CLOSED	03-914-04 Replace secondary containment dampers. (SOURCE: NRC MM 86-41)



## MAINTENANCE

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ISSUE: 03-915  
MECHANICAL - HPCI TURBINE EXHAUST SYSTEM  
DEFICIENCIES

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-915-01 Perform root cause analysis of HPCI turbine exhaust water hammer problem. (SOURCE: NRC MM 86-41)
CLOSED	03-915-02 Implement HPCI exhaust line vacuum breaker upgrade. (SOURCE: NRC MM 86-41)
CLOSED	03-915-03 Conduct post construction operability testing to verify HPCI turbine exhaust modification effectiveness. (SOURCE: NRC MM 86-41)

## MAINTENANCE

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ISSUE: 03-916  
MECHANICAL - CRACKED WELDS & LOOSE BOLTS IN  
ECCS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-916-01 Replace the sleeve at reactor vessel N-16A during RFO-7 because of cracked weld identified on reactor water level instrument line. (SOURCE: LER 86-006-00)
CLOSED	03-916-02 Review previous action taken on failure analysis for cracked welds and loose bolts in ECCS. (SOURCE: NRC MM 86-41)
CLOSED	03-916-03 Investigate root cause of weld failures. (SOURCE: NRC MM 86-41)
CLOSED	03-916-04 Perform root cause evaluation for bolt failures. (SOURCE: NRC MM 86-41)
CLOSED	03-916-05 Install replacement yokes. (SOURCE: NRC MM 86-41)
RFO-8	03-916-06 Implement corrective actions to address root causes of weld failures identified in Action Number 03-916-03. (SOURCE: NRC MM 86-41)

## MAINTENANCE

<u>DUE/STATUS</u>	<u>ACTION</u>
ISSUE:	03-917 MECHANICAL RHR & CORE SPRAY PROBLEMS
CLOSED	03-917-01 Install additional pressure gauges in RHR system per PDC 86-30. (SOURCE: CAL 86-10)
CLOSED	03-917-02 Provide means for system temperature monitoring. (SOURCE: CAL 86-10)
CLOSED	03-917-03 Remove pressure gauge installed on RHR injection line to allow for a vent path. (SOURCE: CAL 86-10)
CLOSED	03-917-04 Remove valve disk and evaluate or restore to confirm the wear rate. (SOURCE: CAL 86-10)
CLOSED	03-917-05 Local venting in RHR to be performed once a week for four weeks per TP 86-84. (SOURCE: CAL 86-10)
CLOSED	03-917-06 Retest the boundary valves of the RHR vessel injection line for Appendix J criteria and for high pressure water leakage. Conduct engineering evaluation of results. (SOURCE: CAL 86-10)
CLOSED	03-917-07 Replace RHR injection gate valve 29B, per PDC 85-75. (SOURCE: NRC MM 86-22)
CLOSED	03-917-08 Disassemble and inspect RHR B loop valve 1001-36B next refuel outage. (SOURCE: NRC IR 86-07)

## MAINTENANCE

CLOSED 03-917-09  
Disassemble, inspect and conduct preventive maintenance program on RHR pumps.  
(SOURCE: NRC MM 86-41)

CLOSED 03-917-10  
Replace RHR pump impeller wear rings.  
(SOURCE: NRC MM 86-41)

CLOSED 03-917-11  
Visually inspect RHR pump wear rings for cracking.  
(SOURCE: NRC MM 86-41)

CLOSED 03-917-12  
Conduct metallurgical evaluation of RHR pump impeller wear rings.  
(SOURCE: NRC MM 86-41)

CLOSED 03-917-13  
Transmit results of RHR and core spray pump inspection to NRC.  
(SOURCE: NRC MM 86-41)

CLOSED 03-917-14  
Disassemble, inspect and rebuild core spray pumps.  
(SOURCE: NRC MM 86-41)

CLOSED 03-917-15  
Schedule accomplishment of resultant design modifications on check valve position indicators, via the long term program.  
(SOURCE: CAL 86-10)

CLOSED 03-917-16  
After trial use as a temporary procedure evaluate and change as required TP 86-85 and incorporate it as a part of the RHR system operating procedure.  
(SOURCE: CAL 86-10)

RFO-8 03-917-17  
Evaluate RHR injection gate valve 29A for replacement.  
(SOURCE: NRC MM 86-22)

27-Sep-88

MAINTENANCE

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ISSUE: 03-918  
MECHANICAL RHR/DRYWELL SPRAY CROSS-CONNECT

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DUE/STATUS

ACTION

05-OCT-88

03-918-01

Fire water system will be interconnected to RHR system to provide additional source of water for drywell spray (installation).

(SOURCE: NRC MM 86-32)

CLOSED

03-918-02

Fire water system will be interconnected to RHR system to provide additional source of water for drywell spray (design).

(SOURCE: NRC MM 86-32)

26-Sep-88

MAINTENANCE

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ISSUE:	03-919 MECHANICAL MINIMUM FLOW PROTECTION FOR RHR PUMPS
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-919-01 Revise safety evaluation for existing PDC 86-95 to establish minimum flow design basis, revise PDC 86-95 accordingly. (SOURCE: NRC MM 86-41)
CLOSED	03-919-02 Correctly install orifice plate in RHR minflow line. (SOURCE: NRC MM 86-41)
CLOSED	03-919-03 Review RHR minflow operating logic and issue appropriate design changes. (SOURCE: NRC MM 86-41)
CLOSED	03-919-04 Install PDC 86-33 (MO 1001-18 A&B). (SOURCE: NRC MM 86-41)
CLOSED	03-919-05 Install PDC 86-95 to establish minimum RHR flow. (SOURCE: NRC MM 86-41)

## MAINTENANCE

ISSUE:	03-920 MECHANICAL CORE SPRAY CHECK VALVE & MOV PROBLEMS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-920-01 Evaluate scope and root cause of problem of core spray test check valve internal disc becoming disassociated from the swing lever arm. (SOURCE: NRC MM 86-41)
CLOSED	03-920-02 Confirm no similar vertical installation. (SOURCE: NRC MM 86-41)
CLOSED	03-920-03 Install new discs including anti-rotation pins in disc of susceptible check valves temporarily until new discs with anti-rotation stops and improved materials are installed. (SOURCE: NRC MM 86-41)
CLOSED	03-920-04 Verify continuing valve operability (CV1400-35 and 214) through routine system surveillance. (SOURCE: NRC MM 86-41)
CLOSED	03-920-05 Prepare or revise procedure to ensure that correct MOV (Limitorque) switch settings are determined and maintained for the life of the plant. (SOURCE: BECO LTR 86.059)
CLOSED	03-920-06 Correct the MOV (Limitorque) switch settings. (SOURCE: BECO LTR 86.059)
CLOSED	03-920-07 Stroke test each identified MOV (Limitorque) requiring switch setting re-adjustment to verify the switch settings. (SOURCE: BECO LTR 85.059)

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- CLOSED 03-920-08  
Review motor-operated valves for inconsistent sizing and oversizing of motor overload devices.  
(SOURCE: NRC MM 86-41)
- RFO-8 03-920-09  
If necessary, implement the physical change and/or configuration necessary to resolve check valves designed for vertical service or reconfigure existing check valves for horizontal use.  
(SOURCE: NRC MM 86-41)
- CLOSED 03-920-10  
Investigate the post maintenance tests for MOVs performed during this outage per Procedure No. 3.M.4-10 which did not meet the acceptance criteria specified in the test documentation and did not have NCRs generated.  
(SOURCE: NRC IR 87-36)
- CLOSED 03-920-11  
Perform a technical evaluation of Procedure No. 3.M.4-10 to determine its adequacy in regards to the acceptance of post maintenance testing. Determine and review any other applicable procedures.  
(SOURCE: NRC IR 87-36)



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MAINTENANCE

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ISSUE: 03-921  
MECHANICAL PASS PIPING PROBLEMS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-921-01 Perform an engineering evaluation to determine the current condition of the PASS piping due to chloride contamination and an assessment of the suitability of the pipe for continued service. (SOURCE: NRC IR 87-01)

26-Sep-88

MAINTENANCE

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ISSUE: 03-922  
MECHANICAL RESIDUAL RCIC FLOW INDICATION AFTER  
SURVEILLANCE

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DUE/STATUS

ACTION

CLOSED

03-922-01  
Investigate the cause and required corrective  
actions for the residual RCIC flow indication  
occasionally noted after RCIC surveillance  
tests.

(SOURCE: NRC IR 86-06)

26-Sep-88

MAINTENANCE

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ISSUE:	03-923 DRYWELL SPRAY AND CONTAINMENT VENTING
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-923-01 Complete modifications addressing drywell spray capability. (SOURCE: NRC MM 86-32)
ON HOLD	03-923-02 Complete modifications addressing containment venting capability. (Containment Venting on hold - see NRC letter dated 8/21/87 Docket No. 50-293). (SOURCE: NRC MM 86-32)

## MAINTENANCE

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ISSUE: 03-924  
SALT SERVICE WATER PIPING CORROSION

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-924-01 Establish scope of problem. (SOURCE: NRC MM 86-41)
CLOSED	03-924-02 Perform root cause study of SSW corrosion in screenhouse and buried piping. (SOURCE: NRC MM 86-41)
CLOSED	03-924-03 Replace salt water components as necessary per PDC 86-22. Install test material piping piece in screen wash piping. (SOURCE: NRC MM 86-41)
CLOSED	03-924-04 Investigate integrity of salt water pumps. (SOURCE: NRC MM 86-41)
CLOSED	03-924-05 Investigate integrity of salt water pipe including screen wash piping. (SOURCE: NRC MM 86-41)
RFO-8 - 60	03-924-06 Provide inspection criteria for routine inspections, 2 months before RFO-8. (SOURCE: NRC MM 86-41)
CLOSED	03-924-07 Issue design change modification to replace/repair degraded components. (SOURCE: NRC MM 86-41)
RFO-8 -180	03-924-08 Identify improved materials for SSW service 6 months before RFO-8. (SOURCE: NRC MM 86-41)

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CLOSED

03-924-09

Investigate cause of incorrect status report  
for SSW piping and implement corrective action.  
(SOURCE: BECO LTR 87.070)

CLOSED

03-924-10

Repair/replace degraded components.  
(SOURCE: NRC MM 86-41)

## MAINTENANCE

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ISSUE: 03-925  
POTENTIAL CORROSION OF PRIMARY CONTAINMENT  
ISOLATION VALVES

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DUE/STATUSACTION

CLOSED 03-925-01  
Develop list of Clow Corporation butterfly  
valves (wafer type) that are used at PNPS.  
(SOURCE: NRC MM 86-41)

CLOSED 03-925-02  
Examine one of the eight Clow valves and review  
results with the valve vendor, and respond to  
ESR 87-590.  
(SOURCE: NRC MM 86-41)

CLOSED 03-925-03  
Continue normal monitoring of valve operation  
during LLRT and valve timing tests.  
(SOURCE: NRC MM 86-41)

## MAINTENANCE

ISSUE:	03-926 SBGT DESIGN MODIFICATION
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-926-01 Correct SBGT deluge system to preclude inadvertent actuation. Modify SBGT to eliminate remaining design deficiencies and single active failures, including SBGT heaters monitoring for failure. (SOURCE: NRC MM 86-41)
CLOSED	03-926-02 Prior to conducting operations which would require the SBGT system to be operable, it will be verified operable in accordance with the Tech Specs. (SOURCE: LER 86-021-01)
CLOSED	03-926-03 Resolve back draft damper issue on SBGT. (SOURCE: NRC IR 87-03)
CLOSED	03-926-04 Add the loss of humidity control situation to the single failure and effects analysis of the SBGT modification. (SOURCE: NRC EM 87-45)
CLOSED	03-926-05 Provide Mr. J. Lyash a copy of BECo's disposition of recommendations of the contractors evaluation of the SBGT system. (SOURCE: NRC EC 87-45)

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MAINTENANCE

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ISSUE: 03-927  
EXTENT OF IMBEDDED STEEL REINFORCING OF SAFETY  
RELATED CONCRETE WALLS

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DUE/STATUS

ACTION

CLOSED

03-927-01  
Contact the original PNPS contractor for a search of construction records to establish that reinforcing bars were installed in safety related concrete walls in accordance with design drawings.

(SOURCE: NRC MM 86-41)

CLOSED

03-927-02  
Use experience in mapping embedded steel reinforcing bars in concrete walls and in drilling for expansion anchor installation to validate design drawings for concrete walls.

(SOURCE: NRC MM 86-41)

CLOSED

03-927-03  
Modify safety related masonry walls to withstand seismic and Depressurization events.

(SOURCE: BECO LTR 81.058)



## MAINTENANCE

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ISSUE: 03-928  
NON-SEISMICALLY QUALIFIED RELAYS (HGA & CFD)

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DUE/STATUSACTION

CLOSED 03-928-01  
Replace the GE type CFD relays with seismically qualified Westinghouse type SA-1 relays.  
(SOURCE: LER 86-013-00)

CLOSED 03-928-02  
Identify HGA relays in use in safety related applications.  
(SOURCE: NRC MM 86-41)

CLOSED 03-928-03  
Evaluate safety significance of HGA relay installations, and issue design change modification to replace unacceptable relays with qualified substitutes.  
(SOURCE: NRC MM 86-41)

CLOSED 03-928-04  
Replace unacceptable HGA relays with qualified substitutes.  
(SOURCE: NRC MM 86-41)

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MAINTENANCE

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ISSUE: 03-929  
ATWS/RECIRC MG SET FIELD BREAKER

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DUE/STATUS

ACTION

CLOSED

03-929-01  
Perform root cause analysis of ATWS RECIRC MG set field breaker which failed in June 1986.  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-02  
Perform root cause analysis of recurring breaker failures.  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-03  
Conduct formal industry survey of failure history and corrective action.  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-04  
Perform aging and testing of lubricant.  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-05  
Investigate design change options (initiation of drive motor trip on ATWS signal - redundant to field trip; change spring design field breaker).  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-06  
Investigate and recommend possible improvements to maintenance and testing practices.  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-07  
Update breaker maintenance manual/procedure to define use of special lubricants and enhance steps for making breaker adjustments.  
(SOURCE: NRC MM 86-41)

CLOSED

03-929-08  
Update root cause analysis and risk and reliability analysis relating to recirc MG set trip breakers.

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MAINTENANCE

(SOURCE: NRC MM 86-41)

CLOSED

03-929-09

Reassess corrective action to decide whether replacement of the recirc MG set field breaker would be more prudent than continuing trouble shooting and repair efforts.

(SOURCE: NRC MM 86-41)

CLOSED

03-929-10

Install PDC 87-30 to upgrade recirc MG set trip breakers.

(SOURCE: NRC MM 86-41)

CLOSED

03-929-11

Implement improvements to maintenance and testing practices recommended by Nuclear Engineering Department investigation.

(SOURCE: NRC MM 86-41)

## MAINTENANCE

ISSUE:	03-930 HEAT DAMAGE TO PCIS C/WBLING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-930-01 Review operation of circuit involved and evaluate extent of damage. (SOURCE: NRC MM 86-41)
CLOSED	03-930-02 Replace cable, relocate conduit and repack valve H00100-107. (SOURCE: NRC MM 86-41)
CLOSED	03-930-03 Reinstall insulation on valve and affected steam lines. (SOURCE: NRC MM 86-41)
CLOSED	03-930-04 Include in training an emphasis on importance of early identification and correction of material deficiencies. (SOURCE: NRC MM 86-41)
CLOSED	03-930-05 Assess effectiveness of foregoing actions through continuing program of F&M trend analysis. (SOURCE: NRC MM 86-41)

## MAINTENANCE

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ISSUE: 03-931  
BREAKER SETTING AND CONTROL COORDINATION

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DUE/STATUSACTION

CLOSED	03-931-01 Initiate a temporary modification to correct immediate breaker coordination problem which was not addressed in the original design. (SOURCE: NRC MM 86-41)
CLOSED	03-931-02 Initiate a full review of the breaker coordination issue. (SOURCE: NRC MM 86-41)
CLOSED	03-931-03 Develop a new and more comprehensive design basis. (SOURCE: NRC MM 86-41)
CLOSED	03-931-04 Implement required PDC 27-15 changes to resolve breaker coordination issue. (SOURCE: NRC MM 86-41)
CLOSED	03-931-05 Implement the Temporary Modification to correct immediate breaker coordination problem which was not addressed in the original design. (SOURCE: NRC MM 86-41)

26-Sep-88

MAINTENANCE

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ISSUE: 03-932  
EMERGENCY LIGHTING FOR SAFE SHUTDOWN PANELS

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DUE/STATUS

ACTION

CLOSED

03-932-01  
Provide adequate emergency lighting for four  
safe shutdown panels.  
(SOURCE: NRC IR 85-30-05)

26-Sep-88

MAINTENANCE

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ISSUE:	03-933 EPIC COMPUTER PROJECT
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-933-01 Write PDC to install EPIC computer system to monitor the RPS and PCIS systems. (SOURCE: CAL 86-10)

## MAINTENANCE

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ISSUE: 03-934  
VALVE TESTING

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DUE/STATUSACTION

CLOSED

03-934-01  
Submit a list of all pressure isolation valves at PNPS. For each valve, describe the periodic tests or other measures performed to assure the integrity of the valve as an independent barrier at the reactor coolant boundary along with the acceptance criteria for leakage, if any, and frequency of test performance.

(SOURCE: GEN LTR 87-06)

CLOSED

03-934-02  
Incorporate seven year service requirement for internals of ARI valves into PM program.

(SOURCE: NRC IR 86-25)

CLOSED

03-934-03  
Submit the revised list of pressure isolation valves previously submitted per BECo Letter 2.87.103 dated June 11, 1987.

(SOURCE: GEN LTR 87-06)



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MAINTENANCE

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ISSUE: 03-935  
CONTAINMENT PRESSURE TRANSMITTERS

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DUE/STATUS

ACTION

CLOSED

03-935-01  
Replace the transmitters as per PDC 84-17.  
(SOURCE: LER 85-011-00)

26-Sep-88

MAINTENANCE

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ISSUE:	03-936 HYDROGEN WATER CHEMISTRY
<u>DUE/STATUS</u>	<u>ACTION</u>
RS + 105	03-936-01 Install permanent hydrogen injection system, modifying operating and maintenance procedures accordingly and train operators. (SOURCE: BECO LTR 86.034)

26-Sep-88

MAINTENANCE

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ISSUE: 03-937  
MSIV PILOT POPPET VALVE MODIFICATION

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DUE/STATUS

ACTION

CLOS' ,

03-937-01

Investigate root cause and perform permanent modification of MSIV pilot poppets to ensure poppets remain screwed to poppet nuts during long term operation.

(SOURCE: NRC IR 86-17-01.7)

26-Sep-88

MAINTENANCE

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ISSUE: 03-938  
MAINTENANCE REQUESTS TO BE CLOSED BEFORE  
RESTART

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DUE/STATUS

ACTION

CLOSED

03-938-01  
Provide the NRC with the process and criteria  
for determining those maintenance requests  
which require closure prior to restart.  
(SOURCE: NRC MM 87-28)

26-Sep-88

MAINTENANCE

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ISSUE: 03-939  
INCORRECT WOODWARD GOVERNOR SETTINGS

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DUE/STATUS

ACTION

CLOSED

03-939-01

Complete procedure for establishing Woodward Governor settings 30 days after the diesel generator has been declared operable, and before startup.

(SOURCE: NPC IR 87-26-01)

## MAINTENANCE

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ISSUE: 03-940  
IMPROVING CONTROL OF VENDOR SUPPLIED  
INFORMATION

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DUE/STATUSACTION

RS + 240

03-940-01

Evaluate the procedures for receiving vendor supplied information such as technical manual changes and drawing revisions within the Nuclear Organization and the practices in effect for controlling that information. Provide recommendations to correct identified problem areas.

(SOURCE: SALP 86-99)

26-Sep-88

MAINTENANCE

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ISSUE: 03-941  
INADEQUATE REVIEW OF PLANT DESIGN CHANGES  
(PDCs) AND POST MODIFICATION PREOPERATIONAL  
TEST (PMPTs)

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DUE/STATUS

ACTION

CLOSED

03-941-01  
Establish a three man review group (with no  
concurrent duties) to review PMPTs initiated  
for implementation during RFO 7.  
(SOURCE: NRC IR 87-33)

26-Sep-88

MAINTENANCE

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ISSUE:	03-942 CLASS I CONDUIT ROUTING THROUGH CIRCULATING WATER INTAKE STRUCTURE.
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-942-01 Reroute Class I conduits through Circulating Water Intake Structure to meet the requirements of FSAR Section 12.2.1.1. (SOURCE: LER 87-009-00)



26-Sep-88

MAINTENANCE

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ISSUE: 03-943  
REACTOR WATER LEVEL MODIFICATION

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DUE/STATUS

ACTION

CLOSED

03-943-01  
Revise the Reactor Water Level Modification PDC to require radiation surveys of the drywell penetration during startup to verify shielding design adequacy.  
(SOURCE: NRC EC 87-32-01)

RESTART

03-943-02  
Perform radiation surveys of the Reactor Water Level Modification drywell penetration during startup.  
(SOURCE: NRC EC 87-32-02)

## MAINTENANCE

ISSUE:	03-944 TORUS MAIN EXHAUST VALVE LEAKAGE
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-944-01 Determine the root cause of high leakage through the torus main exhaust valves (AO-5042A and AO-5042B) prior to startup. (SOURCE: NRC IR 87-47)
CLOSED	03-944-02 Implement the resolution for high leakage through the torus main exhaust valves (AO-5042A and AO-5042B) prior to startup. (SOURCE: NRC IR 87-47)
CLOSED	03-944-03 Remove loop seal level control system power switch on panel N-3999. (SOURCE: NRC IR 87-47)
CLOSED	03-944-04 Ensure Regenerant Waste Strainer is not clogged. (SOURCE: NRC IR 87-47)
CLOSED	03-944-05 Change valve logic to make valve open in a high-level loop seal signal. (SOURCE: NRC IR 87-47)
CLOSED	03-944-06 Relocate termination of the condensate Demineralizer System Vent. (SOURCE: NRC IR 87-47)
CLOSED	03-944-08 Inform NRC Inspector Harold Gray of successful stroke test of containment torus exhaust valve AD-5042B. (SOURCE: NRC)

26-Sep-88

MAINTENANCE

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ISSUE:	03-945 RHR Drain piping.
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	03-945-01 Perform visual and PT of drain piping between RHR system valves 33 and 28. (SOURCE: NRC EC 88-03-01)
CLOSED	03-945-02 Document resolution of drain valve concern by responding to ESR 88-085. (SOURCE: NRC EC 88-03-02)
CLOSED	03-945-03 Inform NRC Inspector Harold Gray of results of Visual & PT inspections. (SOURCE: NRC EC-88-03-03)

26-Sep-88

MAINTENANCE

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ISSUE: 03-946  
Automatic actuations of portions of primary  
containment, secondary containment and standby  
gas treatment systems.

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DUE/STATUS

ACTION

CLOSED

03-946-01  
Implement the recommendations of TCH 87-464 and  
replace the specified relays (or relay coils)  
prior to restart.

(SOURCE: NRC IR 87-50)

## SURVEILLANCE

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ISSUE: 04-001  
IMPROVE THE ADMINISTRATIVE CONTROL OF THE  
SURVEILLANCE TESTING PROGRAM

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-001-01 Centralize the control of the surveillance data base and future changes within the Technical Section. The Surveillance Test Program will be managed by the Technical Section Systems Group Leader.  (SOURCE: SALP 86-99)
CLOSED	04-001-02 Conduct independent studies to analyze root cause for missed reportable surveillance test events and initiate actions to address root causes in the future.  (SOURCE: SALP 86-99)
COMPLETED	04-001-03 1) Clarify "once per cycle" test frequency with NRC relative to Containment Leakage Testing (LLRT, ILRT - Appendix J) 2) Tech Spec-related Equipment Surveillance requirements.  (SOURCE: NRC MM 86-30(f))
CLOSED	04-001-04 Complete verification of the correct application of the once per cycle testing versus the once per refueling outage testing.  (SOURCE: LER 86-016-00)
CLOSED	04-001-05 Revise the MSTP based on INPO Good Practice TS-410 to address missed surveillance tests, conflicting definitions of once/cycle, inability of the surveillance tracking system to compensate for plant mode or for multiple component testing and clarification of line responsibility.  (SOURCE: NRC MM 86-41)

26-Sep-88

**SURVEILLANCE**

CLOSED

04-001-06

Identify and suggest corrective actions to problems with surveillance requirements resulting from ambiguous operating cycle related to Technical Specification surveillance requirements.

(SOURCE: NRC MM 86-41)

CLOSED

04-001-07

Improve and simplify MSTP database.

(SOURCE: NRC MM 86-41)

01-DEC-88

04-001-08

Train personnel on the upgraded MSTP program and procedures.

(SOURCE: NRC MM 86-41)

CLOSED

04-001-09

Direct the implementation of procedural changes to address ambiguous operating cycle relative to Technical Specification surveillance requirements identified by surveillance requirement study.

(SOURCE: NRC MM 86-41)

26-Sep-88

SURVEILLANCE

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ISSUE:	04-002 SURVEILLANCE PROCEDURES
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-002-01 Revise and apply Core Spray Functional Logic Test to include core spray start timer relays 14A-K, 14A&B. (SOURCE: NRC IR 85-30-06)
CLOSED	04-002-02 Develop and implement primary and backup methods for determining N2 makeup capacity to the Primary Containment for purposes of quantifying containment air volume leakage rate. (SOURCE: NRC IR 86-29-01)
RESTART	04-002-03 Revise the surveillance procedures which address the requirements of Technical Specification 4.5.C.1.a and use the revised procedure to test the HPCI system. (SOURCE: LER 86-012-00)
RESTART	04-002-04 Revise the surveillance procedure which addresses the requirements of Technical Specification 4.5.D.1.a and use the revised procedure to test the RCIC System. (SOURCE: LER 86-014-00)
RESTART	04-002-05 Implement the testing requirements of Surveillance Procedure 8.M.1-30 for instrument calibration and functional tests for the recirc pump trip/alt. rod insertion systems. (SOURCE: LER 86-019-00)
CLOSED	04-002-06 Conduct Surveillance Procedures 8.7.2.1 to demonstrate that the Standby Gas Treatment System (SBGTS) fans automatically start and operate at 4000 CFM plus/minus 10% prior to core reload.

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**SURVEILLANCE**

(SOURCE: NRC IR 87-04-01)

RESTART

04-002-07

Conduct functional test of Rod Block Monitor and APRM trips per Tech Spec Commitment.

(SOURCE: NRC IR 85-03-04)

RS + 30

04-002-08

Develop and implement primary and backup methods for determining N2 makeup capacity of the Primary Containment for purposes of quantifying containment air volume leakage rate.

(SOURCE: NRC IFI 86-29-01)



## SURVEILLANCE

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ISSUE: 04-003  
LOCAL LEAK RATE TESTS ADMINISTRATION AND  
SURVEILLANCES

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-003-01 Submit a letter to the NRC requesting a clarification of the two year interval set forth in 10CFR50 App. J "Containment Leakage Control". (SOURCE: NRC MM 86-41)
CLOSED	04-003-02 Two year maximum test interval will be established for each LLRT component and included in master surveillance tracking program until clarification is obtained. (SOURCE: NRC MM 86-41)
CLOSED	04-003-03 Update MSTP to include all components requiring LLRT and insure two year maximum interval between tests of each component is properly controlled. (SOURCE: NRC MM 86-41)
CLOSED	04-003-04 Complete LLRT Surveillance Tests for LLRTs that exceed the two year requirement. (SOURCE: NRC MM 86-41)
CLOSED	04-003-05 Perform LLRT on component to component basis and revise the MSTP to ensure that the 2 year maximum interval is properly applied to the LLRT test frequency. (SOURCE: NRC IR 86-21-08)
CLOSED	04-003-06 Establish an LLRT Failure Analysis Team as a standing entity to conduct root cause analysis and make recommendations to correct problems and prevent future failures. (SOURCE: NRC MM 86-41)

## SURVEILLANCE

- CLOSED 04-003-07  
Analyze cause of leaking Containment Isolation Valves and develop corrective/preventative maintenance actions.  
(SOURCE: NRC MM 86-41)
- CLOSED 04-003-08  
Revise the LLRT Surveillance Procedures to add a precaution regarding prior approval and documentation of test connection valve packing adjustments.  
(SOURCE: NRC MM 86-41)
- CLOSED 04-003-09  
Initiate a Valve Betterment Program to upgrade valves that have a history of maintenance or spare parts availability problems.  
(SOURCE: NRC MM 86-41)
- CLOSED 04-003-10  
Verify that the MSIVs meet LLRT acceptance criteria by conducting Surveillance Procedure 8.7.1.6.  
(SOURCE: LER 86-011-00)
- CLOSED 04-003-11  
Evaluate the procedure for LLRT of feedwater check valves. Revise the procedure if necessary.  
(SOURCE: NRC MM 86-30)
- COMPLETED 04-003-12  
Resolve surveillance scheduling problems associated with 4.16KV undervoltage relays surveillance.  
(SOURCE: NRC IR 86-21-08)
- COMPLETED 04-003-13  
Provide a Technical Specification clarification memo defining once per operating cycle.  
(SOURCE: NRC MM 86-41)
- CLOSED 04-003-14  
Implement the corrective/preventative maintenance actions developed by the Valve Betterment Team and approved by management to correct the cause of leaking Containment

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SURVEILLANCE

Isolation Valves.

(SOURCE: NRC MM 86-41)

## SURVEILLANCE

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ISSUE: 04-004  
IN-SERVICE INSPECTION

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-004-01 Continue required ISI surface examination of safety related piping and identify unacceptable results in the NCR process. (SOURCE: NRC MM 86-41)
CLOSED	04-004-02 Perform ISI of pipe supports including expanding the sample of supports to be inspected when service induced problems are found. Identify unacceptable conditions found and verify completion of corrective actions under NCRs. (SOURCE: NRC MM 86-41)
CLOSED	04-004-03 Perform an overall assessment of the RFO-6 and RFO-7 ISI program results for root cause. (SOURCE: NRC MM 86-41)
RS + 150	04-004-04 Results of IGSCC augmented inspection program sent to the NRC. (SOURCE: GEN LTR 84-11)
CLOSED	04-004-05 Conduct NDE inspections of welds rescheduled in the final report of the RFO-6 ISI. (SOURCE: FR-ISI)
CLOSED	04-004-06 Develop IST procedures for testing HPCI, RCIC and CS injection check valves to include positive verification that the disc travels to the seat promptly on cessation or reversal of flow and implement these procedures. (SOURCE: NRC IR 83-23-01)
CLOSED	04-004-07 Inspect the welds identified in Generic Letter 84-11 using the procedure and process derived

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**SURVEILLANCE**

in accordance with GLS4-11, BWROG and EPRI guidelines.

(SOURCE: GEN LTR 84-11)

CLOSED

04-004-08

Determine position relative to crack evaluation and repair criteria based upon NUREG 0313 Rev. 2 when issued by the NRC.

(SOURCE: GEN LTR 84-11)

RESTART

04-004-09

Perform a leak check at operating pressure by I.S.I. on recirc. pump casing and suction piping during restart.

(SOURCE: NRC EM 87-57)

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SURVEILLANCE

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ISSUE: 04-005  
CALIBRATION AND TESTING

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DUE/STATUS

ACTION

CLOSED 04-005-01  
Place the RHR high pressure alarm switches on a once per cycle calibration schedule.  
(SOURCE: CAL 86-10)

CLOSED 04-005-02  
Prepare and utilize a procedure to periodically monitor RHRS pressures and temperatures.  
(SOURCE: CAL 86-10)

CLOSED 04-005-03  
Schedule RHRs pressure gauge calibration every refueling outage.  
(SOURCE: CAL 86-10)

CLOSED 04-005-04  
Perform leakage test, across RHRs 68 check valves in accordance with Procedure 8.5.2.7 every refueling outage.  
(SOURCE: CAL 86-10)

CLOSED 04-005-05  
Complete the required relay calibrations for voltage relays A5, A6 and the startup transformer.  
(SOURCE: LER 86-016-00)

CLOSED 04-005-06  
Evaluate protective relay setting and test criteria and provide written criteria to the Maintenance Section.  
(SOURCE: NRC MM 86-41)

CLOSED 04-005-07  
Revise and update controlled documents for all 4KV circuits and 480V load centers to reflect protective relay/breaker setting and testing.  
(SOURCE: NRC MM 86-41)

APPENDIX 10

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SURVEILLANCE

RS + 60

04-005-08

Revise and update controlled documents for all 480V motor control centers to reflect protective relay/breaker setting and testing.

(SOURCE: NRC MM 86-41)

CLOSED

04-005-09

Inspect the four upper annulus drain lines to determine that they are not plugged and that there is no drainage of water from the drywell air gap.

(SOURCE: BECO LTR 87.074)

RFO-8

04-005-10

Develop a surveillance procedure to inspect the four upper annulus drain lines each refueling outage to determine that they are not plugged and that there is no drainage of water from the drywell air gap.

(SOURCE: BECO LTR 87.074)

## SURVEILLANCE

ISSUE:	04-006 MEASURING AND TEST EQUIPMENT (M&TE) IMPROVEMENTS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-006-01 Establish central M&TE issue areas for each discipline within maintenance. (SOURCE: NRC MM 86-41)
CLOSED	04-006-02 Segregate out of calibration M&TE equipment from other M&TE equipment to prevent inadvertent use. (SOURCE: NRC MM 86-41)
CLOSED	04-006-03 Assign maintenance staff to manage the M&TE issue areas. (SOURCE: NRC MM 86-41)
CLOSED	04-006-04 Station management spot check M&TE equipment through implementation of the management monitor Watch Program. (SOURCE: NRC MM 86-41)
CLOSED	04-006-05 Implement a program for assessing the effectiveness of M&TE control using plant management tours emphasizing that function. (SOURCE: NRC MM 86-41)
CLOSED	04-006-06 Evaluate the effectiveness of M&TE control using a program of M&TE audits. (SOURCE: NRC MM 86-41)



## SURVEILLANCE

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ISSUE: 04-007  
ECCS LOGIC SYSTEM FUNCTIONAL TEST IMPROVEMENTS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	04-007-01 Revise as necessary ECCS Logic System functional tests and procedures required for various mode switch positions. (SOURCE: NRC MM 86-41)
CLOSED	04-007-02 Determine adequacy of simulated automatic actuation testing approach. (SOURCE: NRC MM 86-41)
CLOSED	04-007-03 Revise simulated automatic actuation testing to incorporate the recommendations contained in the evaluation of adequacy report. (SOURCE: NRC MM 86-41)
CLOSED	04-007-04 Make appropriate ECCS Logic System functional test procedure changes to incorporate simulated automatic actuation testing. (SOURCE: NRC MM 86-41)

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FIRE PROTECTION

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ISSUE:	05-001 STAFFING ISSUE - ESTABLISHING AND FILLING KEY POSITION IN THE FIRE PROTECTION AREA
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-001-01 Centralize Fire Protection function at site through establishment of new group leader position to provide centralized management of the Fire Protection program including direction of resources, budget planning and control and long term planning of the program. (SOURCE: NRC MM 86-41)

## FIRE PROTECTION

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ISSUE:	05-002 REDUCTION OF COMPENSATORY MEASURES
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-002-01 Inoperative Fire Protection systems requiring compensatory measures are incorporated into the plan-of-the-day. (SOURCE: NRC MM 86-41)
CLOSED	05-002-02 Inoperative systems requiring compensatory measures receive daily review and are assigned a priority level. (SOURCE: NRC MM 86-41)
CLOSED	05-002-03 Inoperative systems requiring compensatory measures receive priority treatment in the Plan-of-the-Day meetings. (SOURCE: NRC MM 86-41)
CLOSED	05-002-04 Establish fire watch compensatory measures action items report to assign ownership of problem solutions. (SOURCE: NRC MM 86-41)

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FIRE PROTECTION

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ISSUE: 05-003  
FIRE PROTECTION SURVEILLANCE PROCEDURES

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DUE/STATUS

ACTION

CLOSED

05-003-01  
Develop and implement Temporary Procedures to document the surveillance of Appendix R related fire barriers.

(SOURCE: SALP 86-99)

## FIRE PROTECTION

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ISSUE: 05-004  
 HARDWARE ISSUE - FIRE BARRIERS/SEALS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-004-01 Perform fire barriers walkdown to identify barriers and penetrations. (SOURCE: NRC MM 86-41)
CLOSED	05-004-02 Establish tracking mechanisms for tracking of new penetrations and for procedure revision. (SOURCE: NRC MM 86-41)
CLOSED	05-004-03 Prepare specifications for procurement of equipment and material for existing penetration seals. (SOURCE: NRC MM 86-41)
CLOSED	05-004-04 Resolve (internally) which fire barriers are required by Appendix R, Appendix A and Licensing Commitments. Prepare drawings identifying boundaries to be maintained. (SOURCE: NRC MM 86-41)
CLOSED	05-004-05 Submit Appendix R Licensing clarification if needed. (SOURCE: NRC MM 86-41)
COMPLETED	05-004-06 Upgrade non-Appendix R barriers as required. (SOURCE: NRC MM 86-41)

## FIRE PROTECTION

ISSUE:	05-005 FIRE BRIGADE AND FIRE WATCH TRAINING
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-005-01 Hire permanent BECO Fire Brigade Instructor. (SOURCE: NRC MM 86-41)
CLOSED	05-005-02 Revise Nuclear Training Manual requiring mandatory quarterly attendance at fire brigade training. (SOURCE: NRC MM 86-41)
CLOSED	05-005-03 Establish two drills per member each year, as requirement for fire brigade membership. (SOURCE: NRC MM 86-41)
CLOSED	05-005-04 Establish and maintain Fire Brigade qualification files. (SOURCE: NRC MM 86-41)
CLOSED	05-005-05 Provide written scenarios to Fire Brigade Leader for drills. (SOURCE: NRC MM 86-41)
CLOSED	05-005-06 Conduct critique at end of each drill. (SOURCE: NRC MM 86-41)
CLOSED	05-005-07 Revise the Fire Brigade Training Drill Procedure to evaluate the performance of the participating brigade members as a team. (SOURCE: NRC MM 86-41)
CLOSED	05-005-08 Perform QA audit to assure the Fire Brigade Training is being implemented in accordance with approved procedures. (SOURCE: NRC MM 86-41)

## FIRE PROTECTION

ISSUE:	05-006 ADMINISTRATION OF FIRE PROTECTION PROGRAM
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-006-01 Use routine submittals from the Fire Protection Group and the Plan-of-the-Day process to establish priority treatment of Fire Protection Maintenance Requirements. (SOURCE: NRC MM 86-41)
CLOSED	05-006-02 Establish a fire protection system status board in the Control Room area. (SOURCE: NRC MM 86-41)
CLOSED	05-006-03 Establish a fire protection system Status Board for the Fire Protection Group Leader to assess operability. (SOURCE: NRC MM 86-41)
CLOSED	05-006-04 Assess program effectiveness in a formalized monthly report for upper management. (SOURCE: NRC MM 86-41)
CLOSED	05-006-05 Train appropriate station and engineering personnel in existing corrective action program including use of F&MRs. (SOURCE: NRC MM 86-41)
CLOSED	05-006-06 Assess effectiveness of Corrective Action Program Training, (specifically F&MR use) using performance indicators. (SOURCE: NRC MM 86-41)
CLOSED	05-006-07 Establish a Fire Protection Coordinator to assist Barrier Walkdown Team and Watch Engineer in identifying Fire Watch postings for identified deviations. (SOURCE: NRC MM 86-41)

## FIRE PROTECTION

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ISSUE: 05-007  
APPENDIX R MODIFICATIONS

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<u>DUE/STATUS</u>	<u>ACTION</u>
COMPLETED	05-007-01 Repair degraded seals and install new seals where required in Appendix R Barriers. (SOURCE: NRC MM 86-41)
CLOSED	05-007-02 Evaluate design to determine the extent of fuse-to-breaker coordination, resultant actions, and modify circuitry as necessary. (SOURCE: BECO LTR 83.070)
CLOSED	05-007-03 Provide suppression pool temperature and level indications independent of a control room fire. (SOURCE: BECO LTR 83.070)
CLOSED	05-007-04 Modify control circuit for valve MO-1001-47 so that it will not spuriously operate by a fire condition in the areas where the control circuits for redundant valve MO-1001-50 are located. (SOURCE: BECO LTR 83.070)
CLOSED	05-007-05 Install sprinkler system at elev 51 and 23 of RX building to address App. R separation requirements. (SOURCE: BECO LTR 83.070)
CLOSED	05-007-06 Revise alternate shutdown procedure 2.4.143 to reflect recently installed modifications and NRC concerns. (SOURCE: BECO LTR 83.194)
CLOSED	05-007-07 Modify torus water temperature instrumentation. (SOURCE: BECO LTR 83.281)



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**FIRE PROTECTION**

- CLOSED 05-007-08  
Reroute power and control cable for A & B diesel generator fuel oil transfer pumps.  
(SOURCE: BECO LTR 83.281)
- CLOSED 05-007-09  
Reroute power cables feeding MCC B18 out of torus compartment.  
(SOURCE: BECO LTR 83.281)
- CLOSED 05-007-10  
Install 1 hour rated fire wrap on newly installed additional torus water temperature instrumentation in the torus compartment.  
(SOURCE: BECO LTR 84.049)
- CLOSED 05-007-11  
Remove wood scaffolding from the torus fire zone 1.30A except that required for surveillance testing. All such remaining scaffolding will be either pressure treated fire retardant (UL/FM approved) or painted with a listed and approved fire retardant coating.  
(SOURCE: BECO LTR 86.110)
- 07-OCT-88 05-007-12  
Provide to NRC detailed information regarding fire protection work expected to be outstanding as of plant startup, and those compensatory measures expected to be in place at startup.  
(SOURCE: NRC MM 87-28)
- CLOSED 05-007-13  
Resolve NRC concern on the basis for exemption from 10CFR50 Appendix R requirements for a fire suppression system in the control room.  
(SOURCE: NRC IR 87-39)
- CLOSED 05-007-14  
Resolve NRC question on sealing of conduits.  
(SOURCE: NRC IR 97-39)
- CLOSED 05-007-15  
Provide NRC Region I the completed fire barrier evaluations for the plant approximately one month before plant restart.  
(SOURCE: NRC IR 87-39-03)

## FIRE PROTECTION

ISSUE:	05-008 APPENDIX R EXEMPTION REQUEST 21/ALTERNATE SHUTDOWN.
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	05-008-01 Provide additional marked fuses and a precut jumper with appropriately-sized terminals attached in the alternate shutdown tool boxes. (SOURCE: BECO LTR 87.160)
CLOSED	05-008-02 Prepare and approve Procedures 2.4.143.1 and 2.4.143.2 for safe shutdown for a fire in Fire Areas 1.9 and 1.10. (SOURCE: BECO LTR 87.160)
CLOSED	05-008-03 Train plant operators on procedures 2.4.143, 2.4.143.1 and 2.4.143.2. (SOURCE: BECO LTR 87.160)
CLOSED	05-008-04 Prepare PDC package to address core spray, SSW and RBCCW control cables in Fire Areas 1.9 and 1.10. (SOURCE: BECO LTR 87.160)
CLOSED	05-008-05 Implement modification to address CS, SSW and RBCCW control cables in Fire Areas 1.9 and 1.10. (SOURCE: BECO LTR 87.160)
CLOSED	05-008-06 Develop a procedure for periodic monitoring of the contents in the alternate shutdown tool boxes. (SOURCE: BECO LTR 87.160)
CLOSED	05-008-07 Install enhanced communication equipment for alternate shutdown. (SOURCE: NRC IR 87-22)

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MISCELLANEOUS

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ISSUE:	06-001 NUCLEAR ORGANIZATION IMPROVEMENTS
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	06-001-01 Eliminate dual reporting chain with site organizations reporting to both the Outage Management Director and the Nuclear Operations Manager. (SOURCE: SALP 86-99)
CLOSED	06-001-02 Fill all outstanding key management positions. (SOURCE: SALP 86-99)

## MISCELLANEOUS

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ISSUE: 06-002  
MULTIPLE ADMINISTRATIVE DATA BASES/TRACKING  
SYSTEMS USED IN NUCLEAR ORGANIZATION DO NOT  
INTERFACE/INTERACT EFFICIENTLY

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DUE/STATUSACTION

RFO-7 +730

06-002-01  
Capture all administrative work items into  
(minimum required) interactive data bases.  
(SOURCE: NRC MM 86-32(f))

## MISCELLANEOUS

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ISSUE: 06-003  
IMPROVE THE LEGIBILITY OF DRAWINGS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	06-003-01 Publish drawing legibility standards. (SOURCE: NRC MM 86-41)
CLOSED	06-003-02 Implement a quality check of all new vendor drawings and reject illegible drawings. (SOURCE: NRC MM 86-41)
CLOSED	06-003-03 Upgrade existing drawings as drawing revisions occur. (SOURCE: NRC MM 86-41)
CLOSED	06-003-04 Examine prints made from all existing aperture cards and identify poor quality aperture cards and poor quality original prints. (SOURCE: NRC MM 86-41)
CLOSED	06-003-05 Prioritizing poor quality original drawings for restoration. (SOURCE: NRC MM 86-41)
CLOSED	06-003-06 Prepare plan and schedule for drawing restoration work. (SOURCE: NRC MM 86-41)
CLOSED	06-003-07 Upgrade quality of all equipment in the drawing processing cycle. (SOURCE: NRC MM 86-41)
CLOSED	06-003-08 Implement 100% quality inspection of new aperture cards sent to the Document Control Center. (SOURCE: NRC MM 86-41)

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MISCELLANEOUS

CLOSED

06-003-09

Train clerical staff in drawing legibility requirements.

(SOURCE: NRC MM 86-41)

CLOSED

06-003-10

Issue Work instructions and initiate monthly random sampling of DCC issued drawings to monitor operator and equipment performance.

(SOURCE: NRC MM 86-41)

26-Sep-88

MISCELLANEOUS

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ISSUE: 06-004  
IMPROVE THE CONTROL OF PROCEDURE ISSUE TO  
ENSURE THAT ONLY THE LATEST REVISION OF A  
PROCEDURE IS ISSUED

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DUE/STATUS

ACTION

CLOSED

06-004-01  
Devise controls to ensure that only the latest  
revisions of NOD procedures are issued.  
(SOURCE: SALP 86-99)

## MISCELLANEOUS

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ISSUE:	06-005 COMPLIANCE OF EMERGENCY ACTION LEVELS WITH NUREG-0654
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	06-005-01 Review EALs against NUREG-0654. (SOURCE: NRC MM 86-41)
CLOSED	06-005-02 Revise Procedures 5.7.1.1, 5.7.1.2, 5.7.1.3, 5.7.1.4 and 5.7.1.5 to comply with NUREG-0654. (SOURCE: NRC MM 86-41)
CLOSED	06-005-03 Revise lesson plans as necessary for operator training on EALs. (SOURCE: NRC MM 86-41)
CLOSED	06-005-04 Conduct operator training on revised EAL procedures. (SOURCE: NRC MM 86-41)
CLOSED	06-005-05 Revise, print and distribute wall mounted EAL displays. (SOURCE: NRC MM 86-41)



26-Sep-88

MISCELLANEOUS

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ISSUE: 06-006  
MAINTENANCE OF POSITIVE PRESSURE AT THE EOF  
UNDER EMERGENCY CONDITIONS

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DUE/STATUS

ACTION

CLOSED 06-006-01  
Install manometer for continuous read-out of  
EOF positive pressure values.  
(SOURCE: SALP 86-99)

CLOSED 06-006-02  
Draft and implement E.P. Work Instruction to  
require regular verification of positive  
pressure at EOF.  
(SOURCE: SALP 86-99)

26-Sep-88

MISCELLANEOUS

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ISSUE: 06-008  
ENGINEERED SAFEGUARD FUNCTIONS

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D/E/STATUS

ACTION

CLOSED

06-008-01

Evaluate the 4 ESF actuations identified as being caused by incorrect or deficient procedures to determine if the procedure development and validation process is adequate.

(SOURCE: NRC EM 87-45)

26-Sep-88

MISCELLANEOUS

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ISSUE: 06-009  
IMPROVEMENT IN PROCEDURES, COMMUNICATIONS AND  
OPERATOR TRAINING FOR SAFE CONTROL OF THE PLANT  
DURING A NON-ROUTINE EVENT.

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DUE/STATUS

ACTION

CLOSED

06-009-14  
Review the emergency action levels regarding  
loss of on-site and off-site power for  
situations when fuel is loaded in the reactor  
vessel and R.C.S. temperature is less than 212  
degrees F and revise as necessary.  
(SOURCE: AIT 12/14/87)

## SECURITY

ISSUE:	07-001 SECURITY ORGANIZATIONAL AND STAFFING IMPROVEMENTS
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	07-001-01 Security Group reporting line changed from plant management to Vice President Nuclear Operations (currently senior V. P. level). (SOURCE: SALP 86-99)
CLOSED	07-001-02 Establish Security Operations Group. (SOURCE: NRC MM 86-41)
CLOSED	07-001-03 Add one BECo Security Supervisor per shift. (SOURCE: NRC MM 86-41)
CLOSED	07-001-04 Establish Administration, Compliance and Technical specialist positions and fill positions with permanent BECo employees. (SOURCE: NRC MM 86-41)
CLOSED	07-001-05 Establish three new supervisory positions in the plant areas of Main Gate Access, Central Alarm Station and Secondary Alarm Station. (SOURCE: NRC MM 86-41)
CLOSED	07-001-06 Increase the total security force. (SOURCE: NRC MM 86-41)
CLOSED	07-001-07 Reduce the supervisor-to-patrolman ratio from 1-20 to 1-10 or less. (SOURCE: NRC MM 86-41)
CLOSED	07-001-08 Perform root cause analysis of continued weaknesses in follow-up on problems. (SOURCE: NRC MM 86-41)

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SECURITY

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ISSUE: 07-002  
IMPROVE THE SECURITY SYSTEMS IN ORDER TO  
INCREASE SECURITY EFFECTIVENESS AND REDUCE  
RELIANCE ON COMPENSATORY MEASURES.

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	07-002-01 Conduct a system level requirements analysis to identify improvements required in the hardware. (SOURCE: NRC MM 86-41)
CLOSED	07-002-02 Corrective maintenance to security equipment and hardware is scheduled to be complete prior to restart. (SOURCE: SALP 86-99)
CLOSED	07-002-03 Monitor the material status of the security system. A security staff technical specialist will track the outstanding maintenance items, monitor preventive maintenance and surveillance status and establish the primary focus for major modifications of the security systems. (SOURCE: NRC MM 86-41)
CLOSED	07-002-04 Prioritize the Security maintenance requests. Establish controls to ensure proper prioritization of future security maintenance requests. (SOURCE: NRC MM 86-41)
CLOSED	07-002-05 Resident NRC Inspector provided with expected completion date for Engineering evaluations of the scope of security equipment improvement. (SOURCE: NRC MM 86-30)
COMPLETED	07-002-06 Install plant design changes for CCTV, fence and intrusion detection improvements. (SOURCE: NRC MM 86-41)

## SECURITY

- CLOSED 07-002-07  
Develop a security equipment preventive maintenance program.  
(SOURCE: NRC MM 86-41)
- CLOSED 07-002-08  
Conduct an evaluation of the continual utilization of compensatory measures.  
(SOURCE: NRC MM 86-41)
- CLOSED 07-002-09  
Increase management's awareness of the use of compensatory measures.  
(SOURCE: NRC MM 86-41)
- CLOSED 07-002-10  
Discuss with the responsible individual any compensatory measures in existence greater than 30 days to ensure resolutions are promptly planned and scheduled.  
(SOURCE: NRC MM 86-41)
- CLOSED 07-002-11  
Inform NRC of new dates on installation plans for security modifications.  
(SOURCE: NRC MM 86-41)

## SECURITY

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ISSUE: 07-003  
PROCEDURE/INSTRUCTION CHANGES AND TRAINING  
REQUIREMENTS RESULTING FROM SECURITY PROGRAM  
REVISIONS

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	07-003-01 Review and update/revise security procedures and instructions. (SOURCE: NRC MM 86-41)
CLOSED	07-003-02 Review/revise the Security Training & Qualification (T&Q) Plan to ensure it remains current and reflects actual security practices. Revise training materials to reflect T&Q changes. (SOURCE: SALP 86-99)
CLOSED	07-003-03 Implement a Station Procedure to establish employee termination practices. (SOURCE: NRC IR 87-27)

## QUALITY ASSURANCE

ISSUE:	08-001 IMPROVE THE RESPONSE TO QA CORRECTIVE ACTION PROGRAM
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	08-001-01 Establish weekly meetings between QA Manager and Plant Manager to discuss QA Corrective Action problems. (SOURCE: NRC MM 86-22)
CLOSED	08-001-02 Revise the QA Corrective Action Program to incorporate non-regulatory problems. (SOURCE: NRC MM 86-22-D(5))
CLOSED	08-001-03 Revise the BEQAM to ensure that DRs get timely handling in the QA Corrective Action Program. (SOURCE: NRC MM 86-22-D(1))
CLOSED	08-001-04 Revise the BEQAM to include requirement for Vice-President notification 15 days before expiration of 90-day corrective action limit. (SOURCE: NRC MM 86-41)
CLOSED	08-001-05 Revise BEQAM to include requirement that unresolved Corrective Action issues are automatically elevated to top management. (SOURCE: NRC MM 86-41)
CLOSED	08-001-06 Vice-Presidents provide specific guidance to department managers regarding acceptable standards of responsiveness to DR's. (SOURCE: NRC MM 86-41)
CLOSED	08-001-07 Revise Nuclear Organization Procedure (NOP) to incorporate BEQAM Corrective Action requirements. (SOURCE: NRC MM 86-41)



26-Sep-88

QUALITY ASSURANCE

- CLOSED 08-001-08  
Train nuclear organization personnel on the  
Corrective Action Program and associated NOP.  
(SOURCE: NRC MM 86-41)
- CLOSED 08-001-09  
Revise QA department deficiency report  
procedure to conform to the BEQAM for the  
handling of second responses to deficiency  
reports.  
(SOURCE: NRC MM 86-41)
- CLOSED 08-001-10  
Revise the QAD Deficiency Report procedure  
description to better define the term  
"significant".  
(SOURCE: NRC MM 86-41)
- CLOSED 08-001-11  
Assess organizational and corrective action  
program effectiveness by using key performance  
indicators and periodic QAD reports.  
(SOURCE: NRC MM 86-41)

26-Sep-88

QUALITY ASSURANCE

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ISSUE:	08-002 IMPROVE QA STAFFING
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	08-002-01 Fill two vacancies on the ten-member on-site Surveillance Group with permanent BECo employees. <p style="text-align: right;">(SOURCE: BECO LTR 87.130)</p>
CLOSED	08-002-02 Fill three new personnel slots in the Quality Assurance Department with permanent BECo employees: <ul style="list-style-type: none"><li>- One auditor with health physics expertise;</li><li>- Two Quality Control personnel to inspect radwaste shipments.</li></ul> <p style="text-align: right;">(SOURCE: BECO LTR 87.130)</p>

## LICENSING

ISSUE:	09-001 IMPROVEMENTS IN THE CONTENT AND ACCURACY OF THE TECHNICAL SPECIFICATION
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	09-001-01 Review Technical Specifications to identify incorrect specifications and submit request to NRC for those revisions required by startup. (SOURCE: SALP 86-99)
CLOSED	09-001-02 Establish a list of criteria for Technical Specification changes which will include clarity of basis, action statement/LCO agreement, precise wording. (SOURCE: NRC MM 86-41)
CLOSED	09-001-03 Schedule Technical Specification review and upgrade for those Tech Spec amendments required before startup. (SOURCE: NRC MM 86-41)
CLOSED	09-001-04 Develop schedule for streamlining Technical Specification review process. (SOURCE: NRC MM 86-41)
CLOSED	09-001-05 Establish a schedule of post-startup Technical Specification changes prior to startup from RFO-7. (SOURCE: NRC MM 86-41)
CLOSED	09-001-06 Submit Technical Specification change request to eliminate testing of redundant ECCS equipment. (SOURCE: NRC MM 86-41)
CLOSED	09-001-07 Submit Technical Specification change request to reduce frequency of MO 1001-28B and 29B valve stroking.

26-Sep-88

LICENSING

(SOURCE: CAL 86-10)

CLOSED

09-001-08

Review the QA finding on ATWS functional test.  
Determine if Technical Specification Table  
4.2.G should be changed to reference Note (7).

(SOURCE: NRC IR 86-25-12)

26-Sep-88

LICENSING

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ISSUE: 09-002  
RESPONSE TIME TO NRC INFORMATION REQUESTS

---

DUE/STATUS

ACTION

CLOSED 09-002-01  
Establish and proceduralize a system to ensure  
timely response to NRC information requests.  
(SOURCE: SALP 86-99)

CLOSED 09-002-02  
Complete the review of the NRC Safety  
Evaluation (April 30, 1986) and verify all  
statements accurately reflect condition of the  
plant at the end of the inspection period.  
Report any discrepancies to NRC.  
(SOURCE: NRC IR 86-25-06)

CLOSED 09-002-03  
Evaluate and report MSIV leakage rates.  
(SOURCE: CAL 86-10)

## TRAINING

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ISSUE: 10-001  
OPERATOR TRAINING

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	10-001-01 Train operations staff (ROs, BROs and STAs) in use of revised Emergency Operating Procedures. (SOURCE: NRC MM 86-32-C)
CLOSED	10-001-02 Conduct 20 hours of hands-on-training per shift on PNPS simulator emphasizing normal plant startup and operating transients. (SOURCE: NRC MM 86-32)
CLOSED	10-001-03 Conduct operator training on the Radiological Environmental Technical Specifications (RETS) per Amendment #89. (SOURCE: SALP 86-99)
CLOSED	10-001-04 Train operations staff on RHR intersystem leakage issue. (SOURCE: CAL 86-10)
CLOSED	10-001-05 Address the NRC concern with respect to licensed operator training on modifications including the spool piece location for fire system/RHR tie in and the ADS 11 minute timer familiarity. (SOURCE: NRC EC 87-51)

26-Sep-88

TRAINING

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ISSUE:	10-002 ADMINISTRATIVE IMPROVEMENTS TO THE OVERALL TRAINING PROGRAM
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	10-002-01 Revise the Nuclear Training Manual to more clearly define required participation in the licensed operator/manager requalification training program. (SOURCE: SALP 86-99)
CLOSED	10-002-02 Revise the Nuclear Training Manual requalification training in the area of preparing, administering and evaluating oral examinations. (SOURCE: SALP 86-99)
CLOSED	10-002-03 Revise the Nuclear Training Manual, Section 3.1.7 for written examination to ensure that procedural knowledge of system is reflected in future examinations. (SOURCE: SALP 86-99)

26-Sep-88

TRAINING

---

ISSUE: 10-003  
MAINTENANCE PERSONNEL TRAINING AND EDUCATION

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DUE/STATUS

ACTION

CLOSED

10-003-01  
Develop, issue and use training module for  
field supervision/monitoring activities.  
(SOURCE: NRC MM 86-41)

CLOSED

10-003-02  
Conduct training and continuing education of  
maintenance personnel assigned to work on  
Limiterque MOVs.  
(SOURCE: NRC MM 86-41)



26-Sep-88

ENGINEERING

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ISSUE: 11-001  
SAFETY EVALUATION OF DRYWELL INSULATION

---

DUE/STATUS

ACTION

CLOSED

11-001-01  
Review the 10 CFR 50.59 evaluation relative to  
the drywell insulation replacement work  
accomplished during RFO 6.

(SOURCE: GEN LTR 85-22)

26-Sep-88

ENGINEERING

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ISSUE:	11-002 RHR CHECK VALVE POSITION MONITORING
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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	11-002-01 Revise safety evaluation #1959 to clarify intent (address reduction in RHR flow). (SOURCE: CAL 86-1^)
CLOSED	11-002-02 Evaluate new RHRS and core spray check valve position monitoring system options as an improvement over the original designs. (SOURCE: CAL 86-10)



## ENGINEERING

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ISSUE: 11-005  
CHECK VALVES DESIGN REVIEW

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<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	11-005-01 Evaluate the feasibility of replacing or redesigning RHRS and Core Spray check valves to provide positive position indication. (SOURCE: CAL 86-10)
CLOSED	11-005-02 Determine the test configuration and the acceptance criteria for test of pressure drop capability of the RHRS 1001-68A and 68B check valves. (SOURCE: CAL 86-10)
CLOSED	11-005-03 Conduct the pressure drop capability test of the RHRS 1001-68A and 68B check valves. (SOURCE: CAL 86-10)

26-Sep-88

ENGINEERING

---

ISSUE: 11-006  
INVESTIGATE CAUSE OF MODE SELECTOR SWITCH  
ANOMALIES DURING POWER ASCENSION

---

DUE/STATUS

ACTION

CLOSED

11-006-01

Develop a procedure to conduct a limited power ascent and descent through the portion of power ascension when the reactor mode switch is repositioned from run mode to start-up mode. This test may confirm the root cause analysis if anomalies recur.

(SOURCE: CAL 86-10)

26-Sep-88

ENGINEERING

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ISSUE: 11-007  
DESIGN ANALYSIS OF HPCI TURBINE EXHAUST STOP  
CHECK VALVE REPLACEMENT

---

DUE/STATUS

ACTION

CLOSED

11-007-01  
Conduct design analysis to support the  
replacement of HPCI turbine exhaust stop check  
valve 2301-74.

(SOURCE: NRC IR 85-30-10)

26-Sep-88

ENGINEERING

---

ISSUE: 11-008  
USE OF NCR AND PDC PROCESSES TO PERFORM PLANT  
CHANGE/WORK

---

DUE/STATUS

ACTION

CLOSED

11-008-01  
Determine reason for use of NCR process rather  
than PDC process and correct.  
(SOURCE: SALP 86-99)

CLOSED

11-008-02  
Establish a procedure to formalize the LER  
submittal and review process.  
(SOURCE: SALP 86-99)

26-Sep-88

ENGINEERING

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ISSUE:	11-009 D/G Room Cooling Design Deficiency
<u>DUE/STATUS</u>	<u>ACTION</u>
CLOSED	11-009-01 Evaluate D/G Room cooling for adequacy. (SOURCE: NRC IR 87-27)



## ENGINEERING

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ISSUE: 11-013  
ENVIRONMENTAL QUALIFICATION FOR DRYWELL  
EQUIPMENT

---

DUE/STATUSACTION

CLOSED

11-013-01  
Update drywell equipment EQ files to establish  
an auditable trail that demonstrates that the  
equipment will meet the new SLB qualification  
profile.

(SOURCE: NRC IR 87-32-01)

CLOSED

11-013-02  
Review the Quality Assurance audit (Compliance  
with 10 CFR 50.49) and resolve any deficiency  
reports.

(SOURCE: NRC IR 87-32-02)

27-Sep-88

ENGINEERING

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ISSUE: 11-014  
P & ID upgrades.

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DUE/STATUS

ACTION

06-OCT-88

11-014-01  
Upgrade P & ID's to show design modifications implemented during this outage and any major process line changes identified during initial walkdowns.

(SOURCE: BECo LTR 87-206)

## APPENDIX 11

### CHANGES TO REGULATORY COMMITMENTS

This appendix summarizes changes to regulatory commitments from source documents referenced in Appendix 10, made since the May 1988 issuance of Volume 2, Revision 2 of the Restart Plan. The meaning of the term "commitment" as used herein has been expanded to include those statements by Boston Edison in earlier correspondence on the status of actions, as well as statements of actions to be undertaken to address specific concerns.

In some cases, reports of status were made that indicated an anticipated completion date for a commitment action later than the date of the status report. Where that date has not been met, the item is not considered a commitment change unless Boston Edison has scheduled completion of the action after restart.

Each change in this appendix will name the source document to which the change applies. Separate statements of the commitment or status as it was originally written, and of the changes are included. An explanation of the need for each change is also provided.

Appendices 8, 9 and 10 have been revised to reflect the change in the commitment in cases where the action statements were affected.

CHANGE TO CAL 86-10  
second response

**SUMMARY:**

This change cancels a commitment made as part of a response to a CAL 86-10 issue.

**ORIGINAL COMMITMENT/STATUS:**

Action

"Install EPIC computer system and have operable to monitor the RPS and PCIS systems"

Status

"RS + 120"

**CHANGE:**

Change the commitment to use GETARS for monitoring.

**SOURCE OF COMMITMENT/STATUS:**

Confirmatory Action Letter 86-10 second response

**REASON FOR CHANGE:**

BECo will monitor the mode switch during the ascent to power for any indication of problems that have been experienced in the past. This monitoring will be performed using the General Electric Transient Analysis Recording System (GETARS).

Response to Inspection Report 86-19  
&  
Volume 2, Rev. 2 of the Restart Plan

SUMMARY: This change revises a commitment status.

ORIGINAL COMMITMENT/STATUS:

ACTION

"Revise the Contaminated Material Control procedure to establish curie limits for temporary and permanent radioactive material storage areas."

Status

"Completed"- (Vol. 2 Rev. 2)

CHANGE:

Change the status to show that additional changes to the procedure are required which will be completed ninety days after Restart.

SOURCE OF COMMITMENT/STATUS:

Boston Edison letter 87-011 of 22 January 87 (NRC Inspection Report No. 50-293/86-19)  
Volume 2 Rev. 2 of the Restart Plan

REASON FOR CHANGE:

Volume 2 Revision 2 of the Restart Plan reported the status of this action as "completed" when the procedure changes were made. Later review determined that additional procedure modifications are required. Those changes will be completed approximately ninety days after Restart, (RS +90).

Change to NRC Inspection Report 87-42

**SUMMARY:** This change cancels a commitment to install positive position indication for RHRS and Core Spray check valves.

**ORIGINAL COMMITMENT/STATUS:**

**ACTION**

Install Namco proximity switches and brackets to provide positive position indication for RHRS and Core Spray check valves.

**Status**

"RS + 120"

**CHANGE:**

Delete the commitment

**SOURCE OF COMMITMENT/STATUS:**

NRC Inspection Report 87-42

**REASON FOR CHANGE**

Appendix 10 Item 11-005-01 was to evaluate the feasibility of replacing or redesigning RHRS and Core Spray check valves to provide positive position indication. Engineering review has concluded that the installation of positive position indication is not feasible.

## APPENDIX 12

### SYSTEM SUMMARY STATUS REPORT

1. The purpose of this appendix is to provide information on The System Status Milestone Review process as well as the status and results for each system listed in Table A12-1.
2. System Specialists are assigned responsibilities for tracking work on specific systems, and carry out the following functions:
  - A. Review outstanding work items in applicable work tracking systems to identify for each system listed in Table A12-1, the required work scope.
  - B. Maintain the status of work progress in a System Status Book.
  - C. Maintain the status of significant outstanding testing requirements for inclusion in a System Status Book.
  - D. Provide periodic summary status reports for management.
3. System Status Books are maintained for each of the systems listed in Table A12-1 (attached). The information in the system books typically includes walkdown reports, modification status updates, outage schedules and other pertinent information. These status books are available at P.N.P.S. for review.
4. In accordance with Volume 1 of the Restart Plan, this revision of Volume 2 includes the following information for each system listed in Table A12-1:
  - A. Major system production work completed.
  - B. Significant system issues addressed.
  - C. Outstanding system post outage work items.
  - D. Significant system testing status.
  - E. Outstanding comments/problems.

Note that the subject area descriptions cited above are slightly different from those noted in Revision 1 of Volume 2 of the Restart Plan. The first 3 topics are essentially the same but minor changes were made to the titles to make them self explanatory and to discuss the status of all Surveillance Testing not just the results of tests accomplished to date.

The Scope of Area C (outstanding System Post Outage Work Items) was expanded to reflect major items planned to be evaluated and addressed during the next cycle including RFO-8. Category E focuses on emerging problems and ongoing corrective actions for each system. The items in this section are restart actions identified from the Systems Engineers' reviews which require closure or specific scheduling in the approach to Startup.

These changes were made to incorporate refinements developed by the System Engineers and serve to provide a clearer presentation of the same material.

The System Status Reports are a working document reflecting a living process and are subject to continuing review, comment and update. As such, proposed or planned actions identified in these reports do not represent commitments on the part of Boston Edison. Such commitments are captured in the long term plan or other specific regulatory communications.

"Software" refers to non hardware work items other than procedures.

Table A12-2 provides a glossary of additional abbreviations used in this Appendix.



TABLE A12-2

APPENDIX-12 GLOSSARY OF TERMS

AC	Alternating Current
ASP	Alternate Shutdown Panel
AOG	Augmented Offgas
ATS	Analog Trip System
ATWS	Anticipated Transient Without Scram
BWR	Boiling Water Reactor
CAL	Confirmatory Action Letter
CAVS	Crack Arrest Verification System
CCW	Closed Cooling Water
CFR	Code of Federal Regulations
CRD	Control Rod Drive
CW	Circulating Water
DC	Direct Current
DG	Diesel Generator
EC	Exit Commitment
EPRI	Electric Power Research Institute
EQ	Environmental Qualification
ETS	Extended Test System
FW	Feedwater
FP	Fuel Pool
GE	General Electric
HCU	Hydraulic Control Unit

TABLE A12-2

APPENDIX-12 GLOSSARY OF TERMS

HP	High Pressure
HPCI	High Pressure Coolant Injection
HVAC	Heating Ventilating & Air Conditioning
HWC	Hydrogen Water Chemistry
Hx	Heat Exchanger
IEB	Inspection & Enforcement Bulletin (NRC)
IEU	Inspection & Enforcement Notice (NRC)
IFI	Inspector Follow Item
IGSCC	Inter Granular Stress Corrosion Cracking
ILRT	Integrated Leak Rate Testing
IRM	Intermediate Range Monitor
ISI	In-Service Inspection
LER	Licensee Event Report
LOOP	Loss of Offsite Power
LLRT	Local Leak Rate Testing
LP	Low Pressure
LPRM	Local Power Range Monitor
LRM	Log Radiation Monitor
M-G	Motor Generator
MOV	Motor Operated Valve
MSIV	Main Steam Isolation Valve
MSTP	Master Surveillance Tracking Program

TABLE A12-2

APPENDIX-12 GLOSSARY OF TERMS

NDE	Non Destructive Examination
NED	Nuclear Engineering Department
NOB	Nuclear Operations Department
NRC	Nuclear Regulatory Commission
PASS	Post Accident Sampling System
PCB	Poly-Chlorinated-Biphenyl
PCIS	Primary Containment Isolation System
PM	Preventive Maintenance
Pre-Op	Preoperational
PRM	Process Radiation Monitor
PWT	Post Work Test
QC	Quality Control
RBCCW	Reactor Building Closed Cooling Water
RBM	Rod Block Monitor
RC	Regulatory Commitment
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RHR	Residual Heat Removal
RPS	Reactor Protection System

TABLE A12-2

APPENDIX-12 GLOSSARY OF TERMS

RSIL	Rapid Service Information Letter (G.E.)
RTV	Room Temperature Vulcanizing
RV	Relief Valve
RWCU	Reactor Water Clean-Up
RWL	Reactor Water Level
SBGT	Stand-By Gas Treatment
SBLC	Stand-By Liquid Control
SIL	Service Information Letter (GE)
SOER	Significant Operating Experience Report (INPO)
SRM	Source Range Monitors
SRV	Safety Relief Valve
SSW	Salt Service Water
TBCCW	Turbine Building Closed Cooling Water
TIP	Traversing Incore Probe
T/G	Turbine Generator
TP	Temporary Procedure
TS	Technical Specification
UNR	Unresolved Issue
UT	Ultrasonic Testing

TABLE A12-1

## System Status Reviews as a Function of Plant Milestone

Plant System	Milestone			
	Reload	Hydro	ILRT	Critical
Main Steam		X	X	X
Reactor Recirculation	X	X	X	X
Control Rod Drives	X	X	X	X
Sampling	X	X	X	X
Feedwater		X	X	X
Turbine Steam Bypass				X
Offgas/Augmented Offgas				X
Primary Cont. Atmos. Control			X	X
Residual Heat Removal	X	X	X	X
Reactor Standby Liquid Control	X	X	X	X
Reactor Water Cleanup	X	X	X	X
Reactor Core Isol Cooling		X	X	X
Core Spray	X	X	X	X
Gland Seal				X
Extraction Steam				X
Heater Drains & Vents				X
Condensate	X			X
Fuel Pool Cooling	X			
Demineralized Water	X	X	X	X
High Pressure Coolant Inject.		X	X	X
Heating Ventilating & Air Cond.	X	X	X	X
Condensate Vent & Drain				X
Condensate Transfer	X			X
Circulating Water	X			X
Screen Wash				X
Service Water	X	X	X	X
Closed Cooling Water	X	X	X	X
Instrument Air	X	X	X	X
Service Air	X	X	X	X
Turbine Lube Oil				X
Diesel Generator Fuel	X	X	X	X
Communications	X			X
Instrumentation & Control	X	X	X	X
Power Systems	X	X	X	X
Standby Gas Treatment	X	X	X	X
Fuel Handling & Storage	X			
Containment & Reactor	X	X	X	X
Turbine Generator & Aux.				X
Condenser & Condenser Aux.	X			X
Reactor Vessel & Aux.	X	X	X	X
Diesel Gen. & Aux.	X	X	X	X
Hydrogen Water Chemistry				X

**NOTES:** \* X indicates comprehensive update/review required to enter each milestone.

\* The "Hydro" column identifies those systems required for a Class I Hydro.

## RFO-7 SYSTEM STATUS SUMMARY REPORT

System: 1 Main Steam  
(Main Steam Isolation Valves  
and Upstream Piping)

Data Date: 9/26/88

System Eng: D. Ferraro

Prepared By: Donald Ferraro

Reviewed By: [Signature]

Approved By: [Signature]

### Major System Production Work Completed:

- Inspect/Overhaul of Safety Relief Valves (SRV) at Wyle Lab
- Design change to Main Steam Isolation Valves (MSIV) pilot poppet completed
- Replaced Main Steam supports/snubbers
- Rebuild of Main Steam Isolation Valves (MSIV) solenoids complete

### Significant System Issues Addressed:

- Analog Trip System (ATS) Modification
- TP 86-167 Test of MSIV closure accumulators complete
- SRV testing of Pilot Poppet Material Modification to prevent pilot poppet sticking

### Outstanding System Post Outage Work Items:

- No outstanding post outage work

### Significant System Testing Status:

- LLRT of MSIVs completed & satisfactory
- Class 1 Hydro complete & satisfactory
- SRV flanges require leak check and visual inspection at pressure
- TP 87-219 MSIV opening test to be performed during Startup to verify proper operation of modified MSIV pilot poppet assemblies
- Surveillance testing is current or scheduled in the MSTP

System 1 (D. Ferraro) continued:

Outstanding Comments/Problems:

• Work Status

- 1 Restart MR Is In Planning
- 4 Outstanding Restart MR's Are Working
- 13 Outstanding Restart MR's Are In Test/Closeout  
(9 require steam for post work test, 4 in closeout)

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #1 Main Steam  
(Downstream of Main Steam Isolation Valves)

Data Date: 9/26/88

System Eng: P. Trepanier

Prepared By: *Pamela Trepanier*  
Reviewed By: *M. Pinto*  
Approved By: *W.A. Clary*

Major System Production Work Completed:

- The (4) moisture separators were inspected. Inlet and outlet welds were dye checked. All previously Furmanited repairs were made permanent. The majority of this work was on level instrumentation on the moisture separator drain tanks.

Significant System Issues Addressed:

- Removal of nine hex nuts which were tack welded to main steam lines B & C (Nuts are believed to have been part of Startup Test apparatus)

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Post Work Testing of repacked/replaced valves in Moisture Separator area and steam supply to Steam Jet Compressors in off-gas system, to be performed when main steam is available.



System #1 (P. Trepanier) continued:

Outstanding Comments/Problems:

- A pipe hanger supporting the Steam Jet Air Ejector pressure control valve is currently being redesigned by the Nuclear Engineering Department. Hanger replacement is scheduled prior to Startup.
- Work Status
  - 1 Working Restart Software Item
  - 1 Outstanding Restart MR Remains To Be Worked

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #2 Recirculation

Date: 9/26/88

System Eng: Steven Bernat

Prepared By: Steven Bernat  
Reviewed By: J. G. [unclear]  
Approved By: W. C. [unclear]

Major System Production Work Completed:

- Motor Generator (M-G) sets refurbished
- Installed Anticipated Transient Without Scram (ATWS) modifications to drive motor breaker (reliability improvement)
- Alarms for pump motor vibration and bearing oil level separated
- Pump A oil cooler changed out
- Condensation problem above panel 2225B eliminated
- Cleaned tubes on A&B MG set oil coolers
- Seal welded pump flanges to stop leakage in drywell

Significant System Issues Addressed:

- NRC concern over field breaker trip failures addressed by adding a trip to the drive motor breakers and original equipment manufacturer overhaul of AKF Breakers at their facility
- System reliability improved by refurbishing M-G sets

Outstanding System Post Outage Work Items:

- Leak check various valves at pressure
- Monitor seal purge flow control valve performance at pressure

Significant System Testing Status:

- Surveillance testing is current or scheduled in the MS<sup>2</sup>P

System #2 (S. Bernat) continued:

Outstanding Comments/Problems:

- Replacing several snubbers in the drywell.
- Work Status
  - 6 Outstanding Restart MR's Remain To Be Worked
  - 10 Outstanding Restart MR's are Working
  - 30 Outstanding Restart MR's Are In Test/Closeout
  - 3 Outstanding Restart Software Items (1 F&MR, 2 PDC's)

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #3 Control Rod Drive (CRD)

Data Date: 9/26/88

System Eng: Jeff Calfa

Prepared By: J.P. Calfa  
Reviewed By: J.P. Calfa  
Approved By: W.S. Clancy

Major System Production Work Completed:

- 'B' Control Rod Drive (CRD) Pump and Motor overhauled
- 15 Control Rod Blades replaced (10 with hafnium tipped hybrids)
- 16 Hydraulic Control Units (HCUs) had 101, 102, 112 isolation valves rebuilt (SIL 419)
- 23 CRDs removed and rebuilt
- 96 Scram Valves had diaphragms replaced (IEN 86-109)
- 145 HCUs had holdown bolts replaced and torqued (LER 87-006-0)
- 145 HCUs had 117 and 119 vent valves inspected

Significant System Issues Addressed:

- HCU Holdown Bolts (LER 87-006-00)
- Scram valve maintenance (IEN 86-109)
- HCU Isolation Valves (SIL 419)
- CRD vent valves Failure & Malfunction Report

Outstanding System Post Outage Work Items:

- Restoration of stabilizing valves to balance system pressure

Significant System Testing Status:

- Leak checked CRDs during Hydro
- Scram testing performed after Hydro
- Need to restroke all rods to verify movement (in progress)
- Surveillances are current or scheduled in the MSTP

System #3 (J. Calfa) continued:

Outstanding Comments/Problems:

• Work Status:

- 1 Outstanding Restart MR Is Working
- 4 Outstanding Restart MR's Are In Test/Closeout  
(Planned as Part of Power Ascension Testing)

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #4 Sampling

Data Date: 9/26/88

System Eng: D. Ferraro

Prepared By: *Dick Ferraro*

Reviewed By: *[Signature]*

Approved By: *WA Cherry*

Major System Production Work Completed:

- Installation of two new State-of-the-Art sample racks and chiller units - Reactor Water Cleanup (RWCU) Sampling and Analysis Rack #1 (C-121) and the Condensate and Feedwater Sampling and Analysis Rack #2 (C-122)
- Post Accident Sample System (PASS) flow meter #661 installed

Significant System Issues Addressed:

- PASS piping heat trace and material inspection

Outstanding System Post Outage Work Items:

- Grab sample capability: Changed the installation of the RHR sample sinks from a temporary to a permanent condition.

Significant System Testing Status:

- TP 87-131: Post modification testing of sample sink C-122 completed
- TP 87-177: Post modification testing of sample sink C-121 completed

Outstanding Comments/Problems:

- Need sample sinks placed in automatic service
- Work Status

3 Outstanding Restart MR's Remain To Be Worked  
2 Outstanding Restart MR's Are Working  
5 Outstanding Restart MR's Are In Test/Closeout  
2 Outstanding Restart Software Items

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #6 Feedwater

Data Date: 9/26/88

System Eng: K. Hemeon

Prepared By: [Signature]

Reviewed By: [Signature]

Approved By: [Signature]

Major System Production Work Completed:

- Refurbished Feedwater (FW) pump motors
- Refurbished FW pumps (including new mechanical seals)
- Inspected and modified FW pump discharge check valves
- Replaced soft seats on main FW check valves with new material
- Made permanent repairs to various Furmanited leaks
- Performed extensive Ultrasonic Testing (UT) on FW piping
- Refurbished 'A' FW Regulating valve

Significant System Issues Addressed:

- High Energy Piping Erosion/Corrosion (IEN 86-106, SOER 87-03)
- Check valve problems (IEN 86-01, SOER 86-03)
- Leakage through main FW check valves

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- 8.E.6 Calibrate RX FW Instrument - Working

Outstanding Comments/Problems:

- Work Status
  - 1 Outstanding Restart MR Remains To Be Worked
  - 1 Outstanding Restart MR Is Working
  - 10 Outstanding Restart MR's Are In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: # 7 Turbine Bypass  
#15 Gland Seal  
#51 Turbine Generator & Aux  
System Eng: C. Jungclas

Data Date: 9/26/88

\*see also System 45J

Prepared By: CM Jungclas  
Reviewed By: M. D. [Signature]  
Approved By: W. A. [Signature]

Major System Production Work Completed:

- High Pressure (HP) turbine: complete disassembly, steam path parts sandblasted and non-destructively tested, diaphragms repaired, shell inspected, and rotor inspected
- 'A' Low Pressure (LP) turbine: complete disassembly, steam path parts sandblasted and non-destructively tested, diaphragms repaired, inner casing horizontal joint steam cuts repaired, 24 last stage pins replaced (continued on next sheet)

Significant System Issues Addressed:

- LP Turbine shaft axial keyways ultrasonic test performed
- LP Turbine last stage buckets inspected and 24 pins replaced
- Generator hydrogen seals repaired
- Reduction of set point controlling the bypass of the scram signals on Turbine Control Valve Fast Closure & Turbine Stop Valve Closure as recommended by GE SIL 423

Outstanding System Post Outage Work Items:

- Turbine Control Adjustments per System #45J
- Turbine torsional testing per G.E. TIL 1002 to be performed just prior to RFO 8

Significant System Testing Status:

- Generator Air Test complete
- Generator core monitor test to be complete during Startup
- Turbine trip testing - in progress

Outstanding Comments/Problems:

- Stator cooling water system leaks (repairs in progress)
- Low condenser vacuum alarm and scram setpoints (setpoint change in review)



System #7, 15, 51 (C. Jungclas) continued:

- Work Status

- 3 Outstanding Restart MR's Remain To Be Worked
- 3 Outstanding Restart MR's Are Working
- 6 Outstanding Restart MR's Are In Test/Closeout
- 1 Outstanding Restart Software Item

Major System Production Work Completed

- "A" LP Turbine (continued)

Inspected inner casing and outer hood, inspected LP rotor and buckets, torqued bolts, replaced all diaphragm packing and packing springs, inspected atmospheric relief diaphragms, replaced exhaust hood spray nozzles and inspected extraction line expansion joints.

- Generator - performed High Potential Testing on Stator, replaced hydrogen seals and insulated bolt sleeves and washers, cleaned and inspected collector rings and brush rigging, installed new shaft grounding straps, repaired main lead box manways (hydrogen leaks), replaced gaskets on all oil piping, cleaned 2 hydrogen coolers.
- Alterrex - replaced shims under Alterrex, cleaned air cooler heat exchanger, greased and torqued bus bars, installed solid panels under stator base to correct airflow paths, repaired air cooler vent valve leak, replaced NIBCO valves in rectifier banks.
- Bearings - bearings inspected, T-9 bearing ring repaired, various thermocouples replaced, thrust bearing checked for wear and shaft grounding.
- Couplings - replaced Alterrex coupling, shimmed to correct alignment at A&B coupling.
- Turning Gear - inspected, clearances and alignment checked.
- Lift pumps - replaced 5 pumps, calibrated pressure switches, replaced inlet check valves adjacent to bearings, changed filters, drilled air vent holes on suction side pump elbows.
- Stator Cooling System - inspected 'A' & 'B' pumps, replaced bearings, seals, bushings, guides and mechanical seals, replaced both pump motors, replaced filters, replaced rectifier bank shut off valves, calibrated gauges and flowmeter.

System #7, 15, 51 (C. Jungclas) continued:

- Control valves - all 4 valves overhauled.
- Main stop valves - #1 and #2 inspected and tested.
- Combined Intercept Valves - #2 and #4 inspected and tested.
- Seal Oil System - Inspected Main Seal Oil Pump (MSOP) Recirculating Seal Oil Pump (RSOP) and Emergency Seal Oil Pump (ESOP), replaced rotating parts, inspected MSOP and RSOP motors, replaced motor bearings, replaced Seal Oil Vacuum Pump (SOVP), rebuilt level control valve, rebuilt pressure governor and cleaned vacuum tank.
- Front Standard - Replaced Mechanical Pressure Regulator (MPR) bean valve.

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #8 Augmented Offgas (AOG)

Data Date: 9/26/88

System Eng: R. H. Young

Prepared By: R.H. Young

Reviewed By: M. Deuts

Approved By: W.S. Clary

Major System Production Work Completed:

- Augmented Offgas (AOG) Refurbishment (mechanical complete, electrical, and instrumentation in progress)
- "A" recombiner, preheater, and condenser vessel Non Destructive Examination (NDE)
- Recombiner vessel support replacement
- Small bore pipe replacement

Significant System Issues Addressed:

- Hydrogen Recombiner Area Equipment Condition
- AOG H<sub>2</sub> analyzer operation
- Offgas condenser level control

Outstanding System Post Outage Work Items:

- Complete refurbishment of 'A' recombiner train

Significant System Testing Status:

- Post work testing of repaired equipment for MR closeout pending
- System pressure test to PWT leak repairs and steam piping
- Offgas Flow Calibration 8.E.8 after MR's work

Outstanding Comments/Problems:

- Cycle 8 operation will be with refurbished single train (limited redundancy)
- Work Status

- 1 Outstanding Restart MR Is Open
- 4 Outstanding Restart MR's Are Working
- 5 Outstanding Restart MR's Are In Test/Closeout
- 1 Outstanding Restart Software Item

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #9 Containment Atmospheric Control

Date: 9/26/88

System Eng: D. Ferraro

Prepared By: Donald Ferraro

Reviewed By: R. L.

Approved By: W. A. Clancy

Major System Production Work Completed:

- Backup Nitrogen System installed and tested

Significant System Issues Addressed:

- Installed Backup N<sub>2</sub> supply to increase N<sub>2</sub> purge capacity on site.

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Perform equipment checkout/lineup of Liquid Nitrogen Vaporizer Trailer

Outstanding Comments/Problems:

- Work Status

3 Outstanding Restart MR's Are In Test/Closeout

## RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #10 Residual Heat Removal (RHR)

Data Date: 9/26/88

System Eng: Steven Bernat

Prepared By: Steven Bernat

Reviewed By: J. W. [Signature]

Approved By: W. A. [Signature]

### Major System Production Work Completed:

- Containment spray header nozzle and drains redesigned
- Pumps rebuilt
- Valves 29B and 36A/B replaced
- Valves 68B and 28A & B repaired
- Numerous relays replaced
- B heat exchanger flange furmanited
- B heat exchanger bottom head drain cut and capped
- Provided calibrated leak off capability for low pressure piping
- Corrected 10CFR21 single failure concern for minimum flow valves
- New disks installed in 28 A/B valves
- Reworked minimum flow check valves to prevent suction piping pressurization while in shutdown cooling
- Repaired 28 A/B valve yokes
- Completed overhaul of 28 A/B motor operators and lowered torque switch settings

### Significant System Issues Addressed:

- Small bore piping vibration addressed
- Root cause and corrective action of cracked welds and loose bolts in low pressure ECCS
- Confirmatory Action Letter (CAL) 86-10 issues
- Hydrodynamically tested inboard check valves (68A/B), one refurbished, both left with zero leakage
- Pump impeller wear ring and motor surge ring bracket cracking addressed
- Root cause of 28 valve yoke and backseat failures

### Outstanding System Post Outage Work Items:

- RFO-8 Add small bore pipe supports to selected lines in the drywell
- RFO-8 Replace containment spray header drain hose with permanent pipe
- RFO-8 Replace MO-1001-28A&B valve yokes
- RFO-8 Reinspect Stellite backseat on MO-1001-28A
- RFO-8 Reinspect A heat exchanger gasket for internal leak
- RFO-8 Reinspect containment spray header drain nozzles for plugging
- RFO-8 Reinspect containment spray headers for rust

System #10 (S. Bernat) Continued:

Significant System Testing Status:

- Surveillances are scheduled in the MSTP
- Completed MOVATS testing of MO-1001-28A/B to confirm torque switch settings

Outstanding Comments/Problems:

- Replacing several snubbers in the drywell
  
- Work Status
  - 3 Outstanding Restart MR's Remain To Be Worked
  - 11 Outstanding Restart MR's Are Working
  - 29 Outstanding Restart MR's Are In Test/Closeout
  - 6 Outstanding Restart Software Items (1 ESR, 2 F&MR's, 3 PDC's)

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #11 Stand By Liquid Control (SBLC)

Data Date: 9/26/88

System Eng: J. Calfa

Prepared By: J. Calfa

Reviewed By: J. Calfa

Approved By: W. A. Clancy

Major System Production Work Completed:

- o Replacement of SBLC solution (higher isotopic) to meet requirements of 10CFR50.62.
- o Installed Flowmeter in return to storage tank line.
- o Rebuilt PSV 1105A/B discharge relief valves per 3.M.4-80
- o Corrected 1101-1 indication problem

Significant System Issues Addressed:

- o Resolved discharge relief valve failures

Outstanding System Post Outage Work Items:

- o NONE

Significant System Testing Status:

- o Required Surveillances are current

Outstanding Comments/Problems:

- o None
- o Work Status

1 Outstanding Restart Software Item in Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #12 Reactor Water Clean Up (RWCU)

Data Date: 9/26/88

System Eng: J. Purkis

Prepared By: *[Signature]*

Reviewed By: *[Signature]*

Approved By: *[Signature]*

Major System Production Work Completed:

- PMS performed on: MO-1201-5, MO-1201-2, MO-1201-80, MO-1201-85
- Many system manual valves reworked
- New RWCU holding pump installed
- DPIS 1243, 1244 calibrated & lines flushed
- System tie ins for Hydrogen Water Chemistry completed

Significant System Issues Addressed:

- Flushing of lines to DPIS 1243, 1244 to minimize potential for spurious PCIS actuation of RWCU (Hydraulic Snubber Issue)

Outstanding System Post Outage Work Items:

- Special Test of CV1239 to be performed during power ascension

Significant System Testing Status:

- Completed required LLRT satisfactory
- Completed Hydro
- Required technical Specification (TS) Surveillances are current

Outstanding Comments/Problems:

- Resolution of DPIS hydraulic snubber settings (PDC in implementation)
- Installation of missing pipe supports on DPIS 1243, 1244 (PDC in implementation)
- Work Status
  - 2 Outstanding Restart MR's Remain To Be Worked
  - 2 Outstanding Restart MR's Are In Test/Closeout
  - 5 Outstanding Restart Software Items



RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #13 Reactor Core Isolation Cooling (RCIC)

Data Date: 9/26/88

System Eng: R. Mattos

Prepared By: R. J. Mattos

Reviewed By: R. J. Mattos

Approved By: W. S. Clary

Major System Production Work Completed:

- Turbine 5 year Preventive Maintenance (PM)/overhaul
- Motor Operated Valve (MOV) overhaul/Movats testing
- Gland seal leak-off system restored
- Turbine insulated with Asbestos free material

Significant System Issues Addressed:

- Increased Turbine Exhaust Set Point
- UNR 86-06-06 - residual flow issue root cause identified
- RC 86-21-03 - Logic System Functional Tests
- UNR 86-21-04 - simulated automatic actuation test
- I.E.B. 85-03 MOV (Limitorque) switch setting
- I.E.B. 88-04 - minimum flow issue

Outstanding System Post Outage Work Items:

- Operability Testing as noted below
- RCIC turbine "cold quick" start EC 87-51-02 (procedure 8.5.5.1)

Significant System Testing Status:

- Completed: TP 87-198 RCIC Testing using aux. steam satisfied:
  - 8.5.5.3 (full flow at 150 psi)
  - 8.5.5.6 (A.S.P. operability of pump and valves)
  - 2.2.22 (overspeed trip test)
- Normal surveillances due prior to startup as per MSTP
- IEB 85-03 MOV Testing at pressure to be scheduled after power ascension program

System 13 (R. Mattos) continued:

Outstanding Comments/Problems:

- Evaluate repeating procedure 8.5.5.3 (full flow at 150 psi)
- Complete snubber replacement
- Work Status
  - 2 Outstanding Restart MR's Remain To Be Worked
  - 29 Outstanding Restart MR's Are In Test/Closeout

## RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #14 Core Spray

Date: 9/26/88

System Eng: J. Gaedtke

Prepared By:

Reviewed By:

Approved By:

### Major System Production Work Completed:

- Test return check valves 1400-35/214 discs replaced
- HFA Relay replacements
- MOV 1400-4A and 4B yoke bonnet replacements

### Significant System Issues Addressed:

- Core spray test return check valve concerns
- MOV 1400-4A and 4B yoke failure root cause concerns
- Procedure/drawing discrepancies
- Hanger and support inspections
- Pump Impeller wear rings inspected and replaced to address IGSCC concerns
- Surge ring brackets on one motor Stator inspected and no cracking found
- Repositioned yoke clamp to correct orientation (MR -14-43)
- IIB 88-04 minimum flow issue

### Outstanding System Post Outage Work Items:

- ESR 88-652 replacing Bartons with Rosemount transmitters
- RFO-8, Correct vertical orientation of Core Spray Check Valves 1400-35 and 1400-214
- RFO-8, Address Core Spray 1400-9A and 9B position indication
- ESR 86-373 vibration on small bore piping

### Significant System Testing Status:

- Surveillances are current or scheduled in the MSTP

### Outstanding Comments/Problems:

- Work Status
  - 2 Outstanding Restart MR's Are In Test/Closeout
  - 1 Outstanding Restart Software Item (NCR 88-106)

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #16 Extraction Steam  
#17 Feedwater Heater Vents & Drains

Data Date: 9/26/88

System Eng: P. Trepanier

Prepared By:

*Paul A. Trepanier*

Reviewed By:

*H. Bente*

Approved By:

*W. C. Cunniff*

Major System Production Work Completed:

- Performed maintenance on extraction steam bleeder trip valve motor operators
- Repaired dump sparger for feedwater heater E-105A
- Completed additional non destructive examination to confirm no erosion [Significant Operating Experience Report (SOER) 87-03: High energy pipe inspections].

Significant System Issues Addressed:

- Motor operator maintenance
- Pipe erosion inspections completed satisfactorily (SOER-87-03)

Outstanding System Post Outage Work Items:

- No outstanding system post outage work

Significant System Testing Status:

- None outstanding

Outstanding Comments/Problems:

- Work Status

6 Restart MR's Are In Post Work Testing

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #18 Condensate

Data Date: 9/26/88

System Eng: K. Hemeon

Prepared By: Keith Hemeon

Reviewed By: M. Duto

Approved By: W. Long

Major System Production Work Completed:

- Extensive UT of condensate system piping
- Replacement of conductivity elements and recorders
- Inspected condensate pump discharge check valves
- Refurbished 2 of 3 condensate pump motors
- Inspected & refurbished internals of condensate demineralizers (Condemins)

Significant System Issues Addressed:

- Erosion/Corrosion addressed (IEN 86-106, SOER 87-03)
- Conductivity measurement equipment upgraded
- Potential check valve degradation addressed by multiple tests/inspections (SOER 86-03)
- Condensate Demin liner repairs for man-ways and covers
- Reorientated condemn vent valves as a reliability improvement

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- TP 87-271 Condensate demineralizer conductivity elements - complete
- TP 87-209 Pre-op of condensate demineralizer vent valves - complete

Outstanding Comments/Problems:

- Complet. condensate demineralizer refurbishment
- Work Status

4 Outstanding Restart MR's Are In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #19 Fuel Pool Cooling

Data Date: 9/26/88

System Eng: J.Gaedtke

Prepared By:

Reviewed By:

Approved By:

Major System Production Work Completed:

- New spent fuel racks installed - increased capacity
- FP cooling backflush filter placed in service
- Replaced motor and pump on fuel pool cooling pump "B"
- Replaced motor on fuel pool cooling pump "A"

Significant System Issues Addressed:

- Reviewed adequacy of brace on fuel pool heat exchanger
- Disassembled fuel pool cooling pump B to correct vibration
- Fuel pool liner - precipitate buildup at drain

Outstanding System Post Outage Work Items:

- Inspect neutron absorbing material in fuel racks  
(IEN 87-43)

Significant System Testing Status:

- Surveillance testing is current or scheduled by MSTP

Outstanding Comments/Problems:

- Work Status

1 Outstanding Restart MR Remains To Be Worked

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #21 Demineralized Water

Data Date: 9/26/88

System Eng: R. N. Young

Prepared By: R. N. Young

Reviewed By: M. Pinto

Approved By: W. Young

Major System Production Work Completed:

- NONE

Significant System Issues Addressed:

- NONE

Outstanding System Post Outage Work Items:

- Complete analysis for maintaining portable trailer vs. repairing or replacing Makeup Demineralizer System

Significant System Testing Status:

- NONE

Outstanding Comments/Problems:

- Work Status
  - 1 Outstanding Restart MR Is Working

System: #22 Main Generator Hydrogen

Date: 9/26/88

System Eng: C. Jungclas

Prepared By: C. Jungclas

Reviewed By: M. Perito

Approved By: W. King

Major System Production Work Completed:

- Hydrogen Water Chemistry tie-in complete
- Hydrogen flow totalizer installed
- Hydrogen seals on main generator reworked/repared

Significant System Issues Addressed:

- Hydrogen leakage - Main Generator

Outstanding System Post Outage Work Items:

- None identified

Significant System Testing Status:

- Hydrogen Water Chemistry tie-in post work testing - in progress
- Main generator air in-leakage test - completed satisfactorily

Outstanding Comments/Problems:

- Work Status

No Outstanding MR's



RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #23 High Pressure Coolant Injection (HPCI)

Data Date: 9/26/88

System Eng: R. Mattos

Prepared By: R. Mattos

Reviewed By: [Signature]

Approved By: [Signature]

Major System Production Work Completed:

- Installed exhaust line vacuum breakers (PDC 85-59)
- Turbine 5 year P.M./Overhaul
- MOV overhaul/MOVATS testing
- Turbine/piping insulated with asbestos free material
- Steam inlet piping alignment and turbine redowling
- HPCI Room and Sump Room decontaminated and painted
- Installed Torus level/temp. indication at Alternate Shutdown Panel (ASP)

Significant System Issues Addressed:

- IFI 85-18-01 - Water hammer issue addressed
- RC 86-21-03 - logic system functional tests
- UNR 86-21-04 - Simulated automatic actuation test
- I.E.B. 85-03 MOV (Limitorque) switch settings
- I.E.B. 88-04 - minimum flow issue

Outstanding System Post Outage Work Items:

- Operability Testing as noted below
- HPCI Turbine "cold quick start" EC 87-51-02 (Procedure 8.5.4.1)
- Stop valve balance chamber adj at 1000psi (3.M.4-81)

Significant System Testing Status:

- Completed: Temporary Procedure #87-199 HPCI testing using aux steam satisfied:
  - 8.5.4.3 (full flow at 150 psi)
  - 8.5.4.6 (Alternate Shutdown Panel operability of pump and valves)
  - 2.2.21 (overspeed trip test)
- Surveillances current or scheduled under MSTP
- IEB-85-03 MOV Testing at pressure to be scheduled after power ascension program

System 23 HPCI (R. Mattos) continued:

Outstanding Comments/Problems:

- Check valve 2301-74 failed LLRT
- Complete snubber replacement
- Work Status
  - 13 Outstanding Restart MR's Remain To Be Worked (Includes 9 Snubber MR's)
  - 10 Outstanding Restart MR's Are Working
  - 41 Outstanding Restart MR's Are In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #24 Heating Ventilating &  
Air Conditioning (HVAC)

Data Date: 9/26/88

System Eng: M. Perito

Prepared By: M. Perito

Reviewed By: N/A

Approved By: W. Sherry

Major System Production Work Completed:

- Secondary Containment Dampers replaced with upgraded design
- Preliminary Air Balance - Turbine Building (Bldg) HVAC system

Significant System Issues Addressed:

- Control Room emergency ventilation single failure and operability
- Loss of Control Room HVAC (Procedure 2.4.149)
- Control Room temperatures
- Partial turbine Bldg HVAC balance
- Enhanced secondary containment integrity
- Replaced solenoid valves per IEN 88-24

Outstanding System Post Outage Work Items:

- Comprehensive HVAC air balance program including Control Room and Emergency Diesel Generator Rooms

Significant System Testing Status:

- Control Room ventilation TS Operability/surveillance positive pressure verification per 8.7.2.7 required
- Secondary Containment leak rate - complete
- Primary Containment temperature monitoring - at startup

Outstanding Comments/Problems:

- Work Status
  - PDC88-18 Relocate Heating System From B14/B15
  - 1 Outstanding Restart MR Is In Test/Closeout
  - 1 Outstanding Restart MR Remains To Be Worked
  - 1 Outstanding Restart Software Item Remains To Be Worked

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #25, Condenser Vent & Drains  
#52, Main Condenser  
System Eng: P. Trepanier

Data Date: 9/26/88

Prepared By: *P. Trepanier*  
Reviewed By: *M. P. [Signature]*  
Approved By: *[Signature]*

Major System Production Work Completed:

- Reworked Condenser Tube Sheets including complete removal of deteriorated tubesheet coating from all (8) condenser tubesheets and the application of a thicker, stronger coating, both 6" downtube and on the tubesheet surfaces. The waterbox sacrificial anodes were also replaced. TP 88-24, Hydrostatic Testing of the Main Condenser Steam Side, was performed on 5/11/88 to determine the source of chloride in the hotwell. Four tubes were identified as leaking during this test, and several extraction line dump/drain valves were identified as having packing leaks. The leaking tubes were plugged and the water boxes were returned to service.
- The circulating water pipe expansion joint on the 1-1 waterbox outlet side was observed to be leaking during preparation for the Main Condenser Hydro. The expansion joint was replaced, and an inspection of the remaining expansion joints was conducted.

Significant System Issues Addressed:

- Condenser Betterment Program

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Helium Leak Test of Main Condenser (during Power Ascension Program)
- Steam Jet Air Ejector Performance Test (during Power Ascension Program)
- Surveillances are current or scheduled in the MSTP

Outstanding Comments/Problems:

- Condenser in leakage testing tentatively planned during power ascension

System #25 & 52 (P. Trepanier) continued:

- Work Status

- 23 Restart MR's (System 25) Are In Post Work Testing
- 4 Restart MR's (System 52) Are In Post Work Testing
- 2 Outstanding Restart Items (System 52) Remain To Be Worked

Major System Production Work Completed (continued):

- The main condenser steam jet air ejectors were overhauled. Broken reach rod indicators were repaired, flange surfaces were cleaned and valve gaskets were replaced. (4) primary and (2) secondary vapor valves were removed and inspected. Primary steam admission valves were replaced.
- Twenty hotwell conductivity elements and their associated recorders were upgraded.
- A main condenser internal inspection was performed and several damaged hotwell spargers were repaired.

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#26 Condensate Transfer

Data Date: 9/26/88

System Eng: R. H. Young

Prepared By: RH Young

Reviewed By: M. Pinto

Approved By: W. Blaney

Major System Production Work Completed:

- NONE

Significant System Issues Addressed:

- NONE

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- NONE

Outstanding Comments/Problems:

- Work Status

No Outstanding Restart Work

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#27 Circulating Water (CW)

Data Date: 9/26/88

System Eng: P. Trepanier

Prepared By:

P. Trepanier

Reviewed By:

M. Pento

Approved By:

W. Long

Major System Production Work Completed:

- Refurbished CW Pump Motors
- Replaced shroud on A CW Pump
- Replaced Scavenging System piping
- Overhauled Waterbox Inlet, Outlet, and Crosstie Valves
- Replaced waterbox inlet and outlet temperature elements

Significant System Issues Addressed:

- Degradation of Scavenging system
- Sea water inleakage to condenser
- Erosion/corrosion of CW pump shroud

Outstanding System Post Outage Work Items:

- B CW pump shroud replacement during Refueling Outage-8

Significant System Testing Status:

- TP 87-193 Scavenging Pump Performance Test pending

Outstanding Comments/Problems:

- Work Status
  - 2 Outstanding Restart MR's Remain To Be Worked
  - 3 Restart MR's Are In Post Work Testing

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#28 Screenwash

Date Date: 9/26/88

System Eng: K. G. Lane

Prepared By: KG Lane

Reviewed By: H. Brito

Approved By: AD Cheng

Major System Production Work Completed:

- Changed pump seals from packing to mechanical seals
- Refurbished traveling screens

Significant System Issues Addressed:

- Damage to motor~~s~~ from high moisture/salt environment

Outstanding System Post Outage Work Items:

- Replacement of screenwash pump motors with heated motors
- Refurbishment of chlorination/dechlorination system
- Evaluate check valve performance history

Significant System Testing Status:

- System testing is current per MSTP
- Test spool piece is installed in 'B' strainer inlet line for continuing evaluation of improved piping material

Outstanding Comments/Problems:

- Work Status
  - 1 Outstanding Restart MR Remains To Be Worked



RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#29 Salt Service Water (SSW)

Data Date: 9/26/88

System Eng: K. G. Lane

Prepared By: K. G. Lane

Reviewed By: M. Pinto

Approved By: W. L. King

Major System Production Work Completed:

- Inspection, repair and selective replacement of SSW piping (partial interim repairs - above and below grade)
- Hydrostatic testing of both loops
- UT inspection of accessible piping (100% inspection)
- Partial screenhouse restoration

Significant System Issues Addressed:

- SSW piping degradation
- SSW pump vibration
- RBCCW/TBCCW Hx tubesheet erosion

Outstanding System Post Outage Work Items:

- Pump baseplate renewal
- NED design effort to correct pump vibration in RFO-8
- NED design effort for upgrading SSW piping in RFO-8
- Complete Screenhouse restoration post Startup

Significant System Testing Status:

- Required surveillances are current per MSTP

Outstanding Comments/Problems:

- Work Status

No Outstanding Restart MR's or Software Items

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #30 Closed Cooling Water (CCW)

Data Date: 9/26/88

System Eng: K. G. Lane

Prepared By: K. G. Lane

Reviewed By: M. Beito

Approved By: W. L. King

Major System Production Work Completed:

- Retubed 'A' Turbine Building Closed Cooling Water (TBCCW) Heat Exchanger (Hx)
- Plugged tube leaks in 'B' TBCCW Hx and 'B' Reactor Building Closed Cooling Water (RBCCW) Hx
- TBCCW pump seals changed from packing to mechanical seals
- Major breaker calibration, overhaul and trip adjustment
- "B" RBCCW Hx tubesheet to divider plate refurbishment
- Overhauled 'A' & 'C' RBCCW pumps

Significant System Issues Addressed:

- Hanger and breaker lug discrepancies
- System leakage from TBCCW corrected
- Failure of auto start HFA relay in RBCCW due to wiring discrepancy
- RBCCW pump/motor coupling failure

Outstanding System Post Outage Work Items:

- TBCCW side stream filter replacement/upgrade
- Need proof run of new procedure - RBCCW Hx thermal performance monitoring (SIPG-1054)

Significant System Testing Status:

- System surveillance tests current per MSTP

System 30 (K. Lane) continued:

Outstanding Comments/Problems:

- o F&MR No. 88-160, increasing activity in RBCCW
- Work Status
  - 2 Outstanding Restart MR's Remain To Be Worked
  - 1 Outstanding Restart MR Is In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#31 Instrument Air (IA)

Data Date:9/26/88

System Eng: R. H. Young

Prepared By: RH Young

Reviewed By: M. Pinto

Approved By: W. Young

Major System Production Work Completed:

- Replaced compressor K-104A
- Overhauled compressor K-104B
- Overhauled compressor K-111
- Repaired/replaced system drain traps and Y-strainers
- Inspected all air receivers
- Installed portable air compressor connection (PDC 87-82)
- Replaced intake filters
- Replaced dryer pre/post filters
- Air Dryer X-160 overhauled
- Diesel driven portable compressor staged for use

Significant System Issues Addressed:

- IEN 87-28, Air System Problems at LWRs, issues:
  - development of periodic maintenance program (in progress)
  - upgraded temporary air compressor connection
  - revised Loss of Instrument Air procedure
- SOER88-1, Instrument Air System Failures (preliminary review complete; actions pending)
- NRC Generic Letter 88-14 (initial review and action item development in progress)

Outstanding System Post Outage Work Items:

- Upgrade air dryer post-filters
- Overhaul/repair X105 air dryer
- Repair leaking isolation valves
- Address low level internal system contamination
- Complete repairs on K104B air compressor
- Schedule annual and annual PM's on compressors and X160 air dryer

Significant Testing Status:

- Post work testing of repaired equipment for MR closeout in progress
- Compressor capacity tests to be completed as MR's closeout and as due per periodic schedule

System #31 (K. Young) continued:

Outstanding Comments/Problems:

• Work Status

- 1 Outstanding Restart MR Is In Test/Closeout
- 2 Outstanding Restart MR's Are Working
- 1 Outstanding Restart MR Is Open

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#32 Service Air

Data Date: 9/26/88

System Eng: R. H. Young

Prepared By: R.H. Young  
Reviewed By: M. Bente  
Approved By: W. Young

Major System Production Work Completed:

- Repaired blower K-105B
- Repaired blower K-105A

Significant System Issues Addressed:

- Development of comprehensive PM program (in progress)

Outstanding System Post Outage Work Items:

- Address low level internal system contamination
- Repairs to air blower seal water make-up solenoids
- Repair K-105A baseplate

Significant System Testing Status:

- NONE

Outstanding Comments/Problems:

- Work Status  
2 Outstanding Restart MRs Are Open

System:#37 Turbine Lube Oil

Date Date: 9/26/88

System Eng: C. Jungclas

Prepared By: C. Jungclas.

Reviewed By: M. Dento

Approved By: W. C. C. C.

**Major System Production Work Completed:**

- Main Oil tank drained and cleaned
- Lube oil pumps inspected
- Lube oil pump inlet screens removed
- Lube oil vapor extractor disassembled and inspected
- Lube oil flush completed
- Lube oil purifier disassembled, cleaned, inspected and repaired
- Servo enclosure internals inspected

**Significant System Issues Addressed:**

- Lube oil flush completed

**Outstanding System Post Outage Work Items:**

- None identified

**Significant System Testing Status:**

- Lube oil testing is done in association with System 31 - Turbine Generator & Auxiliaries

**Outstanding Comments/Problems:**

- Work Status

No Outstanding Restart MR's

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #38 Diesel Oil

Data Date: 9/26/88

System Eng: W. Swan

Prepared By: W. Swan  
Reviewed By: Edward Almeida  
Approved By: W. Swan

Major System Production Work Completed:

- Installed Blackout Diesel Underground Storage Tanks

Significant System Issues Addressed:

- N/A

Outstanding System Post Outage Work Items:

- None

Significant System Testing Status:

- Required surveillances up to date
- Monthly and Quarterly Preventive Maintenance (PM) up to date

Outstanding Comments/Problems:

- Work Status
  - 1 Outstanding Restart MR Is In Test/Closeout



RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#42 Communications

Data Date: 9/26/88

System Eng: K. Kampschneider

Prepared By:

*K. Kampschneider*

Reviewed By:

*E. J. ...*

Approved By:

*W. ...*

Major System Production Work Completed:

- Upgraded Alternate Shutdown Communication
- Upgraded Shift Supervisors Communications Console

Significant System Issues Addressed:

- Alternate shutdown communications

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Post modification Testing upgraded communications to be scheduled

Outstanding Comments/Problems:

- Work Status  
No Restart Work Remaining

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #45A Neutron Monitoring

Data Date: 9/26/88

System Eng: J. Yingling

Prepared By: J. Yingling

Reviewed By: E. T. Almeida

Approved By: W. H. Chung

Major System Production Work Completed:

- All eight Intermediate Range Monitors (IRMs) and drytubes replaced
- Three Source Range Monitors (SRMs) and drytubes replaced
- 11 Local Power Range Monitor (LPRM) strings were replaced
- Traversing Incore Probe (TIP) tubing reinstalled, pressure tested, friction tested, drive control units PM'ed, System ran electrically, and calibrated
- SRM/IRM drive mechanisms rebuilt
- LPRM Undervessel cables replaced with mineral insulated cable

Significant System Issues Addressed:

- Top loading vs. bottom loading of SRM/IRMs

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- LPRMs and cable - TP 87-55  
Current Versus Voltage (I-V) curves, during power ascension to complete Post Work Test (PWT)
- 3 Rod Block Monitor (RBM) MRs need PWT with mode switch not in shutdown
- Surveillances current or scheduled in the MSTP

Outstanding Comments/Problems:

- Parts restraints exist for: an IRM Bypass Switch

Work Status

- 2 Outstanding Restart MR's Remain To Be Worked
- 4 Outstanding Restart MR's Are In Test/Closeout
- 1 Outstanding Restart Software Item

System: #45B Reactor Protection System (RPS)  
Primary Containment Isolation System (PCIS)

Date: 9/26/88

System Eng: K. Kampschneider

Prepared By: *Karin J. Kampschneider*  
Reviewed By: *Ed Almeida*  
Approved By: *W. Long*

Major System Production Work Completed:

- Installed ATWS Feedwater Trip
- Installed Analog Trip System
- Installed ATWS High Pressure Trip of Recirc
- Installed Reference Leg Modification
- PCIS Model CR120A Relay Coil replacement

Significant System Issues Addressed:

- RPS/PCIS improved by replacement of Barton/Yarway level transmitters
- Reference leg flashing reduced by moving ref. leg outside containment
- ATS transmitter problems (valving into service following calibration) eliminated with installation of head chambers allowing "wet" calibrations

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Surveillance testing is current or scheduled for startup by MST?
- Neutron Test of new RWL containment penetration to be scheduled

Outstanding Comments/Problems:

- Rapid Service Information RSIL 012 (S1) and SIL-463  
Rosemont transmitter "ringing"
- General Electric Information Letter SIL 468 (Rosemount  
510DU/710DU System Having Unstable Trip Points)

System 45B (K. Kampschneider) continued:

- Need results from Post Work/Startup Test Team Review
- Work Status
  - 2 Outstanding Restart MR's Remain To Be Worked
  - 5 Outstanding Restart MR's Are In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #45C Nuclear Boiler Instrumentation

Data Date: 9/26/88

System Eng: K. Kampschneider

Prepared By:

*K. Kampschneider*

Reviewed By:

*A. Almeida*

Approved By:

*W. C. Long*

Major System Production Work Completed:

- Installation of modification to reference leg
- Installation of new Control Room recorders

Significant System Issues Addressed:

- Common zero for reactor water level
- Reference legs moved outside of containment to eliminate flashing

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Surveillance testing current or scheduled for startup by Master Surveillance Tracking Program (MSTP)

Outstanding Comments/Problems:

- PDC 88-25 Removal of DPIS Hydraulic Snubber Pins
- Work Status
  - 1 Outstanding Restart MR Remains To Be Worked
  - 1 Outstanding Restart MR Is In Test/Closeout
  - 3 Outstanding Restart MR's Requiring Reactor Pressure To Satisfy Post Work Testing

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#45D Reactor Manual Control

Data Date: 9/26/88

System Eng: E. Almeida

Prepared By: E. Almeida

Reviewed By: W. King

Approved By: W. King

Major System Production Work Completed:

- CRD position indicating probe cables replaced

Significant System Issues Addressed:

- Upgraded reliability of CRD position indicating probes

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Testing complete to date

Outstanding Comments/Problems:

- Work Status
  - 1 Outstanding Restart MR Remains To Be Worked

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #45E Radiation Monitors

Date: 9/26/88

System Eng: J. Yingling

Prepared By: J. Yingling

Reviewed By: Edward Almeida

Approved By: W. Allay

Major System Production Work Completed:

- NUMAC Process Radiation Monitors installed
- NUMAC log radiation monitors installed
- Replaced sample pumps for Main Stack Vent (MSV)
- Replaced sample pumps for Reactor Building Vent (RBV)

Significant System Issues Addressed:

- o Resized the MSV & RBV pumps
- NUMAC instrumentation replacement upgraded the Log Radiation Monitors (LRMs) & Process Radiation Monitors (PRMs)

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Current or scheduled in the MSTP for startup

Outstanding Comments/Problems:

- Repeated spurious downscale/trips on one refuel floor vent monitor have stopped but is still under investigation
- Work Status
  - 1 Outstanding Restart MR Remains To Be Worked

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #45F Recirculation Flow Control

Data Date: 9/26/88

System Eng: J. Yingling

Prepared By: J. Yingling  
Reviewed By: E. Almeida  
Approved By: W. Wang

Major System Production Work Completed:

- Recirc M-G Sets rebuilt

Significant System Issues Addressed:

- Revised operations start sequence procedure to prevent incomplete sequence trips

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Up to date

Outstanding Comments/Problems:

- Work Status
  - ! Outstanding Restart MR Is In Test/Closeout



RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #45I Reactor Water Level (RWL) Control

Data Date: 9/26/88

System Eng: J. Yingling

Prepared By: J. Yingling  
Reviewed By: Ed Almeida  
Approved By: W. Long

Major System Production Work Completed:

- Analog Trip System installed
- Water Level Reference legs moved

Significant System Issues Addressed:

- Reference legs moved outside drywell to eliminate flashing

Outstanding System Post Outage Work Items:

- NONE

Significant System Testing Status:

- Surveillance testing current or scheduled for startup in the MSTP

Outstanding Comments/Problems:

- Work Status  
No Outstanding Restart Work Remaining

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #45J Turbine Generator (T/G)  
Control & Protection  
\*See Also 51 System

Data Date: 9/26/88

System Eng: K. Kampschneider

Prepared By: Kevin J. Kampschneider  
Reviewed By: Col Almeida  
Approved By: W. C. Long

Major System Production Work Completed:

- Outage calibration of the control/protection instrumentation

Significant System Issues Addressed:

- Outage overhaul

Outstanding System Post Outage Work Items:

- Turbine Pressure Regulators (MPR/EPR) have been set, to be monitored/adjusted during startup
- Piping in servo enclosure to be monitored for vibration during startup

Significant System Testing Status:

- T/G controls calibration (essentially complete, some items to be performed during startup)
- Surveillance testing current or scheduled for startup by MSTP

Outstanding Comments/Problems:

- Work Status  
No Outstanding Restart MR's Are Working

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#46 Electrical Alternating Current (AC)

Data Date: 9/26/88

System Eng: W. Ciavarro

Prepared By: William Ciavarro

Reviewed By: H. Almeida

Approved By: W. Ciavarro

Major System Production Work Completed:

- Breakers calibrated
- Added Micro Versa trip units to 480 V load center Model AK breakers
- New coordination data was developed by engineering and implemented for system protection
- New procedures were developed for breaker testing
- A new sequence of events recorder was installed in the switchyard; for improved analysis of distribution system transients
- Equipment Qualification walkdowns identified various components that require repair/replacement.
- Station Black out Diesel installed
- Switchyard insulators have been coated with Room Temperature Vulcanizing Rubber (RTV) to inhibit flash over
- Degraded voltage relays replaced
- PNPS motor operated valve upgrade program RFO #7
- Testing and replacement of HFA relays
- Testing and replacement of CR120 relays
- Silicon bronze bolt sample inspection completed to address IEN-88-11

Significant System Issues Addressed:

- Maintenance on breakers for switchgear and load centers
- The addition of a Black Out Diesel, switchgear A8, and motor control center B40
- Degraded voltage
- Deficiency in safety related terminations
- E203 project completed as built drawings of Diesel Generator panels, Recirc MG panels, and Control Room HVAC panels

Outstanding System Post Outage Work Items:

- None

Significant System Testing Status:

- 480 VAC MCC contactor testing per TP88-40
- \* Surveillance testing is current or scheduled for startup in the MSTP

System 46 (W. Ciavarro) continued:

Outstanding Comments/Problems:

• Work Status

- 4 Outstanding Restart MR's Remain To Be Worked
- 6 Outstanding Restart MR's Are Working
- 35 Outstanding Restart MR's Are In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#46 Station Direct Current (DC)

Data Date: 9/26/88

System Eng: R. Cahill

Prepared By: Richard K. Cahill

Reviewed By: Ed. Almeida

Approved By: W.A. Chung

Major System Production Work Completed:

- Procedure 8.9.8 (Battery Rated Load Discharge Test)  
125V "A", 125V "B", 250V
- Calibration Testing of 43 DC Breakers
- Procedure 8.Q.4-1 (D.7,D.8,D9 Environmental Test)

Significant Systex Issues Addressed:

- Relay house 125V batteries replaced
- Installed fuse & fuse clips on control circuits at alternate shutdown circuits
- Silicon bronze bolt sample inspection to address SER-12-88
- Performed inspections of Terminal Strip Stab Connections

Outstanding System Post Outage Work Items:

- Procure Equipment and Perform Battery load profile testing.

Significant System Testing Status:

- Need to perform TP 88-32 to investigate DC Crosstalk (Testing)  
(Scheduled)
- Other testing current or scheduled for startup in the MSTF

Outstanding Comments/Problems:

- Work Status
  - 3 Outstanding Restart MR's Remain To Be Worked

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#48 Standby Gas Treatment  
System (SBGTS)

Data Date: 9/26/88

System Eng: M. Perito

Prepared By: M. Perito

Reviewed By: N/A

Approved By: W. S. King

Major System Production Work Completed:

- Standby Gas Treatment System Modifications
- Secondary Containment Damper upgrade with improved design

Significant System Issues Addressed:

- SBGTS Single failure criteria
- SBGTS Logic system functional testing
- SBGTS Simulated automatic actuation
- Secondary Containment integrity
- Replaced non seismically qualified HGA relays
- Replaced solenoid valves per IEN 88-24

Outstanding System Post Outage Work Items:

- Install vital area (SBGTS Room) access card reader

Significant System Testing Status:

- Surveillances current or scheduled for startup in the MSTP
- TP 87-128 Post Modification acceptance test of SBGTS modifications complete

Outstanding Comments/Problems:

- Work Status
  - 1 Outstanding Restart MR Is In Test/Closeout

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#49 Fuel Handling

Data Date: 9/26/88

System Eng: D. Ferraro

Prepared By: *[Signature]*

Reviewed By: *[Signature]*

Approved By: *[Signature]*

Major System Production Work Completed:

- Refueling Bridge replaced with enhanced design
- Refueling complete

Significant System Issues Addressed:

- Addressed non-captured items on Bridge

Outstanding System Post Outage Work Items:

- No post outage work items

Significant System Testing Status:

- Required surveillances current

Outstanding Comments/Problems:

- Work Status

No Outstanding Restart Work

RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #50 Containment

Data Date: 9/26/88

System Eng: R. Mattos

Prepared By: R. Mattos

Reviewed By: [Signature]

Approved By: [Signature]

Major System Production Work Completed:

- Penetrations rebuilt (mainsteam lines/feedwater line)
- Drywell water level/Torus press indication
- Secondary Containment Damper Upgrade with improved design

Significant System Issues Addressed:

- Drywell liner inspection completed satisfactory
- Torus walls (inner) inspection completed satisfactory
- Torus walls (outer) inspection completed satisfactory

Outstanding System Post Outage Work Items:

- Completion of direct torus vent modification (install AO-5025 disarmed pending NRC approval)

Significant System Testing Status:

- Successful integrated Leak Rate Test (ILRT)
- Successful drywell/torus vacuum breaker test
- Successful secondary containment verification

Outstanding Comments/Problems:

- Work Status
  - 4 Outstanding Restart MR's Remain To Be Worked
  - 3 Outstanding Restart MR's Are Working
  - 8 Outstanding Restart MR's Are In Test/Closeout



RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #54 Reactor Vessel

Data Date: 9/26/88

System Eng: D. Ferraro

Prepared By: *[Signature]*  
Reviewed By: *[Signature]*  
Approved By: *[Signature]*

Major System Production Work Completed:

- Refueling complete
- Class 1 system Hydro Complete
- Hydrogen water chemistry system nearly complete
- Incore probe installed for sampling core water
- Reactor vessel water level instrument Modifications complete
- N-16A nozzle repaired
- Replaced vessel dry tubes (also replaced IRMs & SRMs)

Significant System Issues Addressed:

- Reactor cyclic Duty Monitoring Program instituted
- QC performed extensive In Service Inspection (ISI) of vessel internals. Results satisfactory except for one cap screw weld which was repaired.

Outstanding System Post Outage Work Items:

- No outstanding post outage work remaining

Significant System Testing Status:

- Surveillances current or scheduled for startup in the MSTP

Outstanding Comments/Problems:

- Work Status
  - 6 Outstanding Restart MR's Are Working
  - 9 Outstanding Restart MR's Are In Test/Closeout (8 steaming retest)

RFO-7 SYSTEM STATUS SUMMARY REPORT

System:#61 Diesel Generators

Data Date: 9/26/88

System Eng: W. Swan

Prepared By: W. Swan

Reviewed By: E. Alonzo

Approved By: W. Swan

Major System Production Work Completed:

- Emergency Diesel Engines rebuilt
- Increased fan blade pitch for engine cooling
- Replaced Poly-Chlorinated-Biphenyl Oil-filled (PCB) transformers
- Installed Blackout Diesel

Significant System Issues Addressed:

- Elevated engine operating temperature
- Prelube pump failures

Outstanding System Post Outage Work Items:

- Provide design revision to allow loaded Surveillance Testing of Blackout Diesel Generator (DG)

Significant System Testing Status:

- Required surveillances current
- Monthly and Quarterly Preventive Maintenance (PM) up to date
- Blackout Diesel Acceptance Testing completed

Outstanding Comments/Problems:

- Work Status
  - 2 Outstanding Restart MRs Are In Test/Closeout
  - 2 Outstanding Restart Software Items

## RFO-7 SYSTEM STATUS SUMMARY REPORT

System: #68, 69, 73, 74  
Hydrogen Water Chemistry (HWC)  
Crack Arrest Verification (CAV)  
Extended Test System (ETS)

Date: 9/26/88

System Eng: K. Hemeon

Prepared By: [Signature]

Reviewed By: [Signature]

Approved By: [Signature]

### Major System Production Work Completed:

- Physical Installation of Systems/Equipment
- Hydrogen Storage Facility system installed
- Hydrogen Piping into Turbine Building system installed
- Extended Testing System installed
- Hydrogen Water Electrolytic System installed
- Misc. Piping Modifications

### Significant System Issues Addressed:

- Enhanced sampling equipment for improved Chemistry control
- Systems P&ID Vendor Review
- HWC Temporary Modification Close-out 84-082, 84-053, 85-15

### Outstanding System Post Outage Work Items:

- Hydrogen injection system start up
- Incore probe monitoring
- CAVs/HWC base data generation
- New Identified field changes to piping systems
- Development of Integrated Test Plan

### Significant System Testing Status: (to be approved, scheduled & performed)

- TP 87-132 "ETS Controller Check-out"
- TP 87-104 "ETS Calibration of Sys. Inst."
- TP 87-145 "ETS Pre-Operation Startup"
- TP 87-233 "G.E. NUMAC Sys. Controller"
- TP 87-236 "Electrolytic Pre-Op/Startup"
- TP 87-183 "Instrument Calibration"
- TP 88-06 "Temporary Procedure for Purging, Filling, and Leak Testing the Hydrogen Storage Facility"

System 68, 69, 73, 74 (K. Hemeon) continued:

Outstanding Comments/Problems:

- Equipment number designations
- Investigation of NUMAC/hardware & Software Interface problems
- Work Status

No Outstanding Restart Work