



BOSTON EDISON

Pilgrim Nuclear Power Station
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LONG TERM PROGRAM: SEMI-ANNUAL REPORT

This letter provides the semi-annual report for the Long Term Program (LTP) in accordance with Section V.A of the "Plan for the Long Term Program - Pilgrim Nuclear Power Station". Attachment 1 includes schedules for the A and B regulatory items. Attachment 2 includes commitment descriptions, progress since the last update, and summaries of changes.

In addition to Schedule A and B items, we are implementing plant betterment modifications and activities. These additional items, identified in Schedule C, are included in Attachment 3. Schedule C items are outside the regulatory scope of the Long Term Program and are exempt from the license conditions imposed on Schedule A and B items. We are currently reforecasting the budget and plans for Schedule C items and will provide a complete status in the next update.

Our next refueling outage (RFO #9) is scheduled to commence on April 3, 1993, with a planned duration of approximately nine weeks.

Progress has continued on the majority of Schedule A and Schedule B items. Changes in status are found in the lightly shaded sections of Attachment 2.

Completed Items

- ATWS Rule (Schedule A)
- Emergency Response Data System (Schedule A)
- Individual Plant Examination of Severe Accident Vulnerabilities (Schedule B)
- Vendor Interface Program (Schedule B)

Schedule Revisions

- Class I Piping Seismic Damping Ratio (Schedule B)

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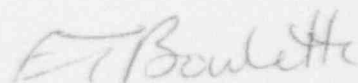
BOSTON EDISON COMPANY

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New Items

- Reactor Vessel Water Level Instrumentation (GL 92-04) (Schedule B)



E. T. Boulette

Attachments

nas/LTPLTR

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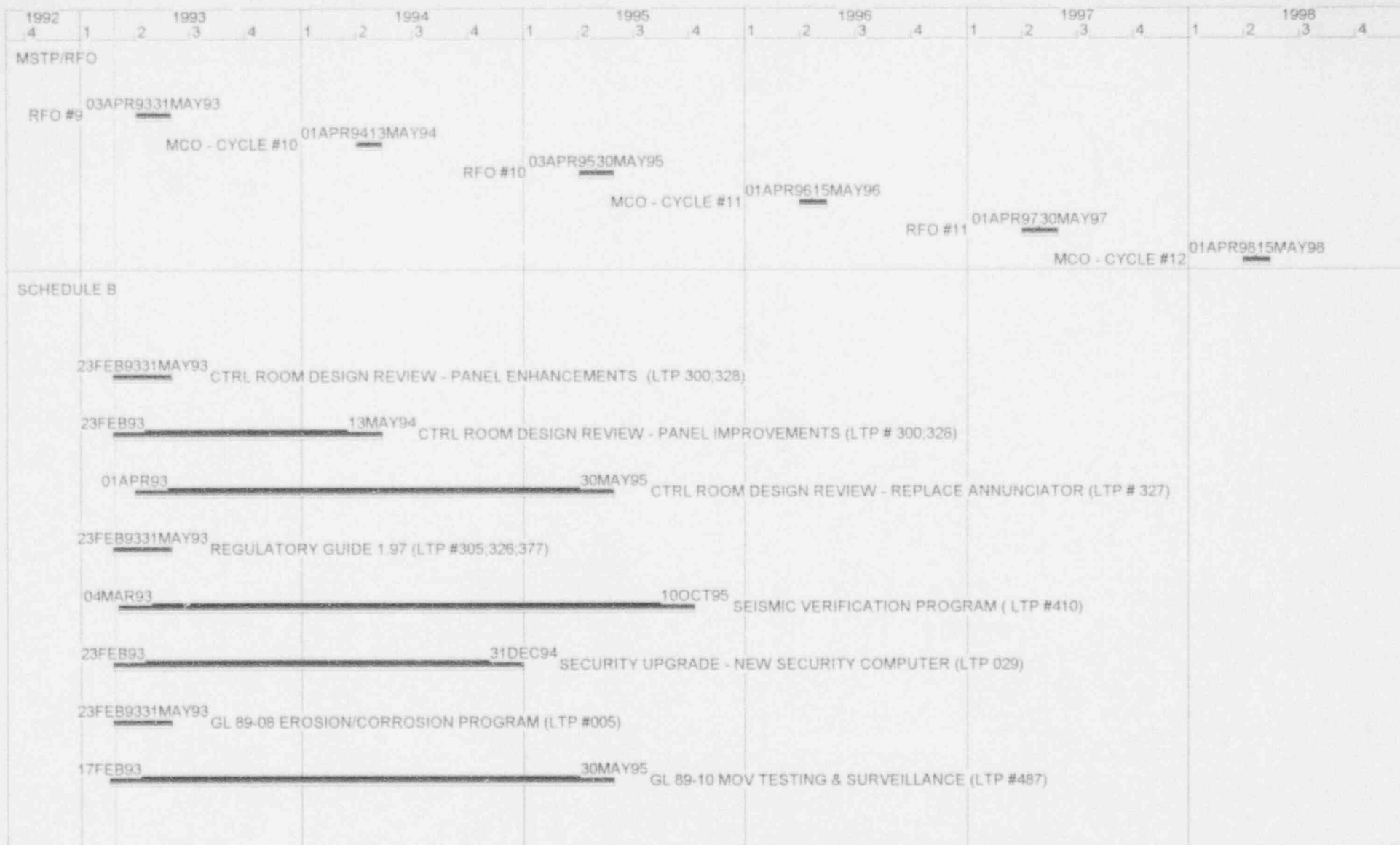
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ATTACHMENT 2

Schedules A and B Index

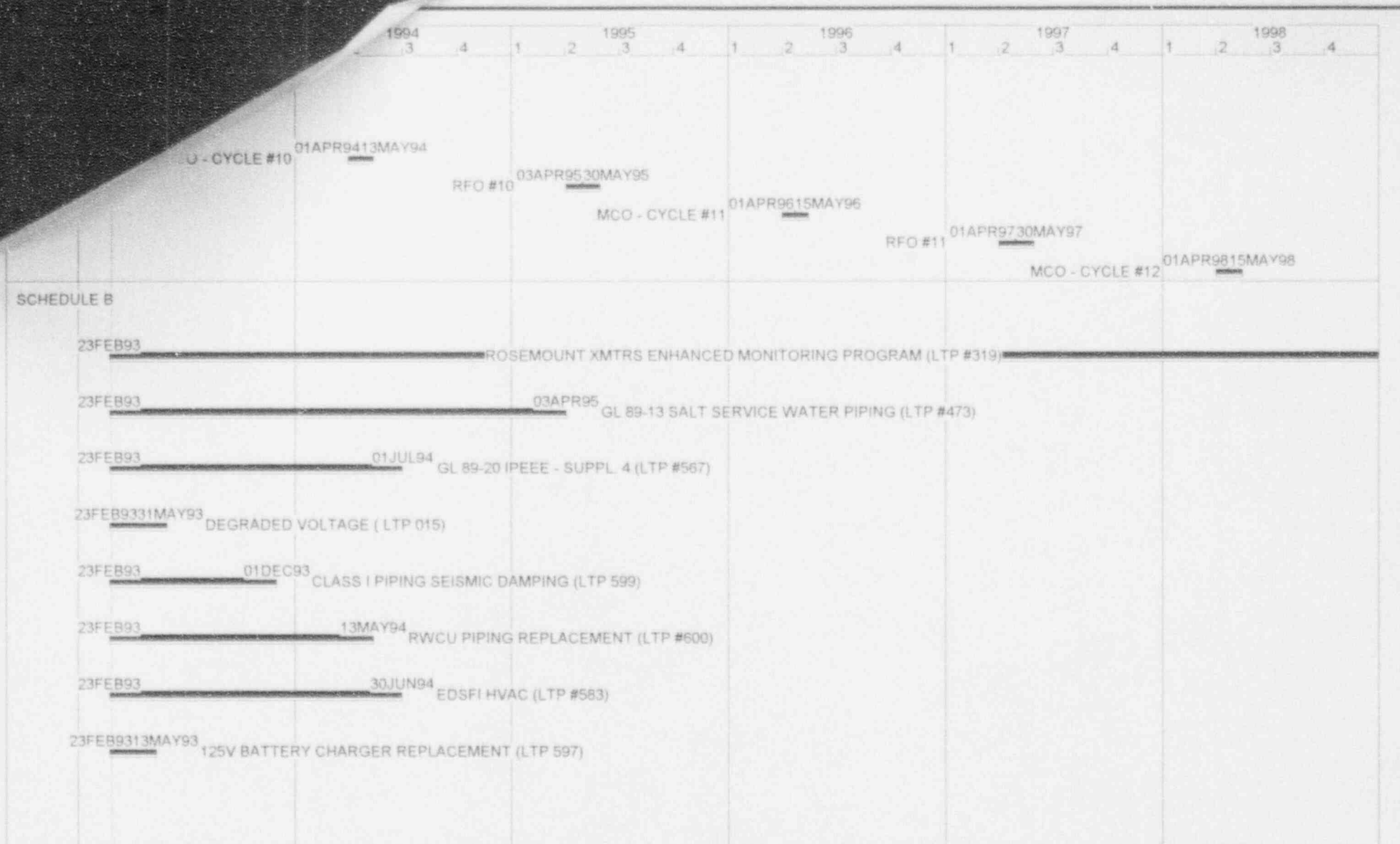
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1992				1993				1994				1995				1996				1997				1998																							
4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																							
MSTP/RFO																																															
RFO #9				03APR9331MAY93				MCO - CYCLE #10				01APR9413MAY94				RFO #10				03APR9530MAY95				MCO - CYCLE #11				01APR9615MAY96				RFO #11				01APR9730MAY97				MCO - CYCLE #12				01APR9815MAY98			
SCHEDULE A																																															
23FEB9331MAY93				STATION BLACKOUT RULE (LTP 043)																																											
01MAR93																				16JUL96				MAINTENANCE RULES (LTP # 584)																							
23FEB93				01JAN94				10CFR20 STANDARDS FOR PROTECTION AGAINST RADIATION (LTP 551)																																							



LTP - 6 YEAR PLAN

BOSTON EDISON - NUCLEAR ORGANIZATION



LTP - 6 YEAR PLAN

BOSTON EDISON - NUCLEAR ORGANIZATION

	1992	1993	1994	1995	1996	1997	1998
	1	2	3	4	1	2	3
MSTP/RFO							
RFO #9	03APR93	31MAY93					
		MCO - CYCLE #10	01APR94	13MAY94			
			RFO #10	03APR95	30MAY95		
				MCO - CYCLE #11	01APR96	15MAY96	
					RFO #11	01APR97	30MAY97
						MCO - CYCLE #12	01APR98
							15MAY98
SCHEDULE B							
	23FEB93			ROSEMOUNT XMTRS ENHANCED MONITORING PROGRAM (LTP #319)			
	23FEB93			03APR95	GL 89-13 SALT SERVICE WATER PIPING (LTP #473)		
	23FEB93		01JUL94	GL 89-20 IPEEE - SUPPL 4 (LTP #567)			
	23FEB93	31MAY93	DEGRADED VOLTAGE (LTP 015)				
	23FEB93		01DEC93	CLASS I PIPING SEISMIC DAMPING (LTP 599)			
	23FEB93		13MAY94	RWCU PIPING REPLACEMENT (LTP #600)			
	23FEB93		30JUN94	EDSFI HVAC (LTP #583)			
	23FEB93	13MAY93	125V BATTERY CHARGER REPLACEMENT (LTP 597)				

ATTACHMENT 2

SCHEDULE A

ATWS RULE COMPLIANCE (LTP 283)

Commitment Description

The ATWS Rule 10CFR50.62, requires modifications to the Standby Liquid Control System, Alternate Rod Insertion and Reactor Recirculation Pump Trip by the second refueling outage from June 26, 1984 (i.e., RFO #8 for BECo).

BECo implemented the Standby Liquid Control System modification in RFO #7. The Technical Specification changes for Standby Liquid Control System were approved by the NRC on August 5, 1987 (Amendment #102). The ARI/RPT modifications were implemented in 1980 in response to NUREG-460, as directed by the NRC.

The NRC requested additional information regarding ARI/RPT modifications by Reference 4 to determine compliance with this rule. BECo submitted its response via Reference 5. The diversity of ARI is yet to be resolved with the BWROG, NRC and licensees, as identified in the meeting notes from the NRC (Reference 6). All other items are resolved. The NRC Safety Evaluation Report issued June 6, 1989 (Reference 7) accepted BECo's design except for diversity. Based on the need for additional time to change from the existing Rosemount trip units and relays, the NRC determined an extension of time to fully comply with the diversity requirements would be acceptable. Another alternative discussed in the SER would be to request an exemption from the diversity requirement. The SER states the NRC staff will provide additional guidance on the diversity issue shortly and requests BECo provide a schedule for resolution when the additional NRC staff guidance is provided. Concurrently, BECo sought to resolve the diversity issue through the BWR Owner's Group.

The NRC has since resolved the diversity issue through issuance of a generic position to the BWROG in Reference 8 that also requested licensees to propose a schedule for achieving compliance with the diversity requirement. This resolution of the diversity issue was made available to us by our NRC Project Manager on October 5, 1990.

BECo has reviewed the staff's position on the diversity requirement, the NRC generic position presented to the BWROG in Reference 8, and the existing diversity afforded by the Pilgrim ARI system (as presented to the NRC staff in a meeting on December 9, 1989). In accordance with the SER (Reference 7), our resolution of the diversity issue includes replacement of Rosemount trip units and an exemption request for actuation relays. Our Reference 9 letter provided the basis for the exemption request and a commitment to replace the Rosemount trip units with General Electric trip units during the mid-cycle outage. Since Reference 9, our mid-cycle outage has been rescheduled to October 1992.

ATTACHMENT 2 (Continued)

SCHEDULE A

In Reference 10, the NRC approved our proposed resolution of the ATWS/ARI diversity issue.

References

- 1) 10CFR50.62
- 2) BECo Letter 85-140 dated August 7, 1985
- 3) NRC Letter from Mr. H.R. Denton to BWROG Chairman dated August 19, 1985
- 4) NRC Letter dated September 27, 1987
- 5) BECo Letter 88-073, dated April 27, 1988
- 6) NRC Letter to BECo, dated January 9, 1989
- 7) NRC Letter to BECo, dated June 6, 1989
- 8) NRC Letter to BWROG Chairman, dated September 20, 1990
- 9) BECo Letter 91-021, dated February 25, 1991
- 10) NRC Letter to BECo, dated May 7, 1991

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

BECo complies with the rule in all areas except diversity. As stipulated in the NRC SER (Ref. 7) on this issue, a schedule for resolution of the diversity issue will be developed following receipt of additional NRC guidance, or an exemption request from the diversity requirement will be submitted.

Progress and Summary of Changes - February 1990 to November 1990

Absent the specific NRC guidance, but based on the Reference 8 NRC denial of the BWR Owners Group appeal on diversity, we are presently planning to purchase trip units and relays to address diversity for Pilgrim Station. A separate BECo letter outlining further details and implementation schedules is planned for submittal in the near future.

Progress and Summary of Changes - December 1990 to February 1991

Based on the Reference 9 letter providing our resolution for achieving diversity for Pilgrim Station, we plan to replace Rosemount trip units with General Electric trip units during the mid-cycle outage in 1992. No actions are planned for replacement of actuation relays based on our exemption request, also submitted via Reference 9.

Progress and Summary of Changes - March 1991 to August 1991

In Reference 10, the NRC granted our exemption request for actuation relays and accepted our proposed schedule for replacing Rosemount trip units with General Electric trip units during the 1992 mid-cycle outage. This replacement is on schedule for completion during the 1992 mid-cycle outage.

ATTACHMENT 2 (Continued)

SCHEDULE A

Progress and Summary of Changes - August 1991 to February 1992

Replacing Rosemount trip units with General Electric trip units is on schedule for completion during the 1992 mid-cycle outage.

Progress and Summary of Changes - March 1992 to August 15, 1992

Replacing Rosemount trip units with General Electric trip units is on schedule for completion during the 1992 mid-cycle outage.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

Work to implement the requirements of 10CFR50.62, the ATWS Rule, is complete and this item will be removed from future LTP updates. Rosemount trip units have been replaced with General Electric trip units as scheduled.

ATTACHMENT 2 (Continued)

SCHEDULE A

STATION BLACKOUT RULE (SBO) (LTP #043)

Commitment Description

The rule required a submittal by April 17, 1989, providing:

- a specified station blackout duration with justifications
- a description of procedures for SBO events and recovering from them
- a list of proposed modifications and schedule including procedures for meeting the SBO duration

BECO responded in Reference 2. A schedule for completion of modifications will be determined and submitted within 30 days following receipt of an NRC notification accepting BECO's proposed design. 10CFR 50.63(c)(4) requires the completion within 2 years of notification by NRC that the proposed design is acceptable or provide an explanation and a justification if the schedule will exceed 2 years.

BECO received the NRC Safety Evaluation Report (Reference 6) on February 25, 1991. An initial response describing SBO-related modifications planned for RFO #8 was submitted on March 26, 1991 via Reference 7.

In Reference 8, we provided an implementation schedule of RFO #9 for the remaining equipment and procedure modifications, and a schedule for resolving the NRC Safety Evaluation Report recommendations based upon NRC's acceptance of our justification for 4 hour SBO duration.

The SBO equipment modifications completed in RFO #8 included the installation of protective relays required to connect the SBO Diesel Generator to the 23KV circuit entering PNPS, to enable load testing of the Alternate AC source during station operation. Additional modifications to enable the operators to energize the shutdown buses with power from the SBO-Diesel Generator within 10 minutes of a SBO event are scheduled for RFO #9. In earlier correspondence, we indicated the modifications would permit the operators to energize the shutdown buses from the Control Room. This may not be necessary to meet the requirement for power from the SBO-Diesel Generator within 10 minutes of a SBO event. The remaining equipment and associated procedure modifications are based upon the previously-described commitments to comply with the Station Blackout Rule by designating Pilgrim's SBO Diesel Generator as the Alternate AC source as defined in 10CFR50.2.

In Reference 8, we also supplied additional information supporting our conclusion that Pilgrim should remain in the P2 site characteristic group with a SBO duration of 4 hours. NRC's concurrence was requested by August 1, 1991, so that we could resolve the SER recommendations by December 1991, based upon the 4 hour SBO duration and the 10CFR50.2 requirements for an Alternate AC source. The NRC issued a Supplemental Safety

ATTACHMENT 2 (Continued)

SCHEDULE A

Evaluation report, dated January 15, 1992 (Reference 9) stating that PNPS is a P3 plant with a SBO duration of 8 hours. The SSE requested a schedule for the resolution of open issues within 30 days of receipt of the letter.

References

- 1) 10CFR50.63 (53FR23203, dated June 21, 1988)
- 2) BECo Letter 89-057, dated April 17, 1989
- 3) NUMARC Letter to NUMARC Board of Directors, dated January 4, 1990
- 4) BECo Letter 90-044, dated March 28, 1990
- 5) BECo Letter 90-106, dated August 31, 1990
- 6) NRC Letter dated February 13, 1991
- 7) BECo Letter 91-042, dated March 26, 1991
- 8) BECo Letter 91-074, dated June 3, 1991
- 9) NRC Letter dated January 15, 1992
- 10) BECo Letter 92-017 dated February 26, 1992
- 11) NRC Letter 92-057 dated March 5, 1992

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

As part of the Safety Enhancement Program, BECo has installed a 3rd diesel to provide emergency power during station blackout (SBO) periods. In compliance with the rule, a letter was transmitted to NRC on April 17, 1989 committing to designate this 3rd diesel as an Alternate AC Source and to implement a series of modifications to enable the starting and loading of the 3rd diesel from the Control Room within 10 minutes of an SBO. These modifications will be scheduled upon receipt of a NRC SER.

The NRC review of BECo's submittal generated several questions that were discussed in a telephone call on December 20, 1989. Since then, the NRC via NUMARC has requested all Licensees to re-confirm the level of conformance to the NUMARC SBO guidelines used by the Industry to develop rule compliance.

10CFR50.63(C)(4) requires the submittal of a schedule for completion of SBO modifications within 30 days of NRC notification that our proposed modifications are acceptable. This submittal must include an explanation of the schedule and a justification if the schedule does not provide completion of the modifications within two years of the notification.

In our April 17, 1989 letter providing the details of our proposed modifications, we projected an RFO #8 completion date in anticipation of receiving an NRC acceptance notification shortly after the April 17, 1989, submittal. This not being the case, we no longer plan to complete these modifications by RFO #8. A schedule for completion will not be available until the receipt of the NRC notification.

ATTACHMENT 2 (Continued)

SCHEDULE A

Progress and Summary of Changes - February 1990 to November 1990

In response to the Reference 3 NUMARC request, we submitted information to the NRC (Reference 4) describing modifications we intend to make to qualify the 3rd diesel as an alternate AC source as defined in 10CFR50.2. A prompt NRC review and Safety Evaluation Report was again requested in order that completion of the modification could be accomplished by RFO #8.

Other applicable supplemental information in response to the NUMARC request was prepared and submitted to the NRC via Reference 5.

Progress and Summary of Changes - December 1990 to February 1991

BECo received the NRC's February 13, 1991 Safety Evaluation on February 25, 1991. We will review the Safety Evaluation and provide an initial response by March 27, 1991 and a detailed schedule by June 1, 1991.

Progress and Summary of Changes - March 1991 to August 1991

An initial response to the Reference 6 NRC Safety Evaluation Report was submitted on March 26, 1991 (Reference 7) describing SBO related modifications planned for RFO #8.

As described in the Reference 7 response, installation of protective relays to allow load testing of the Alternate AC source during station operation were completed during RFO #8.

In Reference 8, we provided an implementation schedule of RFO #9 for the remaining equipment and procedure modifications, and a schedule of December 1991 for resolving the Safety Evaluation Report recommendations. We also supplied additional information supporting our conclusion that Pilgrim should remain in the P2 site characteristic group with a 4 hour SBO duration. NRC's concurrence was requested by August 1, 1991 so that we could resolve the SER recommendations by December 1991, based upon the 4 hour SBO duration and the 10CFR50.2 requirements for an alternate AC source. The NRC response has not been received. We will provide a revised schedule for resolving the SER recommendations after receipt of the NRC response.

Progress and Summary of Changes - August 1991 to February 1992

A Supplemental Safety Evaluation Report was issued on January 15, 1992, stating that Pilgrim Station is a P3 plant with an 8 hour SBO duration. A schedule for resolving additional SER recommendations was requested within 30 days of BECo's receipt. In Reference 10 we responded with the following schedule commitments:

- By RFO #9, complete modifications and testing to energize the shutdown buses within 10 minutes of a SBO.
- By 1992 MCO, complete an assessment on the effects of ventilation for an 8 hour SBO duration.

ATTACHMENT 2 (Continued)

SCHEDULE A

Progress and Summary of Changes - March 1992 to August 15, 1992

- A plant design change for the modification to energize the shutdown buses from the control room within 10 minutes of an SBO event has been prepared and is scheduled for implementation in RFO 9.
- We have implemented an Emergency Diesel Generator Reliability program.
- We are in the final review stage for the assessment on the effects of ventilation for an 8 hour SBO duration.

These actions are consistent with the commitment dates above.

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

- The assessment of the effects of ventilation for an 8 hour SBO duration was completed as planned. No additional modifications are required as a result of this analysis.
- A plant design change for the modification to energize the shutdown buses from the control room within 10 minutes of an SBO event has been prepared and is scheduled for implementation in RFO 9.

SCHEDULE A

MAINTENANCE RULE (LTP #584)

Commitment Description

10CFR50.65 "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants " was issued as a final rule on July 10, 1991 (Reference 1). Licensees are required to have in place by July 10, 1996, a program capable of monitoring the overall continuing effectiveness of their maintenance programs to ensure that safety related and certain non-safety related structures, systems, and components are capable of performing their intended functions; failures of non-safety related equipment will not occur which could prevent the fulfillment of safety related functions; and failures resulting in scrams and unnecessary actuations of safety related systems are minimized.

The rule has a five year implementation schedule with supporting regulatory guide development and promulgation expected within the first two years. This schedule allows three years for licensee development beyond the time that final guidance is expected to be available.

References

1. Federal Register Vol. 56 No. 132, dated July 10, 1991

Commitment History/Progress

Progress and Summary of Changes - March 1991 to August 1991

A program for ensuring compliance with the maintenance rule is being developed and will be provided in the next regular report for the LTP.

Progress and Summary of Changes - August 1991 to February 1992

Our implementation approach for the maintenance rule consists of two major aspects:

- A program to monitor the performance of specified structures, systems and components (SSCs) against established goals, and
- Use of the reliability centered maintenance (RCM) concept to upgrade the Station's Preventive maintenance program.

Development of our monitoring program is evolving in concert with the guidance documents being established by NUMARC and the NRC. The NUMARC guidance is being established to address four areas: selection of SSCs to be covered by the rule; goal setting and performance monitoring; demonstrating equipment functionality by inherent SSC characteristics or by appropriate preventive maintenance; and the removal of plant systems from service without affecting overall plant safety. We understand the NRC guidance will describe acceptable methods for Licensees to monitor the overall continuing effectiveness of their maintenance activities, while offering flexibilities in establishing goal setting, monitoring, and preventive maintenance activities.

ATTACHMENT 2 (Continued)

SCHEDULE A

The RCM program commenced in January 1992 with the formal establishment of an RCM team. The EPRI "Work Station" RCM software was selected for use in RCM system analysis. RCM team training on this software and RCM methodology was completed in January 1992.

The RCM program scope identifies and prioritizes 47 plant systems, each requiring approximately 16 weeks of work. A number of systems will be worked in parallel. Completion of the identified program scope is scheduled for May 1994.

Progress and Summary of Changes - March 1992 to August 15, 1992

PNPS is continuing with a preventive maintenance program upgrade utilizing RCM methodology. An additional system has been added to the RCM program scope bringing the total number of systems to 48. The analysis of three systems has been completed. The identification of SSCs within the scope of the maintenance rule is underway and scheduled for completion in 1992.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

The overall project continues on schedule. The RCM analysis of fourteen systems has been completed. The preliminary list of SSCs within the scope of the maintenance rule has been developed and issued for comment. A tailored collaboration with EPRI has been established and is in progress to develop a "Living PM Program" to assist in the programmatic aspects of the maintenance rule implementation plan.

ATTACHMENT 2 (Continued)

SCHEDULE A

10CFR20 STANDARDS FOR PROTECTION AGAINST RADIATION (LTP #551)

Commitment Description

In Reference 1, the NRC issued a revision to the 10CFR20 requirements, "Standards for Protection Against Radiation." These revisions became effective on June 20, 1991, and are required to be implemented by January 1, 1993, in their entirety. Licensees have the choice of implementing the new requirements in their entirety prior to January 1, 1994, with notification to the NRC, or continuing with the existing requirements until January 1, 1994, after which they must adopt the new requirements. Implementation of selected portions of the revised rule is not allowed prior to the January 1, 1994 deadline.

The revised rule changes the existing radiation protection requirements and practices, accounting of occupational exposures, maintenance of exposure records, General Employee Training, and Health Physics training. The NRC is also revising certain Regulatory Guides and issuing new Regulatory Guides to provide regulatory positions and guidance for implementing the revised requirements.

In reference 3, the NRC extended the original January 1, 1993 implementation date for 10CFR20 until January 1, 1994.

References

1. Federal Register Vol. 56 No. 98, dated May 21, 1991
2. 57FR21216 Extension of Implementation Date, Proposed Rule, dated May 19, 1992
3. 57FR38588 Standards for Protection Against Radiation, Extension of Implementation Date, dated August 26, 1992

Commitment History/Progress

Progress and Summary of Changes - March 1991 to August 1991

A program is being developed to ensure compliance with the revised requirements within the prescribed implementation schedule and will be provided in the next regular report for the LTP.

Progress and Summary of Changes - August 1991 to February 1992

Selected personnel in the Nuclear Organization were trained in the requirements of the revised 10CFR20, and program elements for the implementation of the requirements have been developed. These are: a new system for Radiological Information Management, revision and development of new procedures, development of a training module and training of personnel, and equipment evaluation for potential modifications. These elements are in various stages of implementation. Additionally, we worked with NUMARC in the development of comments on several draft regulatory guides issued by the NRC in the October/November 1991 time frame. We are continuing our effort for the implementation of the requirement by using NRC guidance from draft regulatory guides.

Implementation of the final rule is on schedule for completion by January 1, 1993.

ATTACHMENT 2 (Continued)

SCHEDULE A

Progress and Summary of Changes - March 1992 to August 15, 1992

We are continuing implementation of various elements of the Radiation Protection Program requirements to comply with the revised 10CFR20. We plan to be in full compliance with 10CFR20 requirements by the NRC proposed new schedule of January 1, 1994.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

RP program revision work continues to implement revised 10CFR20. Approximately 55 procedure revisions are in progress. Policy meetings are being held to resolve issues such as monitoring individuals in the controlled area, monitoring declared pregnant radiation workers, air sampling counting techniques, and equipment and Technical Specification revisions.

PNPS is replacing its current Radiological Information Management System and is in the software design and programming stage.

Incorporation of Part 20 requirements into GET training has begun and more will be added as the year end approaches. Special training sessions are planned for Operations, Maintenance, and other station personnel. RP technician training has been completed and refresher training will be provided throughout the year. BECo has been invited to present its training program at the March NRC Region 1 NUMARC 10CFR20 workshop.

We plan to be in compliance with the revised 10CFR20 requirements by the NRC scheduled date of January 1, 1994.

ATTACHMENT 2 (Continued)

SCHEDULE A

EMERGENCY RESPONSE DATA SYSTEM (LTP #579)

Commitment Description

Per Reference 1, the NRC issued a final rule requiring all operating nuclear power facilities to participate in the Emergency Response Data System (ERDS) program. Participation in the ERDS program entails a direct near real-time electronic data link between the plant's onsite computer system and the NRC Operations Center that provides for the automated transmission of a limited data set of selected parameters during a declaration of an ALERT or higher emergency classification.

The rule required an ERDS implementation program plan to be developed and submitted to the NRC by October 28, 1991. Implementation of the ERDS must be complete by February 13, 1993, or before initial escalation to full power, whichever comes later. In Reference 2, we provided a schedule of August 31, 1992 for ERDS implementation.

References

1. Federal Register Vol. 56, No. 156, dated August 13, 1991.
2. BECo Letter 2.91.146 dated October 25, 1991.
3. BECo Letter 2.92.003 dated January 13, 1992.
4. NRC Letter 1.92.253 dated October 1, 1992.

Commitment History/Program

Progress and Summary of Changes - March 1991 to August 1991

An ERDS implementation program plan will be submitted by October 28, 1991.

Progress and Summary of Changes - August 1991 to February 1992

Our ERDS Implementation Program Plan was submitted via Reference 2, with August 31, 1992 as our project completion date.

The ERDS Data Point Library was submitted via Reference 3.

ERDS completion is on schedule for August 31, 1992.

Progress and Summary of Changes - March 1992 to August 15, 1992

The acceptance test for ERDS between BECo and the NRC's contractor, NUS - Halliburton, was successfully completed on August 20. The subsequent final test between BECo and the NRC has not been successfully completed. The NRC is troubleshooting the software and hardware. Project completion is expected by September 30, 1992.

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

This project is complete and will be removed from future LTP updates. The final NRC/BECo test was completed on September 25, 1992 (Reference 4)

ATTACHMENT 2 (Continued)

SCHEDULE B

DETAILED CONTROL ROOM DESIGN REVIEW (G.L. 82-33) (LTP #299, 300, 327, 328, 375)

Commitment Description

References 6, 7, and 8 provided a DCRDR Supplementary Summary Report with update information, panel enhancement program information, and a revised DCRDR program plan, respectively. Reference 9 revised the schedule commitments for enhancements to three control panels singled out by BECo for completion ahead of the others.

A final DCRDR Summary Report, Reference 10, was submitted on November 30, 1990. This summary report included detailed scope and schedules for the remainder of DCRDR issues to be implemented at Pilgrim Station. The following summarizes the remaining CRDR commitment schedule:

- Complete installation of control room ceiling lighting improvements (LTP 375) by December 31, 1991 (complete)
- Complete remaining "Category 7" HEDs (non-engineered actions) by March 31, 1992 (complete).
- Complete control panel enhancements (LTP 300 plus portion of LTP 328) by end of RFO 9, except for panel C7.
- Complete control panel improvements (balance of LTP 328) by end of RFO 9 (outage portion) and December 31, 1993 (on-line portion), except for panel C7.
- Begin installation of replacement annunciator in RFO 9 (completion date to be established)(LTP 327).
- Complete work related to panel C7 by MCO 94 (Reference 12).

References

- 1) NUREG 0737: Item I.D.1
- 2) BECo Letter 84-159, dated September 24, 1984
- 3) NRC Letter 85-157, dated May 16, 1985
- 4) NRC Letter 86-002, dated January 6, 1986
- 5) BECo Letter 87-008, dated January 20, 1987
- 6) BECo Letter 89-064, dated May 2, 1989
- 7) BECo Letter 89-102, dated July 6, 1989
- 8) BECo Letter 89-112, dated July 24, 1989
- 9) BECo Letter 90-008, dated January 11, 1990
- 10) BECo Letter 90-147, dated November 30, 1990
- 11) BECo Letter 91-099, dated July 31, 1991
- 12) NRC Letter 92-178, dated July 13, 1992
- 13) BECo Letter 92-128, dated November 13, 1992

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

Submit Supplementary Summary Report - Complete

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - February 1990 to November 1990

- The final DCRDR Summary Report was submitted November 30, 1990.
- As a result of ongoing human factors evaluations, the scope of control room panel enhancements has expanded beyond those committed in Ref. 7. The on-line portion is planned to be completed by June 30, 1992; the outage portion is planned for completion by the end of RFO #9. The extent of enhancements to be performed in RFO #8 and those to be performed on a later schedule are detailed in the November 30, 1990 Final DCRDR Summary Report submittal. The next LTP update will reflect the revised scope and schedule of the summary report.
- We have determined improvements to control room lighting can be implemented on line. Therefore, we are revising the previous completion date of the end of RFO #8 to completion by December 31, 1991. We plan to install the lighting improvements on-line before RFO #8. However, in the event they are not completed before RFO #8, we will complete them by December 31, 1991.

Progress and Summary of Changes - December 1990 to February 1991

Currently, work to accomplish the items listed in Reference 10 is on schedule.

Progress and Summary of Changes - March 1991 to August 1991

The following improvements were implemented during RFO #8:

- Installed welded patches to restore all main control panels to uniform flat, flush, smooth surface suitable for painting and for installation of improvements.
- Repainted all control panels in main operating area, and began effort to repaint the "back panels."
- Replaced labels and installed new mimics and demarcations on 10 panels, plus revisions to mimics and labels on additional panels.
- Completed removal of abandoned equipment from Main Control Panels.
- Replaced approximately 325 switch escutcheons and 200 switch handles.
- Rewired or replaced 17 switches, continuing a program to achieve uniform switch positions and patterns.
- Rearranged 3 groups of switches and 3 groups of indicators to achieve more logical arrangement.
- Installed an additional set of scram and MSIV indicators on Panel C905.

ATTACHMENT 2 (Continued)

SCHEDULE B

- Replaced 6 meter scales with scales improved in readability; more to be installed on-line, after RFO #8.

In Reference 11, we notified the NRC that we will not be implementing switch rearrangements for the Safety Relief Valves. The work to accomplish the remaining Reference 10 items is on schedule.

Progress and Summary of Changes - August 1991 to February 1992

- Planned construction of improved ceiling lighting was completed by December 1991. Post-work testing was completed in January 1992. Post-work testing identified the need for one additional fixture in the back panel area that will be installed during the next report period.
- Procedure revisions and other non-engineered corrective actions in "Category 7" were completed except for one HED relating to an EOP display space. An improved EOP display stand is expected to be installed by June 30, 1992.
- Installation of control panel enhancements (labels, mimics, demarcation) were continued in the control room and simulator.
- Efforts continue on the preparation of design packages for panel improvements to be installed in the 1992 Mid-cycle Outage and in RFO 9 (1993).
- We continued the signal-by-signal review of annunciator system and initiated the planning effort to establish scope and schedule for the annunciator upgrade.
- Plans are being made to finish re-painting the Control Room back panels with a target completion date of September 1, 1992.
- Installation of improved instrument scales continued in RFO #8. Some of the instrument scales originally scheduled for replacement in RFO 8 were not installed because of emergent technical issues. It is expected that the scale replacement program will be completed by the end of RFO 9 as originally scheduled.

Progress and Summary of Changes - March 1992 to August 15, 1992

- Completed installation of one additional light fixture in control room ceiling which completes physical work on control room lighting.
- Completed installation of EOP support stands in control room and simulator which completes Category 7 actions, as previously planned.
- Completed installation of control panel labels, mimics, and demarcations on control room panels in original (LTP 300) scope, as planned, including marking of RG 1.97 devices.

ATTACHMENT 2 (Continued)

SCHEDULE B

- Completed preparation of engineering change packages for CRDR modifications to be implemented in 1992 mid-cycle outage and in RFO 9, as planned.
- Initiated detailed design of annunciator replacement project.
- Continued re-painting of control room panels and began repainting of simulator panels. All front panels and the majority of the back panels are now complete.
- Conducted task analysis and prepared conceptual designs of panel C7 redesign in preparation for decision on scope and final design. The changes related to Panel C7 are as follows: (a) redesign of Panel C7, referred to in Reference 10, Appendix D as Package 16; (b) redesign N2 portion of C904, Package 20; (c) Replace Kaye Recorder, Package 22; and (d) rewire C7 switches (no package number). As previously documented in Reference 12, this work will be done in MCO94 due to the long lead time for the design and procurement of the new panel.
- The following establishes schedules for two items: (a) Replacement of instrument scales is now expected to be completed by the end of RFO 9. (b) The "priority paging" modification (Page III-18 of Reference 6) was installed in 1989. We are re-evaluating the adequacy of the priority paging feature as well as possible changes to the basic Gai-Tronics configuration. If more extensive modifications are undertaken, the scope and schedule will be provided in the next LTP update letter.
- Colored zone markings on instrument scales as described in Reference 10 (Page III-16) and the use of Light Emitting Diodes (LEDs) to replace indicator light bulbs continue to be worked as elective actions being done as part of the DCRDR project.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

- Implemented the following modifications during the 1992 mid-cycle outage, as planned:
 - Rearranged post-accident sampling panels C174-C175
 - Relocated reactor water cleanup control switches
 - Relocated feedwater block valve control switches
 - Rearranged area temperature annunciator modules
 - Modified position indication lights for HPCI and RCIC turbine control and stop valves. One portion of this package (related to the HPCI governor valve) could not be completed owing to late material delivery and will be completed in RFO 9.
 - Replaced RBCCW temperature recorder
- Completed re-painting control panels in the Main Control Room and at the simulator.
- Completed the evaluation of LEDs as potential replacements for ET-16 indicator lamps. Concluded that currently-available products are not adequate for replacement of ET-16s. This modification will, therefore, not be implemented.

ATTACHMENT 2 (Continued)

SCHEDULE B

- Continued engineering change packages for annunciator replacement project including portions to be implemented in 1994 mid-cycle outage and in RFO 10, as planned. Placed purchase order for replacement annunciator system, having selected a Beta microprocessor-based system.
- Continued on-line work to install replacement meter and recorder scales.
- The following establishes a schedule for the annunciator replacement project (LTP 327). The annunciator will be installed beginning in RFO 9 as previously committed, and will be completed by the end of RFO 10 (previously uncommitted).
- Continued evaluation of the prospective changes to the plant paging system. As indicated in our previous LTP submittal, we no longer plan to complete the "priority paging" system. Instead, we are developing scope of work for changes that will include efforts to address the difficulty of communicating to and from rotating machinery spaces. This was the subject of the initial HED. We expect to be able to provide a scope and schedule in the next LTP update.

ATTACHMENT 2 (Continued)

SCHEDULE B

REGULATORY GUIDE 1.97 (G. L. 82-33) (LTP #305, 326, 377)

Commitment Description

Generic Letter 82-33 required each licensee to review the accident monitoring instrumentation available at their facility and to compare this instrumentation with the recommendations of Regulatory Guide 1.97. The results of BECo's review and comparison for PNPS was provided by Reference 2, with a projected project completion schedule by RFO #8.

A summary of compliance submitted to the NRC in Reference 8 restated compliance information previously submitted, provided new information for specific variables, and identified open items requiring additional work by BECo. Based on the extent of open items for this project, the project completion schedule was changed to RFO #9. This revised project completion schedule was contingent upon NRC approval of both our summary of compliance and the BWR Owner's Group position on neutron flux monitoring capability.

In the February 28, 1991 LTP Update, we rescinded the schedule for completion of the project because we had not then received NRC approval of our summary of compliance.

The NRC safety evaluation report (Reference 11) has since been received. Although this safety evaluation report is not complete, the remaining open or unreviewed issues are expected to be resolved in time to support project completion by RFO #9. Therefore, the schedule for project completion by the end of RFO #9 is reinstated.

Project completion by RFO #9 is based upon expected NRC acceptance of the BWR Owners' Group appeal on neutron flux monitoring capability. If the NRC does not accept this appeal, addressing this issue at PNPS will require a revised project completion schedule.

References

- 1) NRC Generic Letter 82-33, dated December 17, 1982
- 2) BECo Letter 84-187, dated November 1, 1984
- 3) NRC Letter 85-372, dated December 12, 1985
- 4) BECo Letter 87-021, dated February 10, 1987
- 5) NRC Letter 89-044, dated January 24, 1989
- 6) BECo Letter 89-053, dated April 11, 1989
- 7) BECo Letter 90-005, dated January 11, 1990
- 8) BECo Letter 90-010, dated January 15, 1990
- 9) BECo Letter 90-049, dated April 5, 1990
- 10) BWROG Letter to NRC, BWROG-90107, dated August 20, 1990
- 11) NRC Letter 91-070, dated March 13, 1991
- 12) BECo Letter 91-040, dated March 20, 1991
- 13) BECo Letter 91-066, dated May 13, 1991
- 14) NRC Letter 92-167, dated June 23, 1992 (Inspection 92-06)
- 15) NRC Letter 92-296, dated December 23, 1992

ATTACHMENT 2 (Continued)

SCHEDULE B

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

Schedule revised.

BECO responded to the NRC request for additional information (Reference 5) on April 11, 1989 and supplied the information for instrumentation monitoring effluent radioactivity and status of standby power on January 11, 1990. In addition, a summary of compliance with updated information for specific variables and open items requiring additional work was provided on January 15, 1990. We are presently awaiting NRC disposition of remaining open issues.

Based on the scope of open items identified in our recent summary of compliance submittal, dated January 15, 1990, and the re-allocation of BECO resources to accommodate the prioritization of the other LTP issues, the project completion schedule is revised from RFO #8 to RFO #9. This revised project completion schedule is subject to change based on the NRC's review of both our summary of compliance and the BWR Owners' Group position on neutron flux monitoring capability.

Progress and Summary of Changes - March 1990 to November 1990

In anticipation of the NRC's issuance of a safety evaluation report for Regulatory Guide 1.97 compliance at PNPS, BECO provided an updated summary of compliance to the NRC on April 5, 1990 (Reference 9). This update provided the results of our seismic verification program for Regulatory Guide 1.97 Category 1 for primary containment isolation valve indication and seismic Category 2 equipment at PNPS, and provided new information on certain compliance details and exceptions. The BWR Owners' Group submitted a request to the NRC (Reference 10) to appeal the requirement for a post-accident neutron monitoring system that complies with Regulatory Guide 1.97. The Regulatory Guide 1.97 project scope will accommodate the results of the NRC's decision on this appeal. If the appeal is rejected, the addition of work to procure and install a post-accident neutron monitoring system at PNPS will require a revised project completion schedule.

Progress and Summary of Changes - December 1990 to February 1991

During RFO #8, additional safety-related power supplies will be installed for containment isolation valve position switches on the radwaste collection and drywell equipment sumps. A testing and analysis program to provide the basis for Environmental Qualification of Regulatory Guide 1.97 equipment at Pilgrim is in progress. Additional samples of cable will be obtained early in 1991 for testing and evaluation. Laboratory testing of cable and other components is being conducted at Wyle Laboratories. This testing program will be completed in 1991.

ATTACHMENT 2 (Continued)

SCHEDULE B

Additional actions will be planned and scheduled after receipt of NRC response to the Reference 9 submittal.

Progress and Summary of Changes - March 1991 to August 1991

On March 13, 1991, the NRC issued a safety evaluation report (SER) of our conformance to Regulatory Guide 1.97 (Reference 11). This SER found the majority of our identified deviations from full compliance to be acceptable, with exceptions for certain aspects of redundancy and separation, electrical interfaces, channel availability, quality assurance, and servicing, testing, and calibration. In addition, several of our deviations identified in References 9 and 12 have not yet been reviewed by the NRC in this SER.

Concurrent with the receipt of the NRC SER, we submitted an update of our summary of compliance (Reference 12). This update provided additional information on our compliance with design and qualification criteria and the status of standby power and other energy sources important to safety. In addition, this update included a new deviation concerning the monitoring of noble gases and vent flow rates through the main stack.

We responded to the NRC SER with an additional update to our summary of compliance dated May 13, 1991 (Reference 13). This update provided the requested commitment to provide the redundancy and separation recommended by Regulatory Guides 1.97 and 1.75 for those portions of instrumentation being upgraded to conform with Category 1 criteria. Other changes to our summary of compliance were included to address the other open issues in the NRC SER, with the exception of electrical interfaces. In a telephone conversation on April 29, 1991, we discussed this open issue with the NRC and their reviewer. The NRC stated the design at PNPS appeared to be acceptable for a plant of our vintage, but they requested a formal submittal to support this possible conclusion. Additional information on the electrical isolation design at PNPS will be submitted to the NRC to support further NRC review of the acceptability of our current design.

During RFO #8, additional safety-related power supplies were installed for containment isolation valve position switches on the radwaste collection, and drywell equipment sumps. This modification completes the actions required for LTP Item 301.

The samples of electrical cable needed to complete the testing and analysis program for environmental qualification have been obtained. The laboratory testing of these cable samples and other components is still underway at Wyle Laboratories. The testing portion of this program is still expected to be completed in 1991.

With the receipt of the NRC SER, the schedule for project completion by the end of RFO #9 is reinstated. Although this SER is not complete, the remaining open or unreviewed issues are expected to be resolved in time to

ATTACHMENT 2 (Continued)

SCHEDULE B

support project completion by RFO #9. This schedule is based upon the expected NRC acceptance of the BWR Owners' Group appeal on neutron flux monitoring capability. If the NRC does not accept this appeal, addressing this issue at PNPS will require a revised project completion schedule.

Progress and Summary of Changes - August 1991 to February 1992

- Wyle laboratory testing of electrical cable samples is partially complete and is expected to be completed by June 30, 1992.
- The following modifications were designed and are scheduled for implementation during the 1992 Mid-Cycle Outage:
 - Normal Range RPV Level Recorders (PDC 90-19): This modification will replace the existing level signal input to LR1001-604A, B Pen #2 from LT263-120A, B via LI263-121A, B with a qualified level signal from LT263-72A, B via E/I263-72A,B. A shunt resistor will be added to the input circuit of the recorders to accommodate the change in input voltages. A new cable will be pulled through existing conduit between Panels C171 and C2233B.
 - RHR Heat Exchanger Flow (PDC 90-53): This modification will replace the following four thermocouples (Type T) with Pyco equivalent Type T environmentally qualified thermocouples: TE1045A,B & TE1047A,B.
 - Torus Pressure Indication (PDC 90-07): This modification will add a redundant Torus Bottom Pressure Transmitter (PT1001-69A) with remote indication (PI1001-69A and PR1001-69) on C903. The new transmitter will be installed at an existing torus penetration.
 - Post Accident Effluent Sampling (PDC 92-05): This modification will provide shielding for effluent sample holders as specified in NUREG-0737, Table II.F.1-2 and R.G. 1.97.
- Completed laboratory testing of Microswitch limit switches for thermal, seismic, radiation, cycling and functional requirements.
- Initiated completion of remaining RFO #9 scheduled modifications.

Progress and Summary of Changes - February 1992 to August 15, 1992

- Wyle laboratory testing of electrical cable samples was not completed by June 30, 1992. It is progressing and is expected to be completed by October 1992.
- Completed engineering for RFO #9 modifications.
- Completed the NRC R.G. 1.97 Inspection and have no follow-up action items.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

- Completed testing of electrical cable samples at Wyle laboratory. Testing was completed satisfactorily and no additional cable replacements were necessary. Testing of motor-operated valves is continuing and is expected to be completed within the next update period.
- Received Supplemental NRC Safety Evaluation (Reference 15) that concluded "the Pilgrim Nuclear Power Station design [is] acceptable with respect to conformance to R.G. 1.97, Revision 3". We have requested NRC clarification on one item related to monitoring of the main stack flow.
- Continued analyses and documentation to complete the non-modification efforts required by R.G. 1.97, as planned.
- Implemented the following modifications during the 1992 mid-cycle outage, as planned:
 - Modified normal range reactor water level recorder (PDC 90-19).
 - Replaced RHR heat exchanger flow transmitters (PDC 90-53).
 - Installed redundant torus pressure indicator and recorder (PDC 90-07).
 - Replaced RHR heat exchanger thermocouples (FRN 90-04-32).
 - Installed of post-accident effluent sample shield (PDC 92-05). This modification was completed and is operable with respect to R.G. 1.97 requirements.

ATTACHMENT 2 (Continued)

SCHEDULE B

SEISMIC VERIFICATION PROGRAM (G. L. 87-02) (LTP #410)

Commitment Description

The NRC's final Supplemental Safety Evaluation Report (SER) on Revision 2 of the Generic Implementation Procedures (GIP-2) for A-46 was issued via Generic Letter 87-02, Supplement 1, on May 22, 1992 (Reference 4). By September 21, 1992, each licensee was required to respond to the SER stating whether they intend to follow the GIP-2 guidance, provide a schedule for implementation of the GIP including submission of a report summarizing the results of the A-46 review, and provide information on the procedures and criteria used to generate the in-structure response spectra used for A-46 implementation. Evaluation of equipment is to include (a) adequacy of equipment anchorage; (b) functional capability of essential relays; (c) identification of potential outliers and deficiencies; and (d) seismic systems interactions.

In our response (Reference 5), we committed to implement GIP-2 in its entirety and provided a description of the procedures and criteria used to generate the in-structure response spectra. A schedule of GIP-2 implementation and submission of a summary report was deferred to the February 1993 LTP semi-annual update (provided below).

In Reference 6, the NRC issued a Safety Evaluation Report (SER) approving our response. The SER assumed a commitment on BECo's part to implement the GIP-2 in its entirety and noted our in-structure response spectra should be treated as median-centered. We affirmed the NRC assumption to be correct in Reference 7 and clarified our continued commitment to implement the seismic verification program at Pilgrim Station through the GIP-2 and its subsequent revisions.

Our schedule for completion of the GIP and submission of a summary report is 120 days following completion of Refueling Outage #10, currently planned to commence in April, 1995. This schedule is consistent with the 3-year completion recommended in SSER Section II.4.2.3 that specifies commencement of the 3-year period will begin when one of the following conditions is met:

- Receipt of staff approval of the in-structure response spectra to be used to resolve the USI A-46 (i.e. Reference 6).
- 60 days following the licensee's initial submittal of acceptable procedures and criteria in generating those in-structure response spectra.

References

- 1) NRC Letter dated February 19, 1987, GL 87-02
- 2) BECo Letter 88-145, dated October 11, 1988, Response to GL 87-02
- 3) NRC Letter dated June 7, 1989, Acknowledgment of BECo Response
- 4) NRC Letter dated May 22, 1992, Generic Letter 87-02, Supplement 1,
- 5) BECo Letter 92-109, dated September 21, 1992, Response to GL 87-02, Supplement 1
- 6) NRC Letter dated November 18, 1992, SER of PNPS Response to GL 87-02, Supplement 1
- 7) BECo Letter 93-019, dated February 11, 1993, Additional Information Regarding NRC SER of PNPS Response to GL 87-02, Supplement 1

ATTACHMENT 2 (Continued)

SCHEDULE B

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

- A. Develop safe shutdown equipment list - Schedule Revised
- B. Rerreate original seismic design basis documentation - Schedule Revised
- C. Training and commence walkdown of accessible areas - Schedule Revised

The schedule for performing these three items was revised from Cycle 8 to Cycle 9 as a result of our re-assessment of the work to be performed for this seismic issue, with respect to the generic work scope for other similar existing and emerging seismic issues. By incorporating the similarities of work scope for each of the below listed issues into one set of physical activities, we can best optimize our resources. Other seismic issues include:

- Seismic Design Basis (USI A-40)
- Eastern Seismicity and Seismic Design Margins
- External Events (seismic) for Individual Plant Examinations

Progress and Summary of Changes - February 1990 to November 1990

A revised schedule for implementation of the seismic verification program will be developed after issuance of the NRC SER resolving the GIP open issues.

Progress and Summary of Changes - December 1990 to February 1991

No changes from the previous report period.

Progress and Summary of Changes - March 1991 to August 1991

A schedule for implementation of the seismic verification program will be developed after issuance of the NRC SER resolving the GIP open issues.

Progress and Summary of Changes - August 1991 to February 1992

A schedule for implementation of the seismic verification program will be developed after issuance of the NRC SER resolving the GIP open issues.

Progress and Summary of Changes - March 1992 to August 15, 1992

Reference 4, issued the final NRC SER (SSER No. 2) resolving the GIP open issues and superseded all previous NRC SER documents. A response containing the following information will be made by September 21, 1992:

- A statement whether we commit to use both the SQUG commitments and the implementation guidance provided in GIP-2 as supplemented by the SSER No. 2 for the resolution of USI A-46.
- A plant-specific schedule for the implementation of the GIP and submission of a report summarizing the results of the USI A-46 review.

ATTACHMENT 2 (Continued)

SCHEDULE B

- Detailed description of the procedures and criteria used to generate the in-structure response spectra.

Progress and Summary of Changes - August 16, 1992 - February 15, 1993

- Three BECo personnel and a contractor have completed the GIP Seismic Walkdown and Evaluation SQUG Training Program.
- A safe shutdown equipment list has been developed and is undergoing final review and approval.
- A portion of the seismic walkdowns began in MCO #9. On-line walkdowns continue during operating cycle 9. Outage walkdowns are planned for RFO 9 with any further on-line portions in operating cycle 10. Remaining off-line portions will be done in MCO 10 and RFO 10.
- At BECo's request, a meeting was held in our Braintree offices on September 3, 1992, in which we presented our intended approach to A-46 resolution and solicited NRC feedback prior to preparing our Generic Letter 87-02 response letter.

ATTACHMENT 2 (Continued)

SCHEDULE B

PHYSICAL SECURITY IMPROVEMENTS (LTP #029)

Commitment Description

In response to NRC inspection findings, and as a plant betterment activity, BECo committed to replace the security computer and improve certain security activities. This includes miscellaneous perimeter improvements (completed in December 1989), installation of new security computer facilities, a new security computer and access control system, and a backup power supply.

References

- 1) NRC Letter 85-119, dated April 30, 1985 (RER Report)
- 2) I&E Inspection Report 86-08 dated 5/29/86

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

- A. Misc. perimeter improvements - Complete
- B. Facilities change to house new computer - On Schedule for completion by December 31, 1990.
- C. Backup power supply changes - Schedule revised
- D. Develop & install new computer & access control equipment - On Schedule for completion by December 31, 1991.

The schedule for backup power supply completion was revised from December 1990 to June 1991. This change was made to properly reflect the actual integration of this activity with respect to the remaining security improvement activities.

Progress and Summary of Changes - February 1990 to November 1990

- Facilities change to house new computer - Schedule revised from December 31, 1990 to December 31, 1991.
- Backup power supply changes - Schedule revised from June 1991 to December 31, 1991.
- Develop & install new computer and access control equipment - On schedule for completion by December 31, 1991.
- System cutover of alarms and access control will be in full operation by June 30, 1992.

These changes in schedule are the result of unanticipated delays encountered during construction such as the procurement of materials to relocate existing fire water lines, removal of asbestos during building demolition, and contaminated material handling.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - December 1990 to February 1991

Based on improvements undertaken to address NRC evaluations of our security perimeter conducted in 1990, and recent events in the Persian Gulf, we have re-focused our efforts involving physical security improvements to include additional work activities aimed at strengthening perimeter security. These additional activities will be completed in 1991 and include:

- Upgrading the E-Field to a Series 5000
- Installing a new Video Capture System
- Enhancing site lighting

The integration of these activities with the present LTP activities necessitate changes to the projected completion dates. Progress summary and schedule changes are as follows:

- Construction has begun on a new facility to house the new security system computer. Renovations to the bottom floor of the Main Gate House have also begun. This is part of the revised security facilities scope. This work will continue through 1992; thus, the completion date is changed from December 31, 1991 to December 31, 1992.
- A new backup power supply (diesel generator) has been ordered, and expected delivery is March 1991. Final completion of installation is revised to December 31, 1992 to coincide with the computer facilities upgrade schedule.
- Performance acceptance testing of the new security computer system at the manufacturer's facilities has identified system problems that have delayed delivery. Delivery is anticipated within the next several months; therefore, staging and commencement of training and security operating procedure revisions are planned for 1991. The final completion date for the computer and access control equipment is changed to December 31, 1992.
- The system cutover of alarms and access control operational completion date is similarly revised to December 31, 1992 to accommodate the above schedule revisions.

Progress and Summary of Changes - March 1991 to August 1991

- Construction of a new facility to house the new security system computer is on schedule for completion by December 31, 1992.

ATTACHMENT 2 (Continued)

SCHEDULE B

- The new backup power supply (diesel generator) was received on July 19, 1991. Installation is on schedule for completion by December 31, 1992.
- Delivery of the new security computer system has been delayed and is not anticipated until early 1992. The final completion date of the computer and access control equipment is on schedule for December 31, 1992.
- System cutover of alarms and access control operational is on schedule for completion by December 31, 1992.
- We are shifting the implementation schedule from 1991 to 1992 for upgrading the E-Field to a Series 5000. This revision is based on resource re-allocations for 1991 necessitated by work scope increases on other non-security tasks during RFO #8. The installation of a new Video Capture System and enhancement of site lighting remain on schedule for completion during 1991.

Progress and Summary of Changes - August 1991 to February 1992

- Construction of a new facility to house the new security system computer is on schedule for completion by December 31, 1992.
- Installation of the new backup power supply (diesel generator) is on schedule for completion by December 31, 1992.
- The security computer manufacturer has been unable to meet all of the contractual obligations to deliver the specified system on schedule. We are currently evaluating new manufacturers to complete the software requirements for the security computer system. Selection of a new manufacturer is expected by April 1992 at which time an implementation schedule will be prepared. This delay also affects the system cutover of alarms and access control operations. A new schedule for these items will be provided in our next LTP semi-annual update.
- Upgrade of the E-Field is complete.
- Installation of the Video Capture System is complete.
- All construction work on the enhancement of the site lighting is complete. During post work testing, we discovered 2 areas (lights) that did not meet the light intensity requirements. One area (light) was corrected in January 1992. The remaining area (light) was completed in February 1992.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - March 1992 to August 15, 1992

- Construction of a new facility to house the new security system computer is on schedule for completion by December 31, 1992.
- Installation of the new backup power supply (diesel generator) is on schedule for completion by December 31, 1992.
- The security computer manufacturer was unable to meet contractual obligations to provide the specified system. All involvement with this vendor has been terminated and we are currently evaluating proposals from new manufacturers to supply the specified system. Selection of a new manufacturer is expected in September 1992 at which time an implementation schedule can be prepared. This action also affects the access control system upgrade and system cutover of alarms. Resources are being expended to support completion by December 31, 1993 or sooner if possible. This will be clarified in our next submittal after selection of a computer manufacturer.

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

- Construction of facilities to house the new security computer is essentially complete except installation of a sprinkler system actuation panel and performance of fire system tests on the sprinkler, CO₂ and alarm system. Completion of these items and approval of occupancy permits is expected in March 1993.
- Completion of the new backup power system (DG/UPS) has experienced delay due to manufacturer supplied system/equipment problems and their resolutions. Items being resolved are the replacement of DG room louvers to support successful CO₂ system testing and UPS room HVAC system replacement to handle heat load generation. Successful testing of fire suppression equipment will permit fuel loading, DG/UPS testing and commencement of secondary security load cutovers. Completion is now planned in May 1993.
- In December 1992, BECo contracted a new security computer manufacturer. System shipment to PNPS is planned for January 1994 to be followed by installation, site acceptance and availability testing for a June 1994 completion. Access Control System upgrades and cutovers will be integrated with this effort to achieve project completion by December 31, 1994.

ATTACHMENT 2 (Continued)

SCHEDULE B

BULLETIN 87-01, THINNING OF PIPE WALLS & GENERIC LETTER 89-08 EROSION/CORROSION INDUCED PIPE THINNING (LTP #005)

Commitment Description

In response to Bulletin 87-01, BECo (Reference 1) committed to develop criteria for determining how frequently to make thickness measurements and develop a database for monitoring erosion/corrosion. As a result of the issuance of Generic Letter 89-08 (Reference 2) and BECo's response (Reference 3), we committed to develop a formal procedure for implementation of a long-term erosion/corrosion monitoring program based on the guidelines developed by NUMARC and to conduct initial inspections during RFO #8. In Reference 4, the NRC confirmed the acceptability and schedule of BECo's planned actions to be taken in response to Generic Letter 89-08.

In the development of the program, we decided to implement a specification for use during RFO #8 defining the criteria for determining frequency of thickness measurements, the erosion/corrosion data base, and the locations and frequencies of inspections.

Development of a formal long-term erosion/corrosion monitoring program remains as an activity and will be completed by February 28, 1992.

References

- 1) BECo Letter 87-159, dated October 2, 1987
- 2) NRC Generic Letter 89-08, dated May 2, 1989
- 3) BECo Letter 89-107, dated July 21, 1989
- 4) NRC Letter, dated April 30, 1990
- 5) NRC Letter 92-196, NRC Inspection 50-293/92-12 dated July 17, 1992

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

The Bulletin 87-01 scope of work has been revised to incorporate the additional NRC guidance provided in Generic Letter 89-08, "Erosion/Corrosion Induced Pipe Thinning". Our Generic Letter response commitment to develop an erosion/corrosion monitoring procedure by October 31, 1990 was based on the need to complete the procedure development prior to conducting the physical inspections during the next refueling outage. Due to unforeseen emergent issues regarding the Salt Service Water System and the allocation of resources needed to address the issues, the schedule was revised for completion to December 31, 1990. This change does not affect the ability to conduct inspections planned for RFO #8.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - February 1990 to November 1990

- A. Develop criteria and data base for long-term erosion/corrosion monitoring is on schedule for completion by December 31, 1990.
- B. Conduct initial inspections is on schedule for RFO #8.

Progress and Summary of Changes - December 1990 to February 1991

- A. Develop criteria and data base for long-term erosion/corrosion monitoring is complete.
- B. Conduct initial inspections is on schedule for RFO #8.

Progress and Summary of Changes - March 1991 to August 1991

Initial inspections were conducted during RFO #8. The Erosion/Corrosion inspection requirements related to RFO #8 were defined in Specification M-577. The specification identified over 30 locations to be inspected via UT examination. The piping locations selected for initial inspection during RFO #8 constitute an estimated sampling (approximately 10% of the population) of the most highly susceptible areas of the following four plant systems.

1. Extraction Steam Piping - 8 Inspection Points
2. Moisture Separator Piping - 8 Inspection Points
3. Feed Water Piping - 2 Inspection Points
4. Heater Drains and Vents - 11 Inspection Points

Prior to RFO #8 two leaks were identified and temporarily repaired on the Extraction Steam and Moisture Separator systems.

The results of the RFO #8 E/C inspections were as follows:

1. Extraction Steam Piping - 8 original inspection points resulted in 1 failure, 4 additional points inspected resulting in 3 failures.
2. Moisture Separator Piping - 8 original inspection points resulted in 3 failures.
3. Feed Water Piping - 2 original inspection points resulted in no failures.
4. Heater Drains and Vents - 11 original inspection points resulted in no failures.

Based on an evaluation of the inspections that failed the acceptance criteria (several locations at or below minimum wall requirements) and considering that 2 through wall leaks existed prior to RFO #8, it was determined that large scale piping replacement with a material less susceptible to Erosion/Corrosion was the most effective option. The replacement material chosen was 1¼% chromium, ½% molybdenum, alloy steel pipe.

ATTACHMENT 2 (Continued)

SCHEDULE B

The scope of the work completed during RFO #8 included the following plant modifications:

- Replacement of 200 feet of 12 inch pipe and insulation on the 8th Stage Extraction Steam System in the condenser bay.
- Replacement/modification of 2 feedwater heater nozzles (E104A/B) on the 8th Stage Extraction Steam System in the condenser bay.
- Replacement of 2 turbine nozzles safe ends on the 11th Stage Extraction Steam System inside the 'B' condenser.
- The temporary modification of 2 turbine nozzles safe ends on the 11th Stage Extraction Steam System inside the 'A' condenser.
- The replacement of 700 feet of 6 inch pipe and insulation on the Moisture Separator Drain System in the condenser bay.
- The replacement of 2 valve station headers on the Moisture Separator System; the post weld heat treating of over 100 welds and the restoration of all associated pipe supports and check valves.

The above results will be factored into the development of our long term erosion/corrosion program, presently scheduled for completion by February 28, 1992.

Progress and Summary of Changes - August 1991 to February 1992

Development of the long term erosion/corrosion program description is complete. The program description includes provisions for identifying the specific inspection requirements for the 1992 mid-cycle and RFO #9 outages, identifying the basis and methodology for implementing our erosion/corrosion program, and including administrative controls (i.e., procedures) that assure the NUMARC guidelines are satisfied and the structural integrity of E/C susceptible systems is maintained.

The implementing Nuclear Organization Procedure (NOP) will be completed by April 15, 1992.

Progress and Summary of Changes - March 1992 to August 15, 1992

The implementing Nuclear Organization Procedure was issued. In July, the NRC conducted an audit of our E/C program and issued an inspection report (50-293/92-12). The inspection concluded that we have a well planned and documented Erosion/Corrosion program in place. No examinations are planned for the October mid-cycle outage due to its short schedule. We are currently planning to examine approximately 100 locations for Erosion/Corrosion in RFO 9.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

Erosion/Corrosion inspections and replacements are scheduled for RFO 9. Approximately 60 fittings are scheduled for inspection and 50 fittings are scheduled for replacement. This Long Term Program item is being closed. All future inspections will be performed as part of routine plant operations.

ATTACHMENT 2 (Continued)

SCHEDULE B

GENERIC LETTER 88-20, SUPPLEMENT 1, INDIVIDUAL PLANT EXAMINATION OF SEVERE ACCIDENT VULNERABILITIES (LTP #488, 567)

Commitment Description

In response to GL 88-20 (Ref. 1) and its Supplement 1 (Ref. 2), BECo provided a program plan for completing an Individual Plant Examination (IPE) for severe accident vulnerabilities for Pilgrim Station (Ref. 3). The schedule for completion was deferred to the February 1990 LTP update.

The NRC confirmed the acceptability of our program plan and requested we identify the milestones and schedule for completing the IPE and submitting the results (Ref. 4).

Our schedule for completing the IPE as originally proposed in the February 1990 LTP update was October 1, 1991, with the results to be submitted by December 15, 1991. This schedule was revised in our December 1990 LTP update to completion and submittal by April 30, 1992.

This schedule was later revised to September 1992 in the February 1992 update. Significant milestones include:

- Initiating Event Data Review
- Preliminary Event Tree Development
- Fault Tree Development & Quantification
- Event Tree Quantification
- Containment Event Tree Development & Quantification

References

- 1) Generic Letter 88-20, dated November 23, 1988
- 2) Generic Letter 88-20, Supplement #1, dated August 29, 1989
- 3) BECo Letter 89-159, dated October 27, 1989
- 4) NRC Letter 90-006, dated January 10, 1990
- 5) NRC Generic Letter 88-20, Supplement #2, dated April 4, 1990
- 6) NRC Letter 92-060, dated March 6, 1992
- 7) NRC Letter 92-159, dated June 16, 1992
- 8) BECo Letter 92-114, dated September 30, 1992

Commitment History/Progress

Progress and Summary of Changes - February 1990 to November 1990

Our Schedule for IPE is being revised from completion by October 1, 1991 and submittal by December 15, 1991 to completion and submittal by April 30, 1992.

These changes in schedule are being made to accommodate the involvement of additional BECo personnel in the development and quantification of the IPE which is consistent with the Generic Letter 88-20 guidance.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - December 1990 to February 1991

IPE is on schedule for completion and submittal to NRC by April 30, 1992.

Progress and Summary of Changes - March 1991 to August 1991

IPE is on schedule for completion and submittal to NRC by April 30, 1992.

Progress and Summary of Changes - August 1991 to February 1992

We are revising the IPE completion date from April 1992 to September 1992.

In building the Modular Accident Analysis Program (MAAP) computer parameter file, we discovered certain modeling concerns that have necessitated extensive interaction with the computer code's developer. Also, as our experience with MAAP matured, we realized our original estimate of the number of simulations required was below the number necessary to assure completeness.

Since our program was established to use BECo personnel to the maximum extent possible, resolution of MAAP problems by BECo personnel instead of contractors has contributed to the delay of the April 1992 completion.

Progress and Summary of Change - March 1992 to August 15, 1992

IPE is on schedule for completion and submittal to the NRC by September 30, 1992.

Progress and Summary of Change - August 16, 1992 - February 15, 1993

- This item is complete and will be removed from future LTP updates. The IPE was completed and submitted on schedule (9/30/92).

ATTACHMENT 2 (Continued)

SCHEDULE B

GENERIC LETTER 83-28, ITEM 2.2 (PART 2) VENDOR INTERFACE (PROGRAMS FOR ALL OTHER SAFETY RELATED COMPONENTS) (LTP #303)

Commitment Description

In response to Reference 1, BECo committed (Ref. 3) to complete an evaluation of existing vendor interface activities and identify recommendations for improvement. This was accomplished as of August 28, 1989. As a result of this evaluation, BECo is: (1) enhancing formal and informal vendor interface elements and, (2) implementing a new and more comprehensive Plant Equipment Technical Information Library. Our schedule for completion is projected as December 31, 1992.

Generic Letter 90-03 (References 4 & 5) clarified the elements of an equipment manufacturer interface program and requested licensees to review and modify, if necessary, their present equipment manufacturer interface program. Written confirmation of actions taken or planned to be taken was required.

Our Reference 6 response confirmed that the elements of the equipment manufacturer interface program prescribed in Generic Letter 90-03 are included in the existing scope of our Vendor Equipment Technical Information Program (VETIP).

This project involves the establishment of an enhanced vendor interface program that includes: a) All SR components within the NSSS scope of supply, and b) Other key SR components not included in a). The program related to a) will provide for and ensure the receipt of all updates to instruction and maintenance manuals, technical information bulletins, revised test procedures, and updated replacement parts information. The program related to b) is intended to be a good faith, documented effort to periodically contact the vendors of other key, SR components (such as batteries, cooling water pumps, valve operators, diesel generators, SR electrical switchgear) and obtain any technical information applicable to this equipment. The Project Plan and revised administrative procedures, are patterned after INPO Good Practice DE-102 in order to meet these requirements.

Based on the scope, schedule and resource estimates provided in the current revision of the Project Plan, we expect that when completed, the Equipment Technical Information Library will consist of approximately 250 SR/NSSS manuals (plus up to 450 NSR manuals) comprising over 4500 technical bulletins.

We expect to complete at least the total scope of Safety Related and Nuclear Steam Supply System manuals over the next two years.

ATTACHMENT 2 (Continued)

SCHEDULE B

References

- 1) NRC RAI dated May 4, 1988
- 2) NRC SER dated July 18, 1988
- 3) BECo Letter 88-140, dated September 28, 1988
- 4) NRC Generic Letter 90-03, dated March 20, 1990
- 5) NRC Generic Letter 90-03, Supplement 1, dated May 14, 1990
- 6) BECo letter 90-115, dated October 1, 1990

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

The Equipment Technical Information Program is on schedule for completion by December 31, 1991.

Progress and Summary of Changes - February 1990 to November 1990

The Equipment Technical Information Program completion schedule is being revised from December 31, 1991 to December 31, 1992.

This revised schedule is based on our most current review of resource availability and the relative priority of this project to other projects planned during 1991 and 1992.

To date the project has reviewed approximately 120 manuals and catalogued/indexed over 4500 technical bulletins that comprise the current library of approximately 800 manuals (safety related, non-safety related, and Nuclear Steam Supply System). We expect to complete at least the total scope of safety-related and Nuclear Steam Supply System manuals (600) over the next two years.

Progress and Summary of Changes - December 1990 to February 1991

The Equipment Technical Information Program is on schedule for completion by December 31, 1992.

Progress and Summary of Changes - March 1991 to August 1991

The safety-related and Nuclear Steam Supply System scope of the Equipment Technical Information Program is on schedule for completion by December 31, 1992. The number of manuals in this category is approximately 250. The 600 manuals as discussed above in the November 1990 Summary of Changes, was based on a total of approximately 1700 manuals expected to be developed. Although the volume of information will remain the same, the number of total manuals will be limited to approximately 750. Of the 750 manuals, approximately 250 will comprise the safety-related and Nuclear Steam Supply System manuals.

Progress and Summary of Changes - August 1991 to February 1992

The safety-related and Nuclear Steam Supply System scope of the Equipment Technical Information Program is on schedule for completion by December 31, 1992.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - March 1992 to August 15, 1992

The safety-related and Nuclear Steam Supply System scope of the Equipment Technical Information Program is on schedule for completion by December 31, 1992.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

This item is complete and will be removed from future LTP updates. The safety-related and NSSS scope of the equipment technical information program is complete.

ATTACHMENT 2 (Continued)

SCHEDULE B

GENERIC LETTER 89-10, SAFETY-RELATED MOV TESTING AND SURVEILLANCE (LTP #487)

Commitment Description

Generic Letter 89-10 (Ref. 1) expands the scope of the motor operated valve program required by NRC Bulletin 85-03 and its Supplement, to include additional testing, inspecting, and maintenance for all safety-related motor operated valves.

In our Reference 2 response to the Generic Letter, we committed to develop a program to enhance the maintenance, analysis, and testing already being conducted on MOVs at Pilgrim. The Generic Letter calls for the development of this program within 1 year or one refueling outage from the date of the letter, whichever is later. For BECo, this schedule translates to RFO #8. Our plan was to begin a design basis review of MOVs in the first quarter of 1991 and to begin testing in RFO #9. Based on resource constraints in 1990, we revised the design basis review schedule to commence in the last quarter of 1991. This revision continues to support our commitment to begin testing in RFO #9 and supports our program development schedule. We anticipate the testing will require three refueling outages, based on the extent of known scope. Additional scope determinations as a result of NUMARC and BWROG involvement will be factored into our final scope and schedule as appropriate.

Reference 6 requested Licensees to perform a plant specific safety assessment to determine if generic safety assessments performed by the NRC staff and the BWR Owners' Group are applicable. If MOVs are discovered with potential deficiencies of greater significance than the HPCI, RCIC, and RWCU MOVs, planned activities to address the generic letter were to be re-prioritized accordingly. Notification within 30 days of receipt of Supplement 3 was required verifying a plant-specific safety assessment was performed and identifying whether there were MOVs with deficiencies of greater safety significance than in the HPCI, RCIC, and RWCU systems. An additional notification within 120 days of receipt was also requested to provide the criteria reflecting operating experience and the latest test data applied in determining whether deficiencies exist in the HPCI, RCIC, and RWCU MOVs.

In our Reference 7 letter, we concluded the subject valves in the HPCI, RCIC, and RWCU systems were capable of performing their safety function to provide containment isolation in the event of a line break outside containment. This submittal provided our 30 and 120 day response to the generic letter and precluded having to perform a plant specific safety assessment. We also committed in Reference 7 to conduct diagnostic testing on the Reactor Water Cleanup (RWCU) MO-1201-2 valve during RFO #8. We expanded our planned RFO #8 testing to include 2 additional valves: RWCU MO-1201-5 and Closed Cooling Water MO-4010A.

The NRC issued a Request for Additional Information (RAI) (Reference 10) after reviewing our Reference 7 and 8 responses to GL 89-10 Supplement 3. BECo responded to the RAI on August 29, 1991 (Ref. 11).

ATTACHMENT 2 (Continued)

SCHEDULE B

During the week of March 9-13, 1992, the NRC conducted an inspection of the PNPS GL 89-10 MOV program. As a result of this inspection Boston Edison committed to resubmit the GL 89-10, Supplement 3, response and accelerate the schedule for priority 1 valves to have the GL 89-10 actions completed by the end of RFO 10. RFO 10 is scheduled for 1995.

References

- 1) Generic Letter 89-10, dated June 28, 1989
- 2) BECo Letter 90-13, dated January 15, 1990
- 3) NRC Letter dated June 7, 1990, Response to Generic Letter 89-10
- 4) NRC Letter dated June 13, 1990, Supplement 1 to Generic Letter 89-10
- 5) NRC Letter dated August 3, 1990, Supplement 2 to Generic Letter 89-10
- 6) NRC Letter dated October 25, 1990, Supplement 3 to Generic Letter 89-10
- 7) BECo letter 90-158 dated December 17, 1990
- 8) BECo Letter 91-022, dated February 26, 1991
- 9) NRC Letter dated April 1, 1991, Meeting Summary BECo/NRC
- 10) NRC Letter dated June 24, 1991, RAI regarding GL 89-10 Supplement 3
- 11) BECo Letter 91-111, dated August 29, 1991
- 12) NRC Letter dated February 18, 1992, Closure of GL 89-10, Supplement 3
- 13) NRC Letter dated February 12, 1992, Generic Letter 89-10 Supplement 4
- 14) NRC Letter dated June 3, 1992, Inspection 50-293/92-80 Motor Operated Valve Inspection.
- 15) NRC Letter dated May 5, 1992, Motor Operated Valve Inspection at PNPS (NRC Inspection Report 50-293/92-80).
- 16) BECo Letter 92-044, Revision to GL 89-10, Supplement 3, Response

Commitment History/Progress

Progress and Summary of Changes - February 1990 to November 1990

- Begin a design basis review of MOVs is on schedule for first quarter of 1991.
- Begin testing is on schedule for RFO #9 (completion within 3 refueling outages).
- 30 day notification in accordance with Generic Letter 89-10, Supplement 3 is planned for submittal by December 13, 1990.
- 120 day notification efforts are planned for submittal by March 13, 1991.

Progress and Summary of Changes - December 1990 to February 1991

- The schedule for commencement of design basis reviews of MOVs is being changed from the first quarter of 1991 to the last quarter of 1991. This schedule revision continues to support our commitment to begin testing in RFO #9.
- Begin testing is on schedule for RFO #9 (completion within 3 refueling outages).
- 30 day and 120 day notifications are complete.
- 3 safety related valves are on schedule for diagnostic testing during RFO #8 (MO-1201-2, 1201-5, and 4010A).
- Development of a Program Plan is on schedule for completion by May 1, 1991.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - March 1991 to August 1991

- Commencement of design basis reviews of MOVs is on schedule for the last quarter of 1991.
- Begin testing is on schedule for RFO #9 (completion within 3 refueling outages).
- Diagnostic testing of MO-1201-2, 1201-5, and 4010A was conducted during RFO #8. In addition to this testing, we completed diagnostic testing on the remaining GL 89-10 Supplement 3 MOVs (4 valves) and on another 10 safety related MOVs.
- Development of a Program Plan is complete.

Progress and Summary of Changes - August 1991 to February 1992

- Design basis reviews of MOVs continue to support our commitment to begin testing in RFO #9.
- Testing is on schedule to begin in RFO #9 (completion within 3 refueling outages).
- Procedures are in preparation describing design basis review methodology, control of switch settings, and degraded voltage analysis. Additionally, a Nuclear Organization Procedure establishing our MOV program is in final review.
- The schedule for static testing of MOVs has been accelerated and some testing will be done during our mid-cycle outage prior to RFO #9.
- MOVs tested using MOVATS test equipment were reviewed and have been retested using more accurate diagnostic test equipment or been reviewed to ensure there is sufficient margin.

Progress and Summary of Changes - March 1992 to August 15, 1992

- Design basis reviews of MOVs continue to support our commitment to begin testing in RFO #9.
- Testing is on schedule to begin RFO #9.
- GL 89-10 activities will be completed for priority 1 valves by the end of RFO #10.
- Reference 16 submitted a revision to GL 89-10, Supplement 3, response (Reference 8).
- Nuclear Organization Procedure 92M1 "Motor Operated Valve Program" has been approved.
- Procedures describing design basis review methodology and control of switch settings are approved. Draft procedures for degraded voltage of motors are being revised to include temperature effects on available torque. Additional procedures are being developed as necessary.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

- Design basis review is on schedule to support commitment to complete Priority 1 valves by RFO #10.
- Static testing was performed during MCO 9.
- New state of the art test equipment was purchased that provides direct stem torque and thrust measurements.
- Significant MOV testing, maintenance, and inspections scheduled for RFO 9.

ATTACHMENT 2 (Continued)

SCHEDULE B

IMPLEMENT ROOT CAUSE AND CORRECTIVE ACTIONS TO ADDRESS CAUSES OF WELD FAILURE
(LTP #31, 292, 400)

Commitment Description

Provide operator access to RHR Vent Valves, Low Pressure Emergency Core Cooling System (LPECCS) Vibration Monitoring, replace RHR Discharge Pressure Switches (Low Pressure Alarm), collect data on throttling globe and gate valves that could cause erosion and vibration problems and determine if alternatives are required. Review of methods to establish MOV thrust will be performed as part of our Generic Letter 89-10, Motor Operated Valve Testing effort.

Reference

BECO Letter 88-140, dated September 28, 1988
(Appendix 10 Items #01-013-01 & #03-916-06)

Commitment History/Progress

Progress and Summary of Changes - March 1989 to February 1990

On Schedule for RFO #8.

Progress and Summary of Changes - February 1990 to November 1990

- Operator access to RHR Vent Valves is on schedule for completion by RFO #8.
- LPECCS Vibration Monitoring is on schedule for completion by RFO #8.
- Investigate alternatives to throttling globe and gate valves and review methods to establish MOV thrust are on schedule for completion by RFO #8.
- Replace RHR Discharge Pressure Switches (Low Pressure Alarm) is on schedule for completion by RFO #8.

Progress and Summary of Changes - December 1990 to February 1991

- Operator access to RHR Vent Valves is on schedule for completion by RFO #8.
- One area has been determined to require a permanent modification to facilitate venting. Re-routing of the vent lines for valves 10-HO-397/398 will be performed during RFO #8.
- LPECCS Vibration Monitoring is installed. Additional monitoring will be performed during RFO 8.
- Collect data on throttling globe and gate valves that could cause erosion and vibration problems will be performed during RFO #8.

ATTACHMENT 2 (Continued)

SCHEDULE B

- Evaluate collected data on throttling globe and gate valves to determine if alternatives are required will be performed post RFO 8.
- Review of methods to establish MOV thrust will be performed as part of our Generic Letter 89-10, Motor Operated Valve Testing effort (LTP #487).
- Replace RHR Discharge Pressure Switches (Low Pressure Alarm) is on schedule for completion by RFO #8.

Progress and Summary of Changes - March 1991 to August 1991

- Operator access to RHR Vent Valves is complete
- Re-routing of the vent lines for valves 10-HO-397/398 is complete.
- Additional LPECCS vibration monitoring was performed during RFO #8. The LPECCS vibration monitoring system was activated to monitor during the shutdown cooling mode. The system was set to continuously monitor various accelerometer locations to trigger an alarm upon high vibration due to a water hammer event or valve cavitation. No system activation occurred at the established setpoints and no failure of vent or drain welds were discovered during the last operating cycle. We attribute this reduction in water hammer events to the activities undertaken to enhance venting capabilities as mentioned above and changes made to operator venting instructions such as backflushing to remove any steam bubbles prior to venting. Therefore, we intend to continue the monitoring during the present fuel cycle with lower setpoints. More attention will now be focused on vibration related to steady-state flow and valve cavitation. Steady-state vibration data will be recorded from each data point with the system operating in the torus cooling and mixing modes at various flow rates. An analysis of this steady-state vibration will then be performed. Based on the results of the analysis, additional vibration surveys of the piping system may be performed using portable vibration instrumentation. During the next mid-cycle outage, similar monitoring will be performed with the system in the shutdown cooling mode. Once the vibration under these conditions has been analyzed, we will determine the need for any alternative activities.
- Replace RHR Discharge Pressure Switches (Low Pressure Alarm) is complete.

Progress and Summary of Changes - August 1991 to February 1992

Vibration monitoring has been conducted since RFO #8 for ten monitoring locations identified as areas of particular interest by previous investigations. Based upon preliminary monitoring to date, the trigger level for alarming and data acquisition was lowered. Previously, the system was set to trigger on potentially high level transients caused by water hammer events. In the absence of any of these transients, the alarm levels are now set to detect lower vibration levels indicative of valve throttling and/or cavitation. Monitoring and data recording of these ten locations will continue. Particular attention will be given to shutdown cooling, suppression pool cooling, and surveillance testing.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - March 1992 to August 15, 1992

Monitoring and data recording of the ten locations is continuing. Shutdown cooling, suppression pool cooling, and surveillance testing monitoring will be performed during MCO 9. The need for alternative activities will be determined once the vibration under these conditions has been analyzed. Corrective actions previously taken appear successful; no failures occurred during this report period.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

Monitoring of the original ten locations was completed in MCO 9. The data evaluation is in progress. ISI inspections during MCO 9 found one RHR lateral restraint with failed structural welds. Additional strain gauge and vibration monitoring was done immediately after repair of the support. A root cause analysis has shown that normal system startup transients were the primary cause of low cycle fatigue failure. Support modifications are being designed to prevent recurrence. A schedule will be provided in the next LTP submittal.

ATTACHMENT 2 (Continued)

SCHEDULE B

NRC BULLETIN 90-01: LOSS OF FILL-OIL IN TRANSMITTERS MANUFACTURED BY ROSEMOUNT INC. (LTP #319)

Commitment Description

The NRC Bulletin identified safety concerns associated with Rosemount transmitters, Model 1153, Series B, Series D and Model 1154, due to failures resulting from fill-oil leakage. The Bulletin required licensees to identify these models utilized in safety-related and ATWS applications and implement specific actions. The actions include replacement of transmitters identified from the suspect lot, development of a basis for continued operation and implementation of an enhanced surveillance program.

As stated in our response to Bulletin 90-01, we identified Model 1153, Series B, Series D and Model 1154 Rosemount transmitters installed in safety-related and ATWS applications and implemented an Enhanced Surveillance Program for monitoring transmitter performance. The monitoring program consists of operational data trendings, calibration data trendings, and process noise analysis including sluggish transmitter responses. Also, operability acceptance criteria for each transmitter application has been established. The surveillance program will continue until industry resolution is achieved either through NRC or NUMARC.

References

- 1) NRC Bulletin 90-01, dated March 9, 1990
- 2) BECo Letter 90-085, dated July 11, 1990, Response to NRC Bulletin 90-01.
- 3) Bulletin 90-01, Supplement 1, dated December 22, 1992

Commitment History/Progress

Progress and Summary of Changes - March 1990 to November 1990

The Rosemount Transmitter Enhanced Surveillance Program is in place and will continue until industry resolution (resolution expected by first quarter of 1991).

Progress and Summary of Changes - December 1990 to February 1991

The Rosemount Transmitter Enhanced Surveillance Program will continue until industry resolution occurs.

Progress and Summary of Changes - March 1991 to August 1991

In May 1991, NUMARC issued Report #91-02 to the NRC summarizing PSI-month and failure data for Rosemount transmitters. The NUMARC report recommended the oil-loss concern should be focused on the subset of installed Rosemount models 1153 and 1154 normally pressurized to greater than 250 PSI but not beyond the applicable threshold PSI-month recommended by the manufacturer.

ATTACHMENT 2 (Continued)

SCHEDULE B

Additionally, Rosemount issued Amendment #3 to the Master Suspect List on July 3, 1991. Our review of this list identified three Rosemount transmitters in drywell pressure applications which are not in the RPS or ESF systems and are pressurized normally below 250 PSI.

We are presently evaluating this data for application to our surveillance program. Any reductions in program scope will be transmitted to the NRC under separate cover. We plan to continue monitoring Rosemount transmitter performance until industry resolution occurs.

Progress and Summary of Changes - August 1991 to February 1992

Rosemount issued Supplement #4 to the Master Suspect List in December 1991. Our review identified no new transmitters installed in the plant that fall into the highly suspect list lot. We are continuing to monitor Rosemount transmitter performance until industry resolution occurs.

Progress and Summary of Changes - March 1992 to August 15, 1992

We are continuing to monitor Rosemount transmitter performance until industry resolution occurs. None failed during this report period.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

We are continuing to monitor Rosemount transmitters that are in the Reactor Protection System, Engineered Safety Feature Systems, and other safety-related applications as prescribed by NRC Bulletin 90-01, Supplement 1. This is an ongoing routine monitoring program. BECo is planning to submit a response to Supplement 1 of the bulletin by March 5, 1993.

ATTACHMENT 2 (Continued)

SCHEDULE B

GENERIC LETTER 89-13, SALT SERVICE WATER SYSTEM (LTP #255, 473)

Commitment Description

Generic Letter 89-13 required licensees to review and evaluate the adequacy of the service water system and all safety related heat exchangers. The review identified a number of enhancements to the PNPS programs and procedures. As a result, BECo committed via Reference 2 to the following:

- Prior to end of RFO #8, modify the RBCCW heat exchanger test procedures to include an analytical model to calculate RBCCW heat exchanger performance at test and design conditions (complete). Conduct tests with modified procedures during Cycle 9.
- Prior to end of RFO #9, modify the RHR heat exchanger test procedures to include an analytical model to calculate RHR heat exchanger performance at test and design conditions. Conduct tests with modified procedures during Cycle 10.
- Develop a regular maintenance/test program on heat transfer capability of the remaining heat exchangers by RFO #9.
- Conduct a Single Failure Analysis for the RBCCW subsystem by end of RFO #8. (Complete)
- Prior to end of RFO #8, upgrade the licensed operator training module to include a loss of all service water. (Complete)

Credit was also taken in Reference 2 for the SSW piping inspection and replacement program already underway at Pilgrim, which henceforth will be integrated as part of our Generic Letter 89-13 implementation efforts.

References

- 1) Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment"
- 2) BECo letter 2.90.047, dated April 2, 1990, "Response to Generic Letter 89-13"

Commitment History/Progress

Progress and Summary of Changes - March 1990 to November 1990

The licensed operator training module upgrade is complete.

There are no changes to the other above-described commitments and schedules.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - December 1990 to February 1991

A single failure analysis of the RBCCW subsystem has been performed.

There are no changes to the other above-described commitments and schedules.

Progress and Summary of Changes - March 1991 to August 1991

RBCCW heat exchanger test procedures have been modified to include an analytical model to calculate RBCCW heat exchanger performance at test and design conditions.

In addition, activities associated with SSW piping inspection and replacement are being integrated under our GL 89-13 effort. Further inspections of the SSW piping will be scheduled during each planned mid-cycle or refueling outage of sufficient duration. It remains our intention to replace SSW piping when the inspection of piping shows that to be necessary.

Progress and Summary of Changes - August 1991 to February 1992

Efforts to enhance the Salt Service Water System are proceeding as indicated in our response to Generic Letter 89-13. There are no changes to the above-described commitments.

Progress and Summary of Changes - March 1992 to August 15, 1992

A decision was made to replace the buried SSW piping with corrosion-resistant titanium. Five Plant Design Change Packages were prepared to facilitate replacement of the pipe. Construction of a pipe vault at the intake structure is in progress. Replacement activities will continue through MCO9 and RFO9. Above ground piping will be routinely examined by non-destructive technology (typically UT) and will be replaced as required. Efforts to enhance the SSW system are proceeding as indicated above.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

- There are no changes to the GL 89-13 (LTP 473) commitments described above.
- We are currently installing replacement SSW underground piping (LTP 255) in preparation for system tie in RFO #9 (4/93). To support this effort, during MCO 9 (10/92) we replaced spool pieces in the Auxiliary Bay and Screen House. We also plan to replace the remainder of the Intake Structure and Auxiliary Bay above ground inlet piping and tie in the new inlet loop buried piping in RFO #9.

ATTACHMENT 2 (Continued)

SCHEDULE B

GENERIC LETTER 88-20 Supplement 4, Individual Plant Examination - External Events (LTP #488, 567)

Commitment Description

In response to GL 88-20 Supplement 4 (Ref. 1), BECo provided a program plan for completing an Individual Plant Examination of External Events (IPEEE) for severe accident vulnerabilities for the Pilgrim Nuclear Power Station (Ref. 2). The IPEEE scope will include seismic events, internal fires, high winds, external floods, and transportation and nearby facility accidents.

Our schedule for completing the IPEEE and submitting the results is July 1, 1994. Significant milestones include:

- Initiate Fire PRA tasks
- Initiate Seismic PRA tasks
- Initiate remaining external event tasks
- Screening walkdowns for fire and seismic
- Final seismic walkdowns
- Complete Fire PRA
- Complete remaining external events
- Complete Seismic PRA
- Integrate IPE/IPEEE

The NRC confirmed the acceptability of our schedule and program plan in Reference 3.

References

- 1) Generic Letter 88-20, Supplement 4, dated June 28, 1991
- 2) BECo Letter 91-155, dated December 24, 1991
- 3) NRC Letter 92-159, dated June 16, 1992

Commitment History/Progress

Progress and Summary of Changes - August 1991 to February 1992

Pilgrim Station is a USI-A-46 plant and a member of the Seismic Qualification Utility Group (SQUG). Because of the similarities of the A-46 and seismic IPEEE programs, we intend to conduct walkdowns at the same time to avoid repetition of essentially the same work within a short time span. This is consistent with the Generic Letter 88-20, Supplement 4, guidance that states; "USI-A-46 should be coordinated with the IPEEE so the objectives of both activities may be accomplished with a single walkdown effort." However, the anticipated Supplemental Safety Evaluation Report (SSER) on the SQUG's Generic Implementation Procedure (GIP) for resolution of USI-A-46 has not been made available within the October 1991 time frame, as expected by the NRC when Supplement 4 was issued. The issuance of the SSER will affect the achievement of the above-planned walkdown tasks and ultimately the IPEEE completion date. The final issuance date, the content of the SSER, and the resolution of open issues, will be factors in establishing a program schedule for conducting the seismic IPEEE.

Progress and Summary of Changes - March 1992 to August 15, 1992

ATTACHMENT 2 (Continued)

SCHEDULE B

IPEEE is on schedule for completion and submittal to the NRC by July 1, 1994.

Progress and Summary of Changes - August 16, 1992 - February 15, 1993

IPEEE is on schedule for completion and submittal to the NRC by July 1, 1994.

ATTACHMENT 2 (Continued)

SCHEDULE B

DEGRADED VOLTAGE (LTP #015)

Commitment Description

Boston Edison Company letter BECo 91-102 identified that selected loads at the 480V and 120V levels of the PNPS AC distribution system may not receive sufficient voltage during a degraded grid condition at the existing degraded voltage relay setpoints. Compensatory measures involving the use of the PNPS emergency diesel generators were implemented during August 1991 to ensure PNPS's AC distribution system will not be susceptible to potential problems on the 345kV grid. Corrective actions were committed for implementation no later than RFO #9.

References

- 1) BECo Letter 91-102, dated August 9, 1991
- 2) BECo Letter 92-068, dated June 30, 1992

Commitment History/Progress

Progress and Summary of Changes - August 1991 to February 1992

Our Schedule C item #015 effort preliminarily identified the following modifications now included under this Schedule B commitment for RFO #9:

- Installation of four 480-120V voltage regulating transformers as replacements for fixed tap transformers.
- Replacement of approximately 35 control power transformers in 480 volt motor control center control circuits.
- Upgrading to Class IE of load shed logics to 16 drywell unit coolers.
- Increasing the size of feeder cables to 3 motors and 2 heater banks.
- At least 2 regulating transformers will be installed by 1992 MCO in support of Detailed Control Room Design Review modifications.

The proposed modifications listed above are based on load flow/voltage drop analysis of turbine trip and LOCA scenarios conducted as part of the Degraded Voltage Study effort.

Progress and Summary of Changes - March 1992 to August 15, 1992

Three plant design change packages have been issued for the transformer modifications indicated in the preceding paragraphs. The change packages for the drywell cooler and feeder cables are proceeding on schedule.

An analyses by Westinghouse is being prepared that will show the new SSW pump motors can start at voltage levels expected at the motor terminals during a degraded voltage event. Consequently the need to replace cable to this motor is eliminated.

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

ATTACHMENT 2 (Continued)

SCHEDULE B

- Installation of 480-120V voltage regulating transformers X55 and X56 was completed in the 1992 MCO as planned.
- The design change package to upgrade the load shed logic to 16 drywell unit coolers to Class 1E was issued.
- The design change package to upgrade the feeder cable size to SBTG motors and heaters was issued.
- The scope of work for replacement of control power transformers (CPTs) in 480 volt motor control center circuits was increased from replacement of approximately 35 to 65 CPTs, and some interposing relays have been added. The CPT equipment supplier was unable to meet schedule obligations for delivery of the environmentally qualified, third party dedicated CPTs. However, these components have been received and approximately 30 CPTs are scheduled to be replaced prior to RFO 9 with the remaining 35 scheduled for replacement by the end of RFO 9.
- The analysis being performed by Westinghouse that will show the new SSW pump motors can start at voltage levels expected at the motor terminals during a degraded voltage event continues. This is expected to be completed by the end of RFO 9.

ATTACHMENT 2 (Continued)

SCHEDULE B

CLASS I PIPING SEISMIC DAMPING RATIO (LTP #599)

Commitment Description

In Reference 1, BECo committed to re-evaluate two changes to the Final Safety Analysis Report (FSAR) in which certain Class I piping seismic damping ratios were increased and NRC approval for the damping ratio changes was not sought under 10CFR50.59. Planned actions included identification of stress analyses where the higher damping ratios were used, resolution of discrepancies between the existing design and the regulatory guidelines, development of enhanced design specifications for piping and supports, and systematic review of safety grade piping systems to demonstrate conformance with the appropriate specification. These activities were planned for completion by RFO #9.

During the implementation of these actions, we decided to integrate a segment of our GL 87-02, Supplement 4, activities involving soil/structure interaction studies and floor response spectra methodologies. Doing so would optimize resources and effect consistency in the seismic design basis.

This approach was discussed with the NRC in Reference 2 during which we also committed to provide a summary level detail of scope and projected schedule in the next LTP update. Our plan is as follows:

- Develop New Reactor Building Floor Spectra (complete by July 1, 1993)

This task will result in the production of new floor spectra for the Reactor Building for both the Housner and R.G. 1.60 ground response spectra, anchored at 0.08g OBE and 0.15g SSE. These spectra will include the benefit of soil structure interaction and time history inputs that produce ground response spectra closely fitting the Housner and R.G. 1.60 spectral shapes.

- Perform Spectra Comparisons (complete by August 15, 1993)

The seismic demand imposed by the new Housner floor spectra at original design basis damping levels will be compared to the spectra with elevated damping levels used pursuant to R.G. 1.61 and Code Case N411. The expectation is the new Housner floor spectra will be enveloped by the spectra with elevated damping. This means piping analysis with the new spectra would produce lower stresses and hanger loads. This comparison would demonstrate we can meet the original design basis damping requirements if we adopt the new floor spectra as the seismic demand basis.

- Assess Results and Determine Design Basis Application (complete by September 7, 1993).

This includes a decision on whether to adopt the new Housner floor spectra as our design basis and the potential benefit in adopting the new R.G. 1.60 floor spectra in conjunction with the use of RG 1.61 and Code Case N411 damping.

- Forward Licensing Submittals to NRC, as necessary, in Accordance With Above Assessment Results (complete by December 1, 1993)

ATTACHMENT 2 (Continued)

SCHEDULE B

References

- 1) BECo Letter 92-014, dated February 21, 1992
- 2) BECo/NRC phone call dated January 14, 1993.

Commitment History/Progress

Progress and Summary of Changes - March 1992 to August 15, 1992

We are presently re-evaluating the effects of using Code Case N-411 damping ratios with the design basis seismic response spectra in the analysis of safety-related piping systems. The conservatisms of our original design damping ratios and response spectra will be compared to conservatism of the more recent seismic damping ratios of Code Case N-411 when used in conjunction with the response spectra of Regulatory Guide 1.60. The Scram Discharge piping will be the first system to be re-analyzed with this revised amplified response spectra.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

In Reference 2, we notified the NRC of planned changes to the original Reference 1 plan of action. The revised action plan is described above under the commitment description section. Future reporting of status and scope will continue via LTP Program updates.

SCHEDULE BRWCU PIPING REPLACEMENT (LTP #600)Commitment Description

Generic Letter 88-01 was issued to address Intergranular Stress Corrosion Cracking (IGSCC) in stainless steel pipe materials. BECo replaced the recirculation system and IGSCC susceptible material in the drywell. BECo responded to the NRC and committed to comply with Generic Letter 88-01 except for the RWCU system between valves 1201-5 and 1201-80. This response was rejected by the NRC Safety Evaluation of the BECo Generic Letter 88-01 response (NRC Letter 1.90.104, 4/26/90). BECo responded (BECo Letter 2.90.140, 11/15/90) by stating the following for the non-safety portion of the RWCU system: "We will perform an inspection of 10% of these welds during each refueling cycle. If a flaw is discovered in the 10% sample and IGSCC is determined as the probable cause, another 10% will be inspected. If an IGSCC induced flaw is discovered in the second 10% sample, no further inspections will be conducted. The identified flaws will be repaired and plans will be made to replace RWCU non-code piping in subsequent refueling outages."

IGSCC susceptible pipe per Generic Letter 88-10 is non-resistant austenitic stainless steel pipe 4"NPS and greater operating at a temperature greater than 200°F.

During RFO #8 inspections were made of the safety and 10% of the non-safety (non-code) pipe. IGSCC was found. There was a discussion with the NRC at that time and the commitment quoted above was altered. Rather than inspect an additional 10% of the non-safety pipe, the areas of the safety and non-safety pipe that had IGSCC would be replaced and all IGSCC susceptible pipe would be replaced in future outages. This increased the original scope by adding the safety-related RWCU pipe into the replacement commitment. Piping was replaced in the areas where IGSCC was found during RFO #8 by Plant Design Change 91-39.

References

- 1) NRC Generic Letter 88-01
- 2) NRC Letter 90-104, dated April 26, 1990
- 3) BECo Letter 90-140, dated November 15, 1990

Commitment History/ProgressProgress and Summary of Changes - March 1992 to August 15, 1992

A Plant Design Change has been developed to replace remaining safety related and non-safety related IGSCC susceptible pipe in the RWCU system. Plans are being made to replace the balance of susceptible piping in RFO #9 and MCO #10.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

A Plant Design Change was approved and issued for construction to replace the remaining safety related and non-safety related IGSCC susceptible pipe. Replacement of the safety related IGSCC susceptible pipe in the RWC System Heat Exchanger Room and some of the non-safety related piping is scheduled to take place in RFO #9, with the balance of safety related piping outside the Heat Exchanger Room to be replaced in MCO #10. We are currently reassessing our plans to replace the remaining non-safety related piping. This reassessment is to consider the alternatives presented in Generic Letter 88-01, Supplement 1 relative to replacement/inspection plans.

SCHEDULE BEDSFI HVAC (LTP# 583)Commitment Description

The Switchgear and Battery Rooms contain safety-related electrical equipment. Area cooling is provided by the non-safety related Turbine Building Ventilation System. An analysis of the electrical equipment operability was conducted in response to a concern raised by the NRC during the Electrical Distribution System Functional Inspection. Compensatory measures were established to ensure the electrical equipment would perform its intended function. An analysis of the temperature response of the Switchgear and Battery Room due to a loss of HVAC will be conducted. Compensatory measures will remain in place until this is resolved.

References

- 1) BECo Letter 91-101, dated August 8, 1991, "Response to NRC Electrical Distribution System Functional Inspection (EDSFI), Switchgear/Battery Room HVAC Concern
- 2) BECo Letter 91-117, dated October 11, 1991, "Revised Response to NRC Electrical Distribution System Functional Inspection (EDSFI) Switchgear/Battery Room HVAC concern
- 3) NRC Letter 91-287, dated October 18, 1991, "Electrical Distribution System Functional Inspection (EDSFI), Inspection Report No. 50-293/91-80
- 4) BECo Letter 91-145, dated October 24, 1991, "Update to Electrical Distribution System Functional Inspection (EDSFI) Switchgear/Battery Room HVAC issue"
- 5) BECo Letter 91-999, dated November 25, 1991, "Reply to Notice of violation, Unresolved Items and Observations Identified During the Electrical Distribution System Functional Inspection (EDSFI) (Reference IR 91-80)"
- 6) BECo Letter 92-004, dated January 17, 1992, "EDSFI - HVAC Review"
- 7) BECo Letter 92-068, dated June 30, 1992 "Update to Unresolved Item 50-293/91-80-02 Identified During the Electrical Distribution System Functional Inspection"

Commitment History/Progress

Progress and Summary of Changes - March 1992 to August 15, 1992

An analysis of the temperature response of the Switchgear & Battery Room was conducted. In addition, a test of the Turbine Building HVAC system was conducted to support the operability evaluation. The test results reinforced the conclusions previously derived in the operability assessment. The tests results were factored into the temperature prediction model. These predictions correlated well with the actual field data. A plant design change to provide SR ventilation utilizing the temperature model results is being evaluated to restore full design margin. An implementation schedule will be provided in the next LTP submittal.

ATTACHMENT 2 (Continued)

SCHEDULE B

Progress and Summary of Changes - August 15, 1992 to February 15, 1993

This issue is currently being reanalyzed. There is a reasonable chance that the reanalysis will demonstrate modifications are not necessary. However, should the reanalysis support a modification, a plant design change to provide safety-related ventilation to the switchgear & battery rooms is being prepared. The design and procurement of long lead materials is expected to be completed by September 1993. The ventilation system modifications are expected to be completed by June 30, 1994.

ATTACHMENT 2 (Continued)

SCHEDULE B

125V Battery Charger Replacement (LTP #597)

Commitment Description

BECO has encountered difficulty in AC supply voltage transients causing battery charger output fluctuations, potentially challenging functionality of certain critical 125 VDC loads such as the HPCI and RCIC instrument inverters.

We will replace the three 125 VDC battery chargers with new chargers designed to respond to expected AC voltage transients. We tentatively plan to have all three 125 VDC battery chargers installed prior to startup from RFO 9.

References

1. BECO Letter 92-058 dated May 7, 1992

Commitment History/Progress

Progress and Summary of Changes - March 1992 to August 15, 1992

Design change packages have been prepared. The replacement chargers have been ordered and qualification testing is imminent. The replacement of the three 125 VDC battery chargers is on schedule for installation prior to restart from RFO 9.

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

Design change packages have been prepared and the replacement chargers have been received. Installation of one battery charger began on February 5, 1993, and is in final testing. Replacement of the other two 125VDC battery chargers is expected to be completed prior to restart from RFO #9.

ATTACHMENT 2 (Continued)

SCHEDULE B

REACTOR VESSEL WATER LEVEL INSTRUMENTATION (GL 92-04)

Commitment Description

Generic Letter 92-04 was sent under the provisions of 10CFR50.54(F). Its purpose was to request information regarding the adequacy of and corrective actions for the Boiling Water Reactor (BWR) water level instrumentation with respect to the effects of noncondensable gases on system operation.

BECo responded in a letter dated September 28, 1992. The response provided information on the impact potential errors resulting from noncondensable gases would have on various plant analyses and systems. The 9/28/92 response also provided a description of short term actions, such as monitoring level instrumentation, leakage, procedure and training changes to address the issue until a permanent resolution could be developed and implemented.

This response indicated BECo's participation in the Boiling Water Reactor Owner's Group (BWROG) to resolve this issue. BECo is actively participating in the BWROG effort on water level and endorses the plans provided by the BWROG to the NRC by letter of 8/12/92. We also support the BWROG plan of 9/24/92.

References

1. Generic Letter 92-04, dated August 19, 1992
2. BECo Letter 92-113, dated September 28, 1992

Commitment History/Progress

Progress and Summary of Changes - August 15, 1992 - February 15, 1993

- Operator training and procedure development to address potential level errors is complete.
- NRC Inspection Report No. 50-293/92-17 of October 7, 1992, found our actions to be appropriate.
- The BWROG plan is behind schedule. We and other participants are assessing the impact of schedule slippage.

ATTACHMENT 3

ADDITIONAL ITEMS LIST (SCHEDULE C)*

<u>ITEM</u>	<u>AUGUST 1992 TARGET SCHEDULE</u>	<u>CURRENT STATUS</u>
Cooling Water Betterment (LTP #322)	Ongoing through RFO #9	***
Intake Canal Dredging (LTP #486)	Ongoing and Cycle 10	***
Logic System Functional Test Mods (LTP #224)	MCO #10 (on line installation in progress)	***
Turbine Bearing Fire Protection (LTP #234)	1992 Mid-Cycle Outage	Construction Complete
Analog Trip Drawing Update (LTP #319)	December 1992	Complete
Priority B Drawing Update (LTP #051)	Cycle 9	Complete
Design Basis Information System (LTP #264)	Cycle 8 & Ongoing	Ongoing
Design Configuration Control (LTP #367)	Fall 1993	***
Hanger Drawing Update (LTP #112)	Ongoing through 1992	Complete
Radwaste Betterment (LTP #022)	Revised Radwaste Improvement Program developed to run through 1996	***

* Represents a portion of major plant betterments. Total LTP data base contains additional plant betterments, programs/projects and issues.

*** Will be provided in next update.

ATTACHMENT 3

ADDITIONAL ITEMS LIST (SCHEDULE C)*

<u>ITEM</u>	<u>AUGUST 1992 TARGET SCHEDULE</u>	<u>CURRENT STATUS</u>
Spent Resin Storage Tank Replacement (LTP #023)	Schedule being re-evaluated	***
Valve Betterment III (LTP #126)	Ongoing through Cycle 9	***
Radiation Source Reduction (LTP #266)	Ongoing through 1995	***
Replace GE Time Delay Relays w/Agastat (LTP #414)	1992 mid-cycle outage	Complete
Instrument Recirc. Pump Shaft (LTP #546)	Instrumentation partially completed - on hold Shaft testing completed. No cracks per REM testing (LTP #396)	***
Degraded Voltage Study (LTP #015)	Cycle 8 & Ongoing. Specific identified modifications were transferred to Schedule B	***
Setpoint Control Program Study (LTP #108)	Cycle 10	***

* Represents a portion of major plant betterments. Total LTP data base contains additional plant betterments, programs/projects and issues.

*** Will be provided in next update.

ATTACHMENT 3

ADDITIONAL ITEMS LIST (SCHEDULE C)*

<u>ITEM</u>	<u>AUGUST 1992 TARGET SCHEDULE</u>	<u>CURRENT STATUS</u>
Inspect LP Turbine Rotor **	RFO #9	RFO #9
Abandon In-Place Program (LTP #278)	On hold during 1992	***
TIP System Replacement (LTP #380)	RFO #9	***
Damper Inspection Platforms (LTP #337)	RFO #9	***
R.V. Beltline Weld Inspection (LTP #399)	RFO #10	Incorporated into the Augumented ISI Program
Turbine Trucklock Sprinkler (LTP #236)	MCO #11	***
Inspect/Replace Lower Core Support Plate Flow Plugs (GE SIL 359) (LTP #448)	RFO #10	***
Generator Retaining Ring Replacement (LTP #531)	RFO #9	***
Low Level Radwaste Interim Storage (LTP #496)	Ongoing through 1996	***
Replace Simplex Panels (LTP #524)	On hold due to funding restrictions	***
Additional Spent Fuel Storage (LTP #085)	RFO #10	Cycle 10
Replace MO-1001-28 A&B Yokes (LTP #586)	A RFO #9, B MCO #9	***

* Represents a portion of major plant betterments. Total LTP data base contains additional plant betterments, programs/projects and issues.

** Performed as routine work under outage budget.

*** Will be provided in next update.

ATTACHMENT 3

ADDITIONAL ITEMS LIST (SCHEDULE C)*

<u>ITEM</u>	<u>AUGUST 1992 TARGET SCHEDULE</u>	<u>CURRENT STATUS</u>
REM Test Recirc Pumps (LTP #396)	Initial test completed in RFO #8. Additional test planned for RFO #9	Additional test postponed
Replace Effluent Monitors (LTP #590)	MCO #10	***
Steam Tunnel HVAC Evaluation (LTP #576)	MCO #10	***
Change HPCI Booster Pump Impeller (LTP #577) to Five Vane Impeller	RFO #10	***
Replace ISI Shield Blocks with Shield Doors (LTP #572)	Scope is being re-evaluated	***
Exciter Cubicle CO2 Modification (LTP #235)	MCO #10	***
TBCCW Pipe Insulation (LTP #027)	RFO #10	***
Replace RPV Studs (LTP #520)	RFO #9	***

* Represents a portion of major plant betterments. Total LTP data base contains additional plant betterments, programs/projects and issues.

*** Will be provided in next update.