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Attention: V. S. Boyer, Sr. Vice President Nuclear Power

Gentlemen:

The enclosed status report is the fourth of six scheduled for the Independent Design Review of the Limerick Generating Station Unit 1 Core Spray System. This report covers the period July 1, 1984 to July 15, 1984. A manpower activity summary graph illustrates the planned projected vs. actual effort to meet the IDVP milestones in the Program Plan.

A copy of this report is being sent directly to the representative of the U.S. Nuclear Regulatory Commission.

Please call me if you have any questions regarding the contents of this report.

Sincerely,

F. D. Carpenter
Project Manager

FDC/dn
Encl.

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USNRC: J. M. Milhoan, Chief Licensing Section
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U.S. Nuclear Regulatory Commission EWS-305A
Washington, DC 20555

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INDEPENDENT DESIGN REVIEW
OF LIMERICK GENERATING STATION #1
CORE SPRAY SYSTEM

Bi-Monthly Status Report #4
Period Ending July 15, 1984

Introduction

This is the fourth of six planned bi-monthly status reports. This report documents information concerning the independent design review of Limerick's Core Spray System. The work performed covers the period July 1, 1984 to July 15, 1984.

Summary

The design procedure review which describes the Bechtel and GE design process and PECO's design review function for conformance to the PSAR or to 10CFR Part 50, Appendix B is essentially complete. The only remaining activity for this Task A portion of the IDVP is the summary report.

The design procedure implementation review of specific design documents is progressing. Some schedule shifting was necessary due to delays in receiving procedural documents. The design procedure implementation review has required more visits to the major suppliers than projected. However, the net effect appears as a one week delay in preparation of the Task B summary report.

Portions of the technical review, Task C, are being completed. Other portions are progressing reasonably well with no predictable schedule slippages.

The six initial PFRs from Tasks C and D have been received from the original design organizations and the responses are being reviewed by the independent reviewers and the task leader. An additional six PFRs were identified. Three were in Task B, which have been forwarded to PECO. The other three were in Task C and are in process at TPT.

TASK A DESIGN PROCEDURE REVIEW

- A1 Complete - Procedures 2524-PD-1 and -7 issued.
- A2 Memos 2524-QA-05 dated June 27, 1984, 2524-QA-07 dated July 3, 1984, describing design control procedure structure of Bechtel and GE, respectively, were issued. This completes Subtask A2.
- A3 Copies of currently applicable design control procedures, including procedures for audits and corrective action from PECO, Bechtel, and GE have been obtained. This completes Subtask A3.
- A4 This subtask is complete with the issuance of memo 2524-QA-05.
- A5 Reviews of PECO's, Bechtel's and GE's current design control procedures for conformance to the commitments in PSAR are complete.
- A6 Review of available earlier revisions of PECO, Bechtel, and GE design control procedures is complete.
- A7 Summarization of the design procedure review is in progress.

TASK B DESIGN PROCEDURE IMPLEMENTATION REVIEW

- B1 Complete - Procedure 2524-PD-2 issued.
- B2 The selection of design documents to be reviewed for compliance with the design control procedures continues. This is being done in conjunction with development of checklists for Subtask B4. The scheduled completion of this subtask has been advanced to July 27, 1984 since full access to design procedures were not achieved until July 6, 1984.
- B3 This activity is being coordinated with Subtask C4. The schedule completed date is also advanced to 7/27/84.
- B4 Based upon the PECO, Bechtel, and GE design procedures identified and obtained in A3, detailed checklists are being prepared. These checklists will be used to conduct the design document conformance reviews. Specific checklists are being generated for the different types of design documents, e.g., calculations, drawings, specifications, change notices, etc., for each design process system of the major suppliers and PECO.

Preparation of PECO's design process review checklists and the identification of specific design documents for review is complete. Bechtel's and GE's checklists are approximately 40% complete.

The evaluation of PECO's design review process for conformance to procedures is scheduled at PECO the week of July 23, 1984. The evaluation of Bechtel's and GE's design document conformance will be initiated as soon as all checklists are complete for each of these major suppliers.

The review of PECO's and GE's implementation of the design control audit and corrective action activity was completed. Bechtel's review in the design audit and corrective action area will be initiated shortly. Three PFRs were identified in the review of PECO's implementation.

The scheduled completion date for the design document reviews will parallel the schedule completion of the C4 subtasks, August 10, 1984. See Table I.

- B5 The task summary completion date has also been advanced to August 17, 1984 as a result of the change in Subtask B4.

TASK C TECHNICAL REVIEW

- C1 Complete - Procedure 2524-PD-3 issued.
- C2 Completion of the design chain will be delayed until all vendors have been identified. Relevant design documents are currently being received as shown in Task C4 below. A new scheduled completion date of July 31, 1984 has been established.
- C3 No change has occurred from the initial selection of specific components and major features identified for the detailed design review.

- C4 The relevant GE design documents to perform the technical review have been identified. These components include the reactor vessel nozzle, core spray piping inside the vessel, the sparger, and the pump. These documents are available at GE's facility in San Jose. A visit to GE the week of July 16, 1984 will be made for this review.

The technical review of ASME Class I piping and containment penetration have been completed. Two PFRs have been issued and are currently being reviewed in light of ODO's response. Technical review of Class 2 piping and pipe supports has also been completed. Three PFRs have been issued.

The technical review of the CSS fluid system to meet the basic functional requirements is also completed. Instrumentation and electrical components are currently being reviewed. Valve review has just been initiated.

C5 No activity to date.

C6 No activity to date.

TASK D PHYSICAL VERIFICATION

D1 Complete - Procedure 2524-PD-4 issued.

D2 Complete - Memo 2524-ENG:03:AS:84.

D3 Complete - Review of PFR response from the "ODO" is in progress.

D4 Complete - memo 2524:ENG:07:CDF:84 issued.

TASK E POTENTIAL FINDINGS

E1 - E2 Complete

For this period, six potential findings were initiated. Three were initiated in Task B and directed to PECO. These three PFRs identified concerns relating to PECO's implementation of their design control audits and corrective action program. The other three PFRs concerned the review of Class 2 piping and pipe supports. These PFRs are being processed and have not been sent to the respective original design organizations.

TASK F ADMINISTRATIVE AND REPORTING

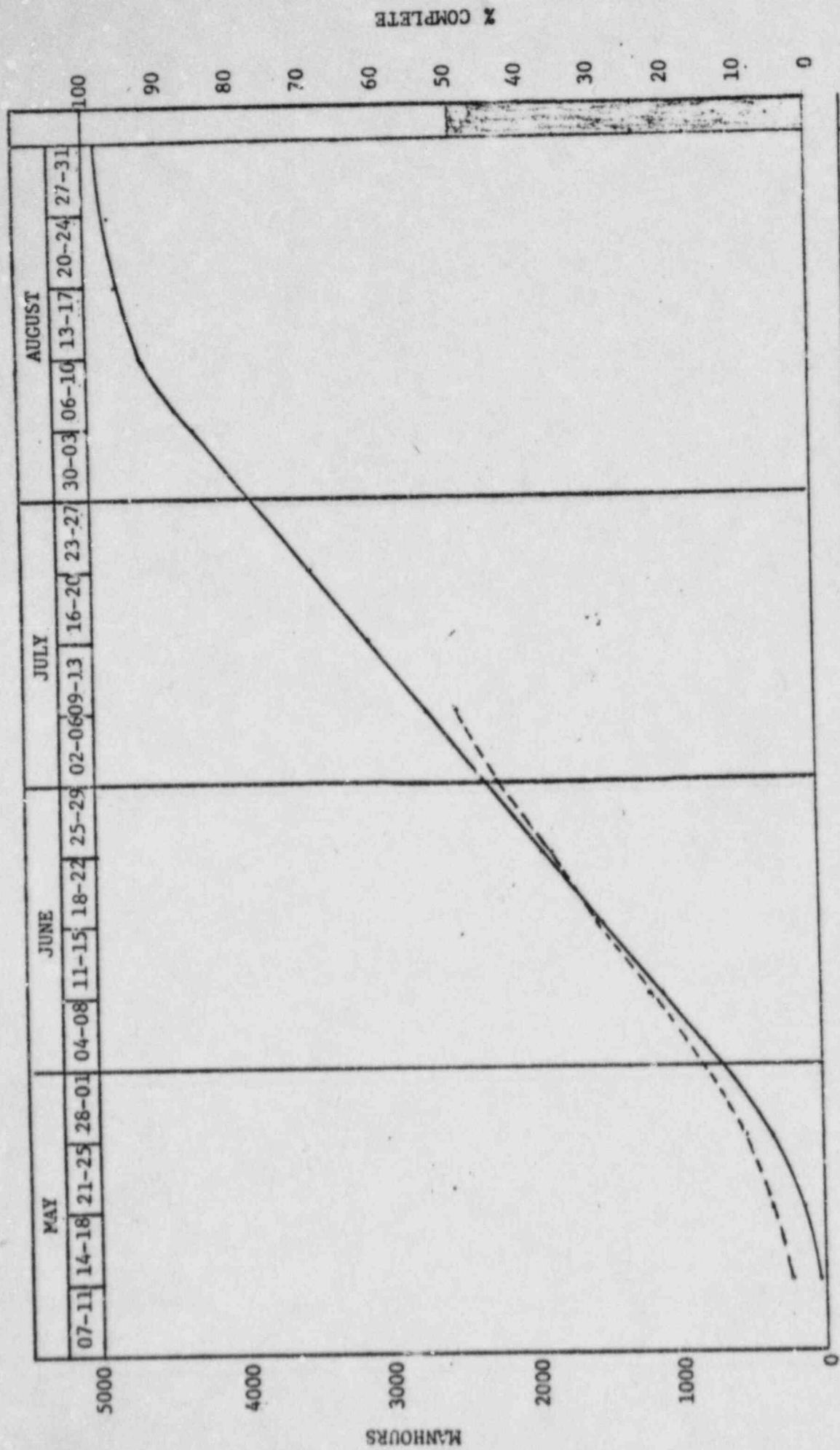
The summary of projected vs. actual manpower and percent complete graph was updated to show current data.

The TPT Limerick IDVP project office was informed by the NRC that an on-site review of TPT's activities will be conducted on July 24 and 25. A team of three NRC representatives will conduct this review.

July 16, 1984

TABLE I
CORE SPRAY SYSTEM
INDEPENDENT DESIGN REVIEW
TASK/MILESTONE STATUS

<u>Milestone</u>	<u>Subject</u>	<u>Sch</u>	<u>Actual</u>	<u>Document</u>
A1	Procedure/Checklist	5/30	5/24	2524-PD-1 & 7
A2	Procedure Structure	6/15	7/08	2524-QA-01, 05, 07
A3	Access Design Procedures	6/15	7/06	NA
A4	Bechtel Review	7/05	7/03	TPT:012:FDC:84
A5	PECo/GE Review	7/05	7/05	2524-QA-01, 05, 07
A6	Time-period Procedures	7/10	7/10	NA
A7	Task Summary	7/24		
B1	Procedure/Checklist	5/30	5/24	2524-PD-2
B2	Document Selection	7/27		
B3	Document Location	7/27		
B4	Document Review	8/10		
B5	Task Summary	8/17		
C1	Procedure/Criteria	5/30	5/30	2524-PD-3
C2	Design Chain	7/31		
C3	Feature Selection	Cont		2524:ENG:02:AS:84
C4	Design Review	8/10		
C5	Independent Analysis	7/27		
C6	Task Summary	8/17		
D1	Walkdown Procedure	5/30	5/31	2524-PD-4
D2	Item Selection	6/04	5/29	2524:ENG:03:AS:84
D3	Complete Walkdown	6/27	6/15	
D4	Task Summary	8/10	6/22	2524:ENG:07:CFD:84
E1	Establish Committee	5/30	5/18	Proj. Directive #3
E2	Define Criteria	5/30	5/25	2524-PD-5
E3	Procedure	5/30	5/30	2524-PD-5
E4	Processing PFRs	cont		
F1	Management/cost	cont	-	Project Directive #1
F2	Protocol Procedure	6/01	6/01	2524-PD-6
F3	Status Report #1	6/1	5/31	TPT:005:FDC:84
	Status Report #2	6/15	6/15	TPT:012:FDC:84
	Status Report #3	7/1	7/2	TPT:018:FDC:84
	Status Report #4	7/15	7/16	TPT:023:FDC:84
	Status Report #5	8/1		
	Status Report #6	8/15		
F4	Information Compilation	8/15		
F5	Final Report Draft	8/24		
F6	Final Report-Issue	8/31		



Projected—
Actual----