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TPT:013:FDC:84  
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Philadelphia Electric Company  
2301 Market Street S25-1  
Philadelphia, PA 19101

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

Gentlemen:

The enclosed status report is the third of six scheduled for the Independent Design Review of the Limerick Generating Station Unit 1 Core Spray System. This report covers the period June 16, 1982 to June 30, 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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- E. C. Kistner
- J. Moskiwitz
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Bechtel: S. J. Ployhar

USNRC: J. M. Milhoan, Chief Licensing Section  
Quality Assurance Branch, Office of Inspection & Enforcement  
U.S. Nuclear Regulatory Commission EWS-305A  
Washington, DC 20555

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DS03

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James Wiggins (w/enclosure)  
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INDEPENDENT DESIGN REVIEW  
OF LIMERICK GENERATING STATION #1  
CORE SPRAY SYSTEM

Bi-Monthly Status Report #3  
Period Ending June 30, 1984

Introduction

This is the third 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 June 16, 1984 to June 30, 1984.

Summary

The design procedure, design document implementation, and technical reviews are progressing and have increased in intensity with the addition of five temporary reviewers. A site visit was made to GE for Task A work to define the structure of GE design control procedures applicable to the CSS. During this visit the implementation of procedures for design control audits was reviewed as required in Task B.

A good portion of the Task C technical review for GE involved features must be conducted at the GE facility since they will not transmit calculations, vendor reports, or electrical instrumentation drawings. This is further complicated by having to review calculations on microfilm or waiting for microfilm reproduction.

The walkdown to determine the physical installation of selected portions of the CSS is complete with the internal summary report issued June 22, 1984.

To date, six potential findings have been initiated and are being processed as required by TPT's procedure. All have been sent to the original design organization, Bechtel, for their review and response.

Specific detailed status on each task follows:

Task A Design Procedure Review

- A1 Complete - Procedures 2524-PD-1 & 7 issued.
- A2 PECO design procedure review is complete. Bechtel and GE design procedure review continues. Two TPT staff reviewers visited GE the week of June 25, 1984 to establish the detailed structure of the design control procedures applicable to the CSS.
- A3 Bechtel and some GE procedures were transmitted to TPT the week of June 18, 1984. The staff reviewers, mentioned in A2, returned with additional procedures identified during their visit.
- A4 Bechtel design procedures are being reviewed under A5.

- A5 PECO procedure conformance to PSAR is complete. Bechtel and GE procedure conformance is nearing completion.
- A6 Early procedure revisions are being obtained from Bechtel and GE.
- A7 No activity to date.

Task B Design Procedure Implementation Review

- B1 Complete - Procedure 2524-PD-2 issued.
- B2 Document lists are being developed for Bechtel and GE and for specific design documents subjected to PECO review.
- B3 Activity being coordinated with C4.
- B4 Review of PECO's design control audit activity was completed. Implementation of GE procedures for design control audits was reviewed during the visit to GE.
- B5 No activity to date.

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. The receipt of design documents continues as noted in C4 below.
- C4 The Bechtel design documents that were initially requested but on hold pending execution of the nondisclosure agreement have been received during this report period. Additional documents identified as the review progresses are being obtained.

The visit to GE's facilities to screen and obtain documents required from GE to initiate the review of the NSSS supplied components in the core spray system was productive. Many of the documents were available and were hand carried to San Diego.

However, all calculations, vendor reports, and electrical instrumentation drawings will have to be reviewed at GE. Some of the analyses which are on microfilm will require one to four weeks to reproduce before they are available for review.

The technical review of ASME Class 1 piping, the containment penetration and selected instruments continues. The review of Class 2 piping, pipe supports, the core spray pump and pump anchorage, the reactor vessel nozzle, core spray piping inside the containment, core spray sparger, and several valves in the core spray line were initiated.

Many of the GE analyses for Limerick components refer to similar analyses previously performed for comparable components in other plants. Verification of similarity, coupled with the reproduction time for microfilmed documents discussed above, may impact the scheduled completion date for Task C. Expected documentation difficulties will be monitored by feature to eliminate or minimize any schedule impact.

C5 No activity to date.

C6 No activity to date.

#### Task D Physical Verification

D1 Complete - Procedure 2524 issued.

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

D3 Complete - the walkdown was completed on June 15, 1984. Four potential finding reports were initiated. Copies were sent to Bechtel for validation confirmation. Items potentially impacted by a HELB of the core spray line for loop A were identified for use in the design review.

D4 Complete - memo 2524:ENG:07:CFD:84 was issued on June 22, 1984.

#### Task E Potential Findings

E1 - E2 Complete

For this period, one potential finding was initiated within Task C and four were initiated with Task D. The PFRs concern the containment penetration, piping, pipe supports, and whip restraints. Processing of these potential findings was initiated.

#### Task F Administrative and Reporting

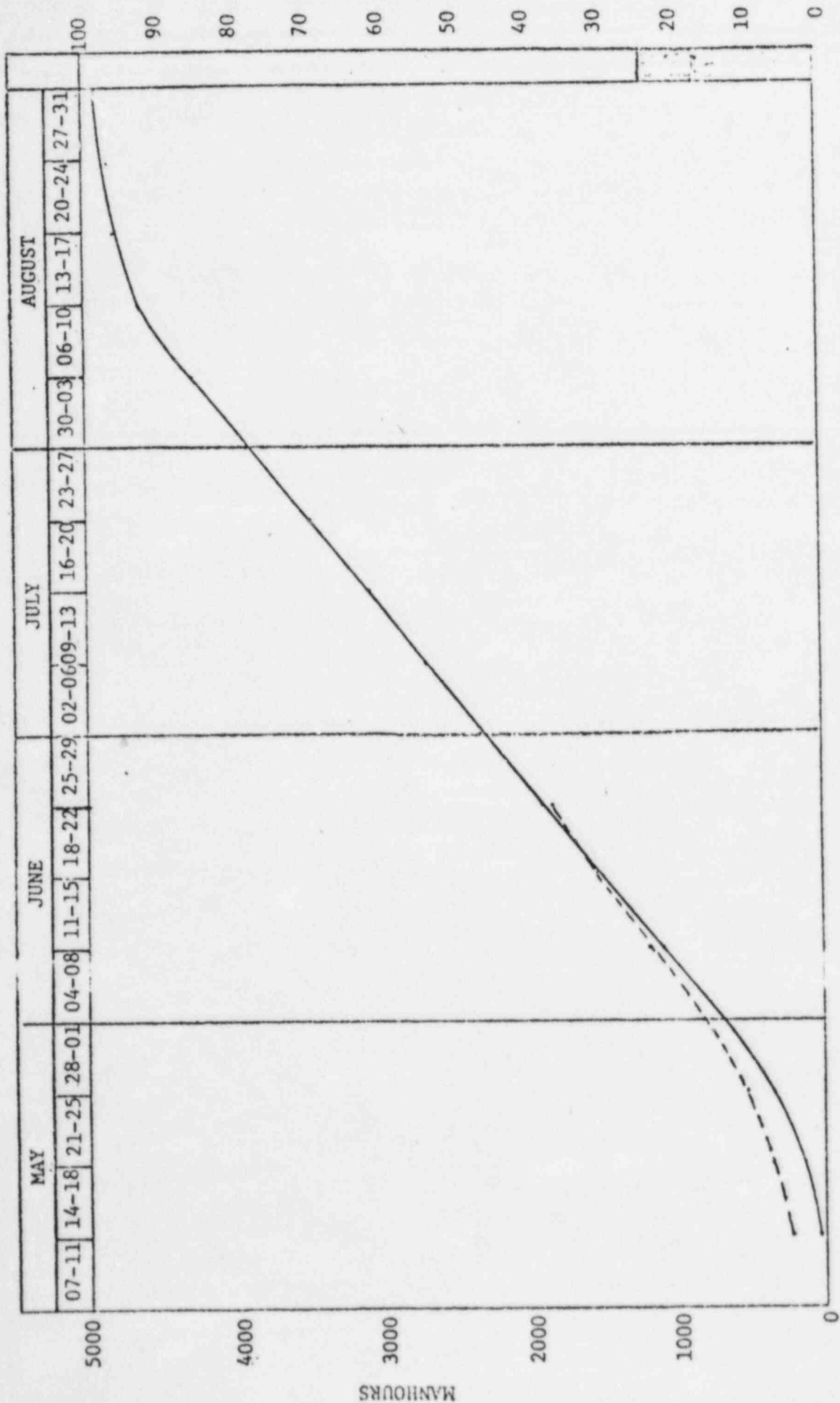
Five additional personnel have been temporarily assigned to assist in the independent design review effort. Two were assigned to assist in the Task A and B review and three in the Task C review. These additional persons have completed their project independence questionnaires. A summary of their technical or design related capabilities and/or experiences will be transmitted under a separate letter.

June 30, 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	*	
A3	Access Design Procedures	6/15	*	
A4	Bechtel Review	7/05		2524-QA-01
A5	PECo/GE Review	7/05		
A6	Time-period Procedures	7/10		
A7	Task Summary	7/24		
B1	Procedure/Checklist	5/30	5/24	2524-PD-2
B2	Document Selection	6/15	*	
B3	Document Location	7/01		
B4	Document Review	7/27		
B5	Task Summary	8/10		
C1	Procedure/Criteria	5/30	5/30	2524-PD-3
C2	Design Chain	6/08	*	
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		
	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		

\*Extended - see status report comments



	10	130	350	680	1100	1500	1920	2320	2690	3090	3490	3930	4290	4630	4830	4870	4910	%	
Projected																			
Actual	200	357	552	838	1169														

ACTIVITY SUMMARY