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RELATED CORRESPONDENCE

DOCKETED  
USNRC

TPT:029:FDC:84  
August 1, 1984

'84 AGO 13 A11:16

Philadelphia Electric Company  
2301 Market Street S25-1  
Philadelphia, PA 19101

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

Gentlemen:

The enclosed status report is the fifth of six scheduled for the Independent Design Review of the Limerick Generating Station Unit 1 Core Spray System. This report covers the period July 16, 1984 to July 31, 1984. A manpower activity summary graph illustrates the planned projected vs. actual effort to meet the DWP 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/gn  
Encl.

cc: PECO: R. A. Mulford N2-1  
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J. Moskiwitz  
L. B. Pyrih  
G. J. Beck  
cc: Limerick Service List

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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|                                        |                          |
|----------------------------------------|--------------------------|
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| Judge Richard F. Cole                  | (w/enclosure)            |
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| Atomic Safety & Licensing Board Panel  | (w/enclosure)            |
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| Timothy R. S. Campbell                 | (w/enclosure)            |

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

Bi-Monthly Status Report #5  
Period Ending July 31, 1984

Introduction

This is the fifth 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 16, 1984 to July 31, 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 complete. No PFRs were issued on Task A.

For Task B, all design procedure implementation review checklists are complete. Design documents generated by Bechtel, GE, and PECO's design review documents are being evaluated for conformance to the established design process.

Task C is progressing as planned with a slight agreed to perturbation requested by the NRC during their review of TPT's IDVP efforts.

With Tasks A, B, C and D nearing completion, or completed, the program will be focusing on resolution of the potential findings. This process is in various stages for the fifteen PFRs generated as of this date.

Three representatives of the NRC's I&E function visited TPT's facilities on July 24 and 25 to review the Limerick IDVP progress. Their review concentrated on the potential finding reports generated and the Task C technical review.

TASK A DESIGN PROCEDURE REVIEW

All work on Task A is complete. The summary of the Task A work is documented in memo 2524-QA-11 dated July 27, 1984. Several additional memos were generated to document previous work completed. These included summary memo 2524-QA-13 which described the GE procedure structure for the design control audits (subtask A2), and summary memos 2524-QA-12, 14, and 15, documenting early procedure revisions (subtask A6).

TASK B DESIGN PROCEDURE IMPLEMENTATION REVIEW

B1 Complete - Procedure 2524-PD-2 issued.

B2 Documents have been selected and are consistent with the technical review in Task C. Several additional documents are required and will be included in the review as a result of the extended technical review noted in C4. This subtask is considered complete.

B3 Task B reviewers visited PECO and GE to review design documents not available at TPT. A Bechtel visit is scheduled for the week of August 6 to review documents not transmitted to TPT. Since the locations of documents are identified, this subtask is considered complete.

P4 All checklists to conduct the design document conformance reviews are complete. Reviews of PECO, Bechtel, and GE design documents were initiated. On site reviews of PECO and GE documents not available at TPT were initiated the week of July 30. Review of Bechtel's design procedure implementation was started with documents located in San Diego. The complete review will require a visit to Bechtel's San Francisco Office, which is presently scheduled for the week of August 6, 1984. Scheduled completion of the subtask remains July 10, 1984.

B5 No activity to date.

#### TASK C TECHNICAL REVIEW

C1 Complete - Procedure 2524-PD-3 issued.

C2 Representative vendors have been identified for purposes of defining the design chain. This completes the subtask. The information will be documented in an engineering memo.

C3 No change.

C4 A visit to GE was made to review documentation for the core spray pump, sparger, reactor vessel nozzle, and piping inside the reactor vessel. This review has been completed. One PFR was issued during the review.

The review of the cable tray supports is completed with one PFR issued.

The review of electrical equipment consisting of a pump motor, valve motor operator, switchgear, and motor control center was completed. The review of instrumentation and control equipment was also completed. One PFR was issued during the review of I&C equipment.

An NRC audit team evaluated the TPT program. They specifically requested that the review of the containment penetration include the penetration anchorage and effects on the concrete. Appropriate documentation was requested from BPC for implementation of their request. They also asked that the concrete slab supporting the pump be reviewed for adequacy. However, since this slab bears directly on the ground and hence all pump loads can be transmitted to the ground, the design of this slab would be governed by loadings which are not related to the core spray system. Therefore, this foundation slab is not considered to be part of the system, and hence will not be reviewed.

C5 Based on the review work performed to date, it appears that the review can be completed within the guidelines of ANSI N45.2.11, Section 6.3.1. Therefore, independent analysis with different analytical models and computer codes than those used by BPC or GE should not be required. However, the completion date is extended until the end of the technical design review, August 10, 1984.

C6 No activity to date.

#### TASK D PHYSICAL VERIFICATION

All work on Task D is complete.

#### TASK E POTENTIAL FINDINGS

E1 - E3 Complete

For this period, three potential findings were initiated under Task C. The three PFRs related to the following areas: cable tray supports, core spray nozzle, and the instrumentation and control equipment.

All PFRs to date are in various stages of processing.

#### TASK F ADMINISTRATIVE AND REPORTING

The summary of projected vs. actual manpower and percent complete graph was updated to show current data. In addition Table I was modified at the request of PECO to include three elements within the schedule column; original schedule date, revised schedule dates, and the actual completion dates.

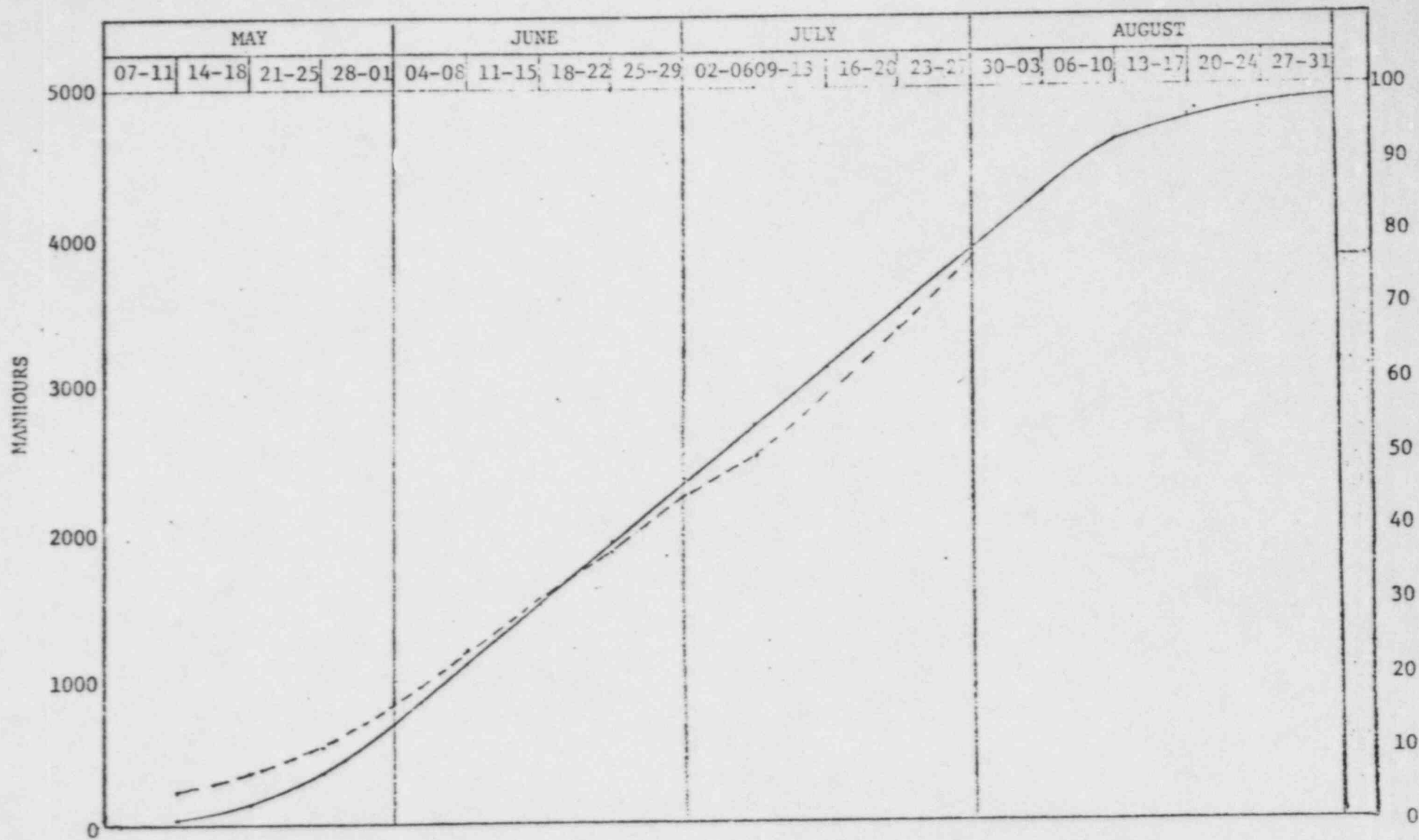
A summary memo, PECO:014:FDC,84 dated July 26, 1984 was issued which documented comments made by the NRC review of the Limerick IDVP at TPT on July 24 and 25, 1984.



August 1, 1984

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

| Milestones | Subject                  | Schedule |         | Actual | Document             |
|------------|--------------------------|----------|---------|--------|----------------------|
|            |                          | Orig     | Revised |        |                      |
| A1         | Procedure/Checklist      | 5/30     |         | 5/24   | 2524-PD-1 & 7        |
| A2         | Procedure Structure      | 6/15     |         | 7/08   | 2524-QA-01,05, 07,13 |
| 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   | 2524-QA-12, 14, 15   |
| A7         | Task Summary             | 7/24     |         | 7/27   | 2524-QA-11           |
| B1         | Procedure/Checklist      | 5/30     |         | 5/24   | 2524-PD-2            |
| B2         | Document Selection       | 6/15     | 7/27    | 7/27   |                      |
| B3         | Document Location        | 7/01     | 7/27    | 7/27   |                      |
| B4         | Document Review          | 7/27     | 8/10    |        |                      |
| B5         | Task Summary             | 8/10     | 8/17    |        |                      |
| C1         | Procedure/Criteria       | 5/30     |         | 5/30   | 2524-PD-3            |
| C2         | Design Chain             | 6/08     | 7/31    | 7/31   |                      |
| C3         | Feature Selection        | Cont     |         |        | 2524:ENG:02:AS:84    |
| C4         | Design Review            | 8/10     |         |        |                      |
| C5         | Independent Analysis     | 7/27     | 8/10    |        |                      |
| 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      |         | 8/1    | TPT:029:FDC:84       |
|            | Status Report #6         | 8/15     |         |        |                      |
| F4         | Information Compilation  | 8/15     |         |        |                      |
| F5         | Final Report Draft       | 8/24     |         |        |                      |
| F6         | Final Report-Issue       | 8/31     |         |        |                      |



|            |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |   |
|------------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| Projected— | 10  | 130 | 350 | 680 | 1100 | 1500 | 1920 | 2320 | 2690 | 3090 | 3490 | 3930 | 4290 | 4630 | 4830 | 4870 | 4910 | % |
| Actual---  | 200 | 357 | 552 | 838 | 1169 | 1536 | 1876 | 2197 | 2473 | 2891 | 3347 | 3876 |      |      |      |      |      |   |