



Commonwealth Edison

One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

August 31, 1982

Mr. James G. Keppler, Regional Administrator
Directorate of Inspection and
Enforcement - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Dresden Station Unit 2
Response to Item 1 of I.E.
Inspection Report Nos.
50-237/82-08, 50-249/82-09,
50-254/82-09, and 50-265/82-10
NRC Docket Nos. 50-237

Reference (a): C. E. Norelius letter to Cordell
Reed dated July 1, 1982.

(b): L. O. DelGeorge letter to J. G.
Keppler dated July 30, 1982.

Dear Mr. Keppler:

Reference (a) provided the results of the special inspection conducted by Mr. I. T. Yin of your office on May 3-6, 1982, at EDS Nuclear Inc., Walnut Creek, California, of activities concerning our Dresden Station Units 2 and 3 and Quad Cities Station Units 1 and 2. During that inspection, certain activities appeared to be in non-compliance with NRC requirements.

The Attachment to this letter provides Commonwealth Edison Company's response to non-compliance item 1. The date for submitting this response was discussed with Mr. W. Little of your office in an August 16, 1982, telephone conversation. Our response to items 2 and 3 was provided in Reference (b).

Please address any questions that you or your staff may have concerning this matter to this office.

Very truly yours,

Thomas Rausel for
L. O. DelGeorge

Director of Nuclear Licensing

TJR/lm

Attachment

cc: Region III Inspector - Dresden

4921N

8209270077 820922
PDR ADOCK 05000237
Q PDR

SEP. 2 1982

Attachment A

Item 1 applies to Docket No. 50-237 only

1. 10 CFR 50, Appendix B. Criterion III, states, in part, that "Measures shall be established to assure that applicable . . . design basis . . . for those structures, systems, and components . . . are correctly translated into specifications, drawings, procedures, and instructions."

Commonwealth Edison Company Topical Report CE-1-A, "Quality Assurance Program for Nuclear Generating Stations, "Revision 20, dated February 17, 1982, states in Section 3 that, "The fundamental vehicle for design control involves multi-level review and/or evaluation of design documents by individuals or groups other than the original designer or designer's immediate supervisor whose authority and responsibility are identified and controlled by written procedures. The design documents include, but are not limited to, system flow diagrams, design and construction specifications, load capacity data sheets, design reports, equipment specifications, process drawings."

Contrary to the above, the CCSW check valve slamming evaluation was considered to be deficient, in that: (1) the loadings on the check valve, the pipe anchor, and the pumps had not been verified to be acceptable, (2) the use of material ultimate stresses as evaluation criteria had not been qualified, (3) the evaluation allowable for the shell type concrete anchor bolt was incorrect, and (4) the engineering conclusion to justify the existing under design condition was without supporting basis.

This is a Severity Level V violation (Supplement IV).

Discussion

Commonwealth Edison believes that the piping fatigue assessment performed by EDS Nuclear is adequate and that we were not negligent in the design control process. The piping fatigue analysis that was performed is not as conservative as the detailed evaluations specified in the noncompliance. However, based on our experience to date, the piping fatigue analysis is a viable alternative and does demonstrate system integrity. However, to fully resolve this issue, the following actions were taken:

Corrective Action Taken and Results Achieved

In order to resolve the subject violation, procedure changes in the testing of the pumps will be implemented to prevent reoccurrence of the water hammer event. Since the water hammer events will not reoccur, the check valve, pipe anchor and pumps do not need to be evaluated to withstand water hammer loads as specified in item 1 of the violation. Since the check valve and pumps have functioned adequately since the last water hammer event, we know there is no present damage and that the components will remain operable for normal operating loads.

The procedure change that will be implemented will consist of operating and shutting off one CCSW pump at a time when quarterly surveillance tests are performed. In the past, both pumps were in operation when one of the pumps was shut off, which caused the higher hydrodynamic loading on the check valve. This procedure change will effectively eliminate the check valve slam and satisfy the four items of the noncompliance. A more detailed discussion is also presented for items 2, 3, and 4 of the violation.

Concerning item 2, ultimate stress was not used to evaluate the system design. To determine if the water hammer analysis gave reasonable results, the results of the analysis were compared to the ultimate capability of hanger 1210-36. Item 3, the evaluation allowable for the shell type anchor bolt was improperly rounded off. The calculation was repeated with the corrected allowable and the results did not vary significantly from the original calculation. Item 4, the engineering conclusion to justify the existing design is correct since the water hammer will be eliminated and the system and system components will not see the added hydrodynamic loading.

Corrective Action Taken to Avoid Further Noncompliance

Eliminating the hydrodynamic loading due to check valve slam with a permanent procedure change will provide a permanent solution to the noncompliance.

Date when full compliance will be achieved

The procedure change will be implemented prior to the next scheduled quarterly surveillance test.