TELEDYNE
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May 20, 1983
5633-69

Mr. Harold Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20114

Subject: Independent Design Review for the Shoreham Nuclear Power Station

Dear Mr. Denton:

Please find enclosed the final classification of ICR No. 5633-18 from the subject design review.

TES has received responses from LILCO to this item originally classified as a Finding and the results of our review of this response is enclosed.

If you have any questions or comments, please do not hesitate to contact Mr. James P. King or the writer.

Very truly yours,

TELEDYNE ENGINEERING SERVICES

James P. King for

Donald F. Landers
Senior Vice-President

DFL/lh

Enclosures

B001

cc: J. A. Flaherty (TES)
J. P. King (TES)
J. H. Malonson (TES)
TES Document Control

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[ ] Request for Information (RFI)
When Requested Assign Control Number

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[ ] Receipt (TES Use Only)

Control No. 5633/001

Originator D. F. Landers

Transmit To: H. R. Denton
USNRC
7920 Norfolk Ave.
Bethesda, MD 20112

Project No. 5633

Date 5/20/83

Client PO 363981

Transmitted Under Separate Cover To: M. Milligan (LILCO)

NOTE: Furnish complete identification for items transmitted (below).

QTY	TYPE	ITEM IDENT NO.	REV.	DESCRIPTION - Title and Number of Sheets/Pages	
6		ICR 5633-18	1		

ACKNOWLEDGEMENT OF RECEIPT BY _____ TITLE _____ DATE _____

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1/83

TELEDYNE
ENGINEERING SERVICES

INDEPENDENT DESIGN REVIEW

SHOREHAM NUCLEAR POWER PLANT

ICR No. 5633- 18, Rev. 1

Date: May 20, 1983

Reference: RRF No. 5633- 65, Rev. 1

PMR No. 5633- 65, Rev. 1

Classification of Item: Closed

S. J. D. Luna
Reviewer Signature

J. A. Flaherty
Committee Chairman Signature

D.F. Landers
Project Manager Signature

1.0 SUMMARY

Referenced documents:

(1) TES ICR No. 5633-18 dated December 8, 1982
(2) SWEC Disposition Response Form for ICR 5633-18 dated February 2, 1983.
(3) TES ICR No. 5633-18, Additional Concern, dated March 10, 1983
(4) SWEC Disposition Response Form for ICR 5633-18, Additional Concern.
(5) TES Trip Report No. 1749

During the original review of pipe support design calculations, the TES reviewer noted that in some cases the time-history load was not properly included as part of the "Upset" design load. The Reference (1) ICR addressed this concern.

The LILCO/SWEC response (Reference 2), indicated that although the time-history load was not included in the Normal/Upset (N/U) design load summary, a conservative "umbrella" load combination was used, and resulting stresses were compared to the Normal condition (lowest) allowables. As a result of this response, TES reviewed the method of load combination for each support, with particular attention to how the time-history loads were considered. This review, summarized in the Reference (3) ICR, produced the following:

(1) Out of approximately 21 rigid supports and snubbers, 9 supports had N/U design loads calculated incorrectly in that the N/U "time-history" load was not included.

(2) The 4 anchors which TES received to review had incorrectly combined loads.

(3) The "umbrella" evaluation method was not used in each calculation.

TES recommended, in the Reference (3) ICR, that all piping systems with time-history load cases be reviewed to determine if the loads were correctly considered in the pipe support calculations.

2.0 RESOLUTION

The LILCO/SWEC response to the TES Additional Concern (Reference 3) is contained in Reference (4). This response reiterated the TES conclusion that the missing time-history loads had no effect on the pipe support designs because:

(1) The time-history loads are combined by SRSS with SRV and OBE loads.

(2) The N/U time-history loads are small.

TES has reviewed the revised calculation for the 12 supports on system AX-10B. All calculations include the N/U time-history loads as required.

SWEC reviewed two supports on each Category I piping model that involved time-history loads, finding no other calculations with inappropriately combined time-history loads. Also, SWEC supervisory personnel have been made aware of this situation.

In order to assure compliance, TES randomly selected and reviewed approximately 20 of the additional piping models that involved time-history loads, Reference (5). All supports reviewed included the N/U time-history loads as required.

TES considers the LILCO/SWEC response in Reference (4) to adequately assess the impact of this Finding. Since there is no impact on safety, this item is considered closed.