

Central File

Iowa Electric Light and Power Company

August 31, 1979
LDR-79-177

LARRY D. ROOT
ASSISTANT VICE PRESIDENT
NUCLEAR GENERATION

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

Dear Mr. Keppler:

Enclosed you will find our response to Item 2 of IE Bulletin No. 79-14. As a result of our initial evaluation of the nonconformances shown in the enclosure we have been able to conclude that system operability is not jeopardized. Our initial evaluation is being followed by an analytical evaluation which will be completed within 14 days. In the interim, all nonconformances which have been identified are being corrected by providing additional piping restraint modifications.

Very truly yours,

Larry D. Root

Larry D. Root
Assistant Vice President
Nuclear Generation

LDR/RFS/ms
Encls.
cc: R. Salmon
D. Arnold
S. Tuthill
L. Liu
E. Hammond
K. Meyer

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Director, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Director, Division of Operating Reactors
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

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SEISMIC ANALYSIS
OF
AS-BUILT SAFETY-RELATED PIPING SYSTEMS
FOR
DUANE ARNOLD ENERGY CENTER
IOWA ELECTRIC LIGHT & POWER

1.0 INTRODUCTION

The US NRC IE Bulletin 79-14 dated July 2, 1979, "Seismic Analysis for As-Built Safety-Related Piping Systems" requested that a description of the results of an inspection of portions of piping systems which are normally accessible be submitted within 60 days of the date of the bulletin. This inspection was to include one system in each set of redundant systems and all nonredundant systems for conformance to the seismic analysis input information set forth in design documents.

This report contains the results of that inspection.

2.0 CONDUCT OF THE INSPECTION

The inspection described in Bulletin 79-14, Item 2 was conducted for Iowa Electric Light & Power by Bechtel Associates Professional Corporation of Ann Arbor, MI using their "Procedure for Verifying Conformance of Seismic Analysis to Actual Configuration of Safety-Related Piping Systems in Response to IE Bulletin 79-14. (Revision 1 of this procedure accompanied the response to Item 1 of Bulletin 79-14; Revision 2 is Attachment 1 to this report.) The inspection reported herein is specifically addressed by

Sections III through IX of the procedure. The field inspection was conducted at DAEC; the comparison addressed in Section VIII was performed at Bechtel's Ann Arbor Office. The office work also included updating Tables 1 and 2 of the Item 1 report for Group 1 lines. See Attachments 2 and 3. 3

In documenting the results of the inspection and comparison with seismic analysis input, it was necessary to differentiate among anomalies found. Hence the following definitions were used.

Discrepancy - an anomaly found during the comparison, of the as-built configuration with the as-designed configurations but which has not been evaluated by stress analysts.

Nonconformance - A discrepancy which stress evaluation finds may invalidate the conclusion of the seismic analysis of record.

The comparison portion of the verification revealed that the stress calculation records did not include a stress isometric for all lines. Thus, for the lines so indicated in Attachment 2, a stress isometric was constructed from the hanger or piping isometric and the system stress calculations. This was done with guidance from the stress analyst and provided a satisfactory vehicle for comparison with as-built conditions.

Lastly, in actually performing the field inspection, it was determined that portions and, in a few cases, all of the line denoted as Group 1 in the Item 1 report were in fact inaccessible. These were reclassified to Group 3 as shown in Attachment 3.

3.0 RESULTS OF THE INSPECTION

Results of the field inspection and office comparison with the seismic analysis of record are given in Attachment 4. All 67 Group 1 lines shown in Attachment 3 have been reviewed. Comparison was completed on 54 systems. The analysis of record were found to be unavailable on portions or all of 13 lines.

All 54 lines for which comparison is complete have been evaluated by stress analysts. These evaluations revealed 6 nonconformances only in 2 piping systems. Due to the complexity of the systems involved, an engineering judgment as to system operability cannot be made. Instead the systems are being analyzed, with completion expected for all systems within 14 days.

4.0 SCHEDULE FOR FUTURE ACTIVITIES

The following activities connected with Item 2 of Bulletin 79-14 are planned to be completed as shown below:

- | | <u>Schedule</u> |
|---|-----------------|
| a. Reanalysis of lines for which the analysis of record is not available. | Within 30 days |
| b. -Analysis of nonconformances. | Within 14 days |

Attachments

1. Procedure for Verifying Conformance of Seismic Analysis to Actual Configuration of Safety-Related Piping in Response to IE Bulletin 79-14, Revision 2.
2. Listing of Design Documents for Seismic Analysis of Group 1 Lines.
3. Seismic Category I Systems, Associated Piping Line Numbers and Inspection Group.
4. Results of Item 2 Inspection.