

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9105030236 DOC. DATE: 91/04/15 NOTARIZED: NO DOCKET #
 FACIL: 50-305 Kewaunee Nuclear Power Plant, Wisconsin Public Service 05000305
 AUTH. NAME AUTHOR AFFILIATION
 EVERS, K.H. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION
 MILLER, H.J. Region 3 (Post 820201)

SUBJECT: Forwards eighth periodic progress rept which contains status update on small bore sample program as of 910222, per IE Bulletin 79-14 & Insp Repts 50-305/88-08 & 50-305/90-13. Next rept due on 911015.

DISTRIBUTION CODE: IE01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 11
 TITLE: General (50 Dkt)-Insp Rept/Notice of Violation Response

NOTES:

| | RECIPIENT | | COPIES | | | RECIPIENT | | COPIES | |
|-----------|--------------------|--|--------|------|--|------------------|--|--------|------|
| | ID CODE/NAME | | LTR | ENCL | | ID CODE/NAME | | LTR | ENCL |
| | PD3-3 PD | | 1 | 1 | | NRR/DAVIS, M | | 1 | 1 |
| INTERNAL: | ACRS | | 2 | 2 | | AEOD | | 1 | 1 |
| | AEOD/DEIIB | | 1 | 1 | | AEOD/TPAB | | 1 | 1 |
| | DEDRO | | 1 | 1 | | NRR MORISSEAU, D | | 1 | 1 |
| | NRR SHANKMAN, S | | 1 | 1 | | NRR/DLPQ/LPEB10 | | 1 | 1 |
| | NRR/DOEA/OEAB | | 1 | 1 | | NRR/DREP/PEPB9D | | 1 | 1 |
| | NRR/DRIS/DIR | | 1 | 1 | | NRR/DST/DIR 8E2 | | 1 | 1 |
| | NRR/PMAS/ILRB12 | | 1 | 1 | | NUDOCS-ABSTRACT | | 1 | 1 |
| | OE DIR | | 1 | 1 | | OGC/HDS1 | | 1 | 1 |
| | <u>REG FILE</u> 02 | | 1 | 1 | | RGN3 FILE 01 | | 1 | 1 |
| EXTERNAL: | EG&G/BRYCE, J.H. | | 1 | 1 | | NRC PDR | | 1 | 1 |
| | NSIC | | 1 | 1 | | | | | |

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 24 ENCL 24



WISCONSIN PUBLIC SERVICE CORPORATION

600 North Adams • P.O. Box 19002 • Green Bay, WI 54307-9002

April 15, 1991

Mr. H. J. Miller, Director
Division of Reactor Safety
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
IE Bulletin 79-14

- References:
- 1) Inspection Report 50-305/87002 dated March 5, 1987
 - 2) Inspection Report 50-305/88008 dated May 31, 1988
 - 3) Inspection Report 50-305/90013 dated June 15, 1990
 - 4) Letter from Mr. A. T. Gody, Jr. to Mr. K. H. Evers dated January 11, 1990
 - 5) Letter from Mr. K. H. Evers to Mr. H. J. Miller dated October 15, 1990
 - 6) IEEE Transactions on Reliability, Vol. R-31, No. 5, "Determining Sample Size When Searching for Rare Items," R. W. Madsen and J. E. Holstein, December, 1982

9105030234 910415
PDR ADDCK 05000305
Q PDR

APR 16 1991

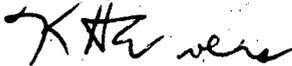
1E01

Mr. H. J. Miller
April 15, 1991
Page 2

References 1, 2 and 3 documented the NRC's findings concerning Wisconsin Public Service Corporation's (WPSC) activities taken to address IE Bulletin (IEB) 79-14. In response to reference 1, WPSC committed to develop and apply improved procedures for the inspection of safety-related large bore piping at the Kewaunee Nuclear Power Plant. We also committed to keep you apprised of our ongoing IEB 79-14 program. Reference 5 provided you with our seventh periodic progress report.

The large bore portion of the IEB 79-14 piping reconciliation program was completed during the spring 1990 refueling outage. Reference 5 provided the NRC with a final compilation. With the large bore piping program completed, efforts are continuing on the small bore sample program which was accepted by the staff in reference 4. The attachment to this letter provides you with our eighth periodic progress report which contains a status update on the small bore sample program as of February 22, 1991. Our next periodic progress report, due on October 15, 1991, will continue to provide the NRC with a status update on the small bore sample program.

Sincerely,



K. H. Evers
Manager-Nuclear Power

MDS/jms

Attach.

cc - Mr. Patrick Castleman, US NRC
US NRC, Region III
Document Control Desk, US NRC

LIC\NRC\N303

Attachment

To

Letter from K. H. Evers (WPSC) to H. J. Miller (NRC)

Dated

April 15, 1991

Mr. H. J. Miller
April 15, 1991

IEB 79-14 Summary Letter

- 1.0 Background
- 2.0 Small Bore Sample Program Status
- 3.0 Current Activities
- 4.0 Conclusion

LIC\NRC\N303

1.0 Background

An NRC inspection of WPSC activities performed in response to IE Bulletin 79-14 was conducted by the NRC for the period of November 13, 1986 to January 29, 1987. As documented in NRC inspection report 50-305/87002, certain of our activities were found to be in violation of NRC requirements. To resolve NRC concerns and to present our program for corrective actions, an enforcement conference was held at the NRC Region III offices on February 13, 1987.

As a result, WPSC committed to a Piping and Hanger Reconciliation Program to resolve the as-built seismic design adequacy of QA Type 1, safety-related, large bore piping. This program was initiated during the 1987 spring refueling outage and was completed at the end of the 1990 spring refueling outage. The NRC inspection report 50-305/90013 (DRS), dated June 15, 1990, documented the NRC review of our activities taken in response to IE Bulletin 79-14. Two previous inspection findings (operability evaluations and anchor bolt evaluations) were closed and no new violations or deviations were identified. As indicated in the Inspection Report, the NRC considers the large bore portion of the IE Bulletin 79-14 program closed. However, one (1) unresolved item was identified concerning the issue of integral welded attachments. WPSC's status on this issue is discussed in the current activities section of this report.

Mr. H. J. Miller
April 15, 1991
Attachment Page 2

IE Bulletin (IEB) 79-14 requires licensees to compare the as-built configuration against the configurations used in the stress analysis for all safety-related large bore and computer-analyzed piping. The small bore piping at the Kewaunee Nuclear Power Plant was computer-analyzed. Therefore, the scope of IEB 79-14 for Kewaunee includes small bore piping. However, the small bore pipe stress analyses for the KNPP were performed based on dimensions (as-built) taken subsequent to the piping design, field fabrication, and installation. Consequently, WPSC proposed a small bore sample program for the purpose of determining the adequacy of all safety related small bore piping at the KNPP. This program was accepted by the staff in reference 4 and implementation was initiated on January 11, 1990. The program is anticipated to be completed by December 31, 1991.

To help ensure IEB 79-14 activities adhere to appropriate procedures, WPSC has committed to an annual audit performed by our Quality Assurance Group. These audits provide documented evidence that piping reconciliation project activities are being performed by qualified personnel in accordance with approved procedures.

In order to keep you apprised of our progress towards resolution, we committed to provide you with periodic status reports. This is our eighth report which covers the

Mr. H. J. Miller
April 15, 1991
Attachment Page 3

period from August 26, 1990 to February 22, 1991. With the large bore program completed, the next periodic status report is due October 15, 1991 and will provide an update on our continuing small bore sample program.

2.0 Small Bore Sample Program Status

The IEB 79-14 small bore sample program is comprised of a sample size of sixty-eight (68) analytical piping parts. As of this reporting period, sixty (60) of the sixty-eight (68) analytical parts have been analyzed and reviewed. In addition, a total of six hundred (600) pipe supports are expected to be evaluated. Of the 600 supports, 387 have been analyzed and reviewed.

In Reference 4, the NRC indicated that if the resultant stresses on piping analyzed as part of the small bore sample program exceed USAR allowables, then the affected part should be considered nonconforming to the sample program and the entire scope of small bore piping shall be analyzed. Of the sixty (60) analytical piping parts analyzed and reviewed, eight (8) analytical parts were identified which have resulted in stress levels exceeding USAR criteria. However, all eight (8) analytical parts were found to have calculated stresses within the operability requirements defined in a letter from Mr. C. R. Steinhardt (WPSC) to the Document Control Desk (NRC) dated May 5, 1989. The reason for these

analytical parts failing to meet the USAR stress criteria can be isolated into three distinct categories of discrepancies. Those due to:

- 1) Modifications/additions since plant startup
- 2) Extra/missing supports
- 3) Incorrect transfer of input information modeled in the analysis of record (AOR) for either pipe outside diameter, wall thickness or insulation weight

Although eight analytical parts in the small bore sample program have exceeded USAR stress criteria due to the above discrepancies, full walkdown and analysis of the entire population of safety-related small bore piping at Kewaunee is unwarranted at this time. This is supported by the fact that WPSC has been able to identify root causes for the above discrepancies. Although a full walkdown is not necessary to remedy this situation, WPSC does recognize that additional efforts beyond the scope of the sample program are required to identify and reconcile these types of occurrences. The additional efforts that will be implemented to address these concerns are outlined below.

- 1) Perform non-dimensional walkdowns of all safety related small bore piping at the KNPP and evaluate the results to ensure that all modifications/additions since plant startup and/or any extra/missing supports are identified and reconciled.
- 2) Implement a procedure to ensure that all future modifications fully comply with IEB 79-14 requirements.

- 3) Verify the following AOR input information for piping not subject to re-analysis:
 - a) pipe outside diameter and wall thickness
 - b) insulation weight

These actions are sufficient to identify and correct the discrepancies that have thus far resulted in non-conforming analytical parts. Therefore, provided no new types of discrepancies are detected in the remaining small bore sample which result in an analytical part failing to meet USAR allowables, WPSC believes the above provisions will provide reasonable assurance that all safety-related small bore piping at Kewaunee will meet the USAR stress criteria.

A schedule for this additional work has not yet been determined. Upon completion and review of the preliminary walkdowns, a schedule will be provided to the NRC.

3.0 Current Activities

As indicated in NRC inspection report 50-305/90013, integral welded attachments were identified as an unresolved issue. The safety-related large bore piping at the KNPP contain 480 integral attachments which have been categorized into seven different types.

Mr. H. J. Miller
April 15, 1991
Attachment Page 6

With the assistance of our Architect/Engineer, WPSC has developed a sample program to determine the adequacy of the total population of 480 integral attachments. A sample size of 56 will achieve a 95% confidence level that all integral attachments are conforming. The statistical analysis method of selecting the random sample is provided in reference 6. The sample that was randomly selected includes at least one integral attachment from six of the seven types. The type that was not selected will also be evaluated. A procedure to evaluate induced stress levels due to integral attachments has been completed and approved as of March 8, 1991. The evaluation process has just recently begun and results are not available at this time. The next status update will provide a summary of results.

Reconciliation of the eight small bore analytical parts to within USAR allowables is currently in progress. In addition, work on the non-dimensional walkdown and review of all safety-related small bore piping at Kewaunee has been initiated. The next status update will provide a summary of these efforts.

4.0 Conclusion

The large bore portion of IE Bulletin 79-14 has been completed. All modifications performed were for the purpose of maintaining conservative design margins and strict conformance to USAR limits.

Mr. H. J. Miller
April 15, 1991
Attachment Page 7

Preliminary results of the small bore sample program indicate additional work outside of the sample program is required to ensure that all safety-related small bore piping at Kewaunee conforms to USAR criteria. Progress is continuing on the small bore sample program and the additional work outside the sample has commenced. Continued operability has been shown for all small bore piping systems evaluated to date.

LIC\NRC\N303