



WISCONSIN PUBLIC SERVICE CORPORATION

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April 20, 1987

10 CFR 2.201

Mr. N. J. Chrissotimos, Acting Director
Division of Reactor Safety
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Gentlemen:

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

- References:
- 1) Letter from Mr. N. J. Chrissotimos (NRC) to Mr. D. C. Hintz (WPSC) dated March 5, 1987
 - 2) Letter from Mr. D. C. Hintz (WPSC) to Mr. N. J. Chrissotimos (NRC) dated April 7, 1987
 - 3) Letter from Mr. N. J. Chrissotimos (NRC) to Mr. D. C. Hintz (WPSC) dated March 20, 1987

Reference 1 transmitted IE Inspection Report 50-305/87002 (DRS) which detailed your inspector's findings concerning our IE Bulletin 79-14 activities. Our response to this inspection report was transmitted to you by Reference 2.

Reference 3 transmitted a Notice of Violation (NOV) based on the inspection report (Reference 1). This NOV requires that we respond to each violation detailing the corrective actions taken and the results achieved; corrective action to be taken to avoid further violations; and, the date when full compliance will be achieved. Our response is required within 30 days from the date of the NOV. In accordance with the provisions of 10 CFR 50.4 we are submitting our response on April 20 since 30 days from the date of the letter falls on a Sunday. The attachment to this letter contains our response to the NOV.

Also, by prior agreement with you, our response to the issues concerning small bore piping will be discussed in a meeting with you during the last week in May, and are not addressed in this response.

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Mr. N. J. Chrissotimos

April 20, 1987

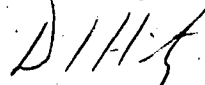
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It should be noted that we believe that a combination of mixed signals sent by the NRC, errors in the execution of our procedures and the passage of time have all contributed to the situation which has culminated in this Notice of Violation. Research performed since completion of the bulletin work has shown that engineering judgments made in 1979 to facilitate a short-term inspection program were potentially non-conservative. The very short time requirement for bulletin response, 120 days, was an additional indication to us in 1979 of the level of detail NRC expected.

In retrospect, WPSC agrees that the work performed in 1979 and 1980 should be redone and we have committed to do so (Reference 2).

In order to avoid any future misunderstandings we have been working closely with your inspector to develop and execute procedures which fully meet the requirements of the bulletin as we know them today. We have been assured that our program is acceptable and that proper execution will fully meet your requirements.

Sincerely,



D. C. Hintz

Vice President - Nuclear Power

DWS/jms

Enc.

cc - Mr. R. L. Nelson, US NRC
Mr. T. R. Quay, US NRC Project Manager

Attachment

Response to Notice of Violation

Letter from Mr. D. C. Hintz to Mr. N. J. Chrissotimos

April 20, 1987

NOV 1. 10 CFR 50, Appendix B, Criterion II, as implemented by Wisconsin Public Service Corporation (WPS) Operational Quality Assurance Program Description, Sections 2.5 and 10.0 require indoctrination and training be provided for personnel performing activities affecting quality.

Contrary to the above, program specific indoctrination and training was not conducted for the WPS and contractor personnel who performed the IE Bulletin No. 79-14 piping configuration and pipe hanger design walk-down inspection. (305/87002-01)

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

WPSC Response

WPSC disagrees with the assertion that program specific training was not performed for WPSC and contractor personnel. In fact, training was provided by our Architect/Engineering firm early into the original IE Bulletin 79-14 program. This training consisted of methods of pipe analysis, general effects of lumped masses and hanger spacing on pipe stress and methods of pipe measurement. WPSC personnel performed training on procedure requirements to the contractor personnel involved in the project.

Much has changed within the industry in the manner in which training is performed and documented since late 1979. At that time there existed no formal requirement for lesson plans or documentation of training for projects of this type. Specific training needed to accomplish a given task was left to the discretion of the person who had overall responsibility for the project. This policy was not as rigorous as today's standards, but it did reflect general industry standards.

As you are fully aware, we have initiated a program to reverify the seismic design and installation of safety related, seismically designed piping at the Kewaunee Nuclear Power Plant (KNPP). The activities affecting safety are controlled by procedure, and training of personnel in proper execution of these procedures has been accomplished and is fully documented in accordance with our training procedures. Your inspector has reviewed these documents and appears satisfied with our current level of detail.

Additionally, as was committed to in Attachment 4 to Reference 2, WPSC will revise Engineering Control Directive (ECD) 3.2, "Requirements for Safety Related Engineering Activities" by August 1, 1987 to provide more detailed guidance on the requirements to be addressed in large engineering projects. The requirements for training will be included in this ECD.

WPSC is now in full compliance with its training requirements for IE Bulletin 79-14 and additional guidance will be established for future projects of this nature by August 1, 1987.

NOV 2. 10 CFR 50, Appendix B, Criterion V, as implemented by Wisconsin Public Service Corporation Operational Quality Assurance Program Description, Section 5.0, requires activities affecting quality be prescribed by procedures and drawings. Appropriate qualitative or quantitative acceptance criteria shall be included in these procedures.

Contrary to the above, (1) the WPS procedure for conducting the IE Bulletin No. 79-14 walkdown inspection did not contain acceptance criteria for hanger design inspection, (2) the computer analyzed small bore piping was not included in the walkdown and evaluation program, and (3) there were no engineering procedures developed and issued for conducting IE Bulletin No. 79-14 evaluations. (305/87002-02 A, B, and C)

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

WPSC Response

- (1) The procedures generated during the original IE Bulletin 79-14 program were written to verify the general configuration of hangers, to verify the line of action of the hanger and to confirm that the hanger type conformed to its design drawing. It was not the intent of the program to critically examine each detail of the hanger to verify conformance to intricate design details. Additionally, no judgement of the acceptability of a hanger was made in the field. The procedure required that the hanger be reviewed against its design drawing and any deviation be recorded. Therefore, the acceptance criterion (or more directly the non-acceptance criterion) was any hanger detail which did not conform with its design to the detail depicted on the hanger drawing.

We disagree with this finding because it was written assuming that the intent of the procedure was to examine each hanger in minute detail when in fact this was not the case. We do, however, concede that there exists a fundamental difference in the objective of Bulletin 79-14 as we understand it today and what we believed it to be in 1979.

- (2) Small bore piping will be the subject of our May 28, 1987, meeting with you.
- (3) We agree with the finding that no engineering procedures were developed for what we believed to be the scope of the original IE Bulletin 79-14 evaluation.

WPSC has developed a IEB 79-14 re-inspection program for large bore piping which meets your requirements. The program is expected to be complete by the end of the calendar year 1989.

Long term corrective action will be contained in a revision to ECD 3.2 (see NOV-1).

NOV 3. 10 CFR 50, Appendix B, Criterion X, as implemented by Wisconsin Public Service Corporation Operational Quality Assurance Program Description, Section 10.0, requires that a program for inspection of activities affecting quality be established and executed to verify conformance with procedures and drawings.

Contrary to the above, the original construction hanger QC inspection program, the IE Bulletin No. 79-14 hanger inspection program, and the hanger modification inspections performed during plant operation were not effectively executed in that, (1) no specific requirements were provided for verification of pipe support configuration, orientation or dimensions, and (2) small bore hanger detail drawings did not provide sufficient information for installation and inspection. ((305/87002-03 A and B)

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

WPSC Response

- (1) Although the program as implemented in 1979 did not contain the level of detail required today, identification of pipe support configuration and orientation were contained in our two procedures entitled "Bulletin 79-14 Inspection" and "Hanger Design Verification." Copies of these procedures were given to you at that meeting. Requirements for hanger dimensions were not included in these procedures as the intent of this program was to verify that the construction in the field was in reasonable agreement with pipe support design. (See NOV-2.)

No guidance for this activity was given by NRC other than the general information given in the Bulletin. WPSC acted in good faith when generating these procedures and based on NRC inspections which included a review of these procedures, WPSC had no reason to doubt that they didn't fully address NRC's concerns at that time.

The intent of the NRC bulletin was to reconcile the results of early construction programs with the stress analyses in order to rectify an industry-wide problem. This NOV cites the failure of the original construction program to meet the 10 CFR Appendix B, criteria X as implemented by our OQAP. We believe this to be inappropriate, since the construction activities preceded these documents.

The immediate corrective action for this NOV has been completed; more detailed procedures have been generated and are approved and have been reviewed by your inspector. We are currently applying these procedures to large bore piping at KNPP and expect to complete our inspection and reconciliation activities by the end of calendar year 1989.

Reoccurrence of violations of this type can be avoided by maintaining close communication with NRC in order to fully understand the level of detail expected for major projects.

- (2) Small bore piping will be the subject of our May 28, 1987 meeting with you.

NOV 4. 10 CFR 50, Appendix B, Criterion V, as implemented by Wisconsin Public Service Corporation Operational Quality Assurance Program Description, Section 5.0, requires activities affecting quality be implemented in accordance with procedures.

Contrary to the above, as prescribed by documented procedures, (1) valve operators were not marked on the walkdown isometric drawing, (2) as-built piping dimensions did not reflect the actual installation configuration, (3) support installation nonconformances were not identified by QA inspection, and (4) the location plans on the pipe support detail drawings were not updated to show the as-built locations. (305/87002-04)

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

WPSC Response

(1) WPSC agrees the procedures generated in response to IE Bulletin 79-14 were not executed to perfection. Much has been done to correct procedure and program design to improve the accuracy of the inspection. Improvements include step signoffs, documentation requirements including required revision to engineering drawings, interface requirements, acceptance criteria, measurement techniques, etc. To supplement the new procedures, we have also agreed to perform yearly QA audits of IE Bulletin 79-14 activities. (See Reference 2) Initial review of our internal audit findings of the 1987 refueling activities for IE Bulletin 79-14 finds that procedure adherence is good. We therefore conclude that our current program is in compliance with Section 5.0 of our OQAP Description. Revision of ECD 3.2 (see response to NOV 1) will delineate the requirements necessary to maintain continuing compliance.

NOV 5. 10 CFR 50, Appendix B, Criterion III, as implemented by Wisconsin Public Service Corporation Operational Quality Assurance Program Description, Section 3.0, requires that measures shall be established to assure that applicable regulatory requirements and design basis are specified and included in design documents; and design modifications receive design control measures commensurate with those applied to the original design.

Contrary to the above, (1) the IE Bulletin No. 79-14 reevaluation for several motor operated valves was performed without vendor information or a documented calculation to ensure that the piping analysis met Code requirements, (2) the implementation of design specifications was indeterminate due to the absence of hanger design calculations, (3) installation deviations on small bore piping were not evaluated for acceptance, and (4) there was no documented engineering justification for deviations from original piping design dimensions that were less than two pipe outside diameters. (305/87002-05 A, B, C and D).

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

WPSC Response

WPSC has taken the following steps to correct the above deficiencies:

(1) We disagree that the IE Bulletin (IEB) 79-14 reevaluation for several motor operator valves was performed without vendor information or a documented calculation. The reevaluation of valves within the scope of IEB 79-14 as defined by WPSC in 1979 was performed using vendor information. This documentation was lost. To correct this a program to generate a data base of valve weights and controls of gravity has been initiated. This data base will be maintained and will serve as design inputs for piping reconciliation and for future piping analyses.

(2) This item is written to cover an alleged violation of our Operational Quality Assurance Program Description. In fact this activity is a design construction activity which preceded this document. Additionally, it is inappropriate to cite against original construction activities for which NRC has recognized deficiencies industry wide and for which this bulletin is intended to correct.

In response, calculations will be performed to verify that large bore pipe hangers within the scope of IE Bulletin 79-14 have sufficient

load bearing capacity to accept their design loads with an appropriate safety factor.

(3) The Small bore piping program will be discussed with you in May.

(4) The present procedures for piping configuration reconciliation generally require reconciliation by dynamic analysis. However, in those cases where justification is provided in lieu of analysis the tolerances provided in the procedure will be used. These tolerances have a sound engineering basis.

Compliance will be achieved for item (1) by June 15, 1987.

Compliance for items (2) and (3) will be achieved upon completion of their respective programs.

We are in compliance with item (4).

Long term corrective action will be contained in a revision to ECD 3.1 (See NOV-1).

NOV 6. 10 CFR 50, Appendix B, Criterion XVI, as implemented by Wisconsin Public Service Corporation Operation Quality Assurance Program Description, Section 16.0, requires that for situations determined to be significantly adverse to quality, corrective measures should be taken to preclude repetition.

Contrary to the above, the NRC inspection identified many of the same problems identified in WPS Audit Report No. 79-73. These audit findings were closed on December 1979 even though many of the piping walkdown dimensional inconsistencies continued to exist (305/87002-06).

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

WPS Response

We disagree with this alleged violation. Audit 79-73 was conducted as a "special" audit, meaning it was outside the scope of a regular program audit, consequently there is no specific Quality Assurance Directives to guide an auditor. The audit was performed at the request of the project supervisor to check the adequacy of the actions taken to answer IE Bulletin 79-14.

The audit was conducted as a spot-check to see if the inspection team was on the right track. It was not intended to be an all encompassing second level review of the entire project. The auditor discovered enough discrepancies to convince him that the inspections being conducted were not adequate.

An open item was issued documenting that the inspection was inadequate. A commitment was also made at the exit interview by the licensing group to do a reinspection. After the reinspection was done, the auditor was notified to evaluate the reinspection. It was and still is normal practice for an auditor to verify to his satisfaction that discrepancies documented in an open item report are resolved.

The close-out of the subject open item is in memo format and basically says that the discrepancies the auditor found in his audit have been resolved. At the time of this audit, this method of close-out was considered adequate. If the auditor was knowledgeable enough to recognize a problem, then he should also be knowledgeable enough to recognize when the problem is resolved. It should be noted at this point that signifi-

cant improvements have been made between 1979 and the present on documenting open items and their eventual close-out. WPSC has, as stated before, improved their documentation practices, but it is still the auditor that makes the final determination whether to close an open item based on verification of corrective action.

In the case of IE Bulletin 79-14, and after resolution of audit 79-73, it was believed a reallocation of manpower to do another audit was not warranted. Therefore, a followup audit was not conducted.

In summary, Audit #79-13 was a special audit which was conducted to determine whether or not the inspections being performed for IE Bulletin 79-14 were adequate. The auditor identified several discrepancies that showed that the original inspection was not adequate. This was documented as an audit open item and a reinspection was performed to resolve it. In the auditor's opinion, this reinspection addressed his concern. Therefore, the open item was closed. A followup audit was not considered to be necessary, at that time, based on the corrective action which had been taken.