

WISCONSIN PUBLIC SERVICE CORPORATION

P.O. Box 1200, Green Bay, WI 54305



March 13, 1985

Mr. J. G. Keppler, Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Status of Corrective Actions (Boric Acid Tank Misalignment Event)

Reference: 1) Letter from C. E. Norelius (NRC) to P. D. Ziemer (WPSC)
dated January 31, 1985 transmitting Inspection Report
50-305/84-23

On January 7, 1985, an enforcement conference was held at Region III headquarters to discuss the events which occurred December 18, 1984, at the Kewaunee Nuclear Power Plant. On December 18, 1984, the automatic transfer of the suction of the safety injection pumps from the boric acid tank to the refueling water storage tank was disabled for approximately 9 hours. The contributing factors and safety significance of this event were discussed with Region III officials during the enforcement conference. Also, the corrective actions completed and the additional corrective actions to be taken were described by WPSC. The results of the NRC special inspection were provided by reference 1.

The attachment to this letter provides the status of the seven additional corrective actions described by WPSC at the enforcement conference. The attachment lists the description of each action as worded by the WPSC enforcement presentation. Following this wording is the current status of that action. We will continue to keep you apprised of our progress through periodic updates.

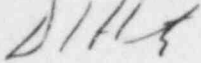
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Mr. J. G. Keppler
March 13, 1985
Page 2

Very truly yours,



D. C. Hintz
Manager - Nuclear Power

KAH/js

Attach.

cc - Mr. S. A. Varga, US NRC
Mr. Robert Nelson, US NRC

Attachment

To

Letter from D. C. Hintz (WPSC) to J. G. Keppler (NRC-Region III)

Dated

March 13, 1985

Additional Corrective Action 1:

Surveillance Procedure "Boric Acid Tank Level Instrument Test" (SP 35-147) will be revised to ensure test performance complies with plant Technical Specifications. This revision will also provide control operator sign-offs for operator manipulations and ensure adequate independent verification. This will be completed prior to the next procedure performance.

Current Status:

On January 21, 1985, surveillance procedures SP 35-147A and SP 35-147B were approved to replace SP 35-147. The following day SP 35-147A, "Boric Acid Tank 1A Level Instrument Test, 1B Logic Test," was performed with Boric Acid Tank (BAT) 1B operational. Following the completion of SP 35-147A, the other Boric Acid Tank, BAT 1A, was manually aligned for safety injection. On January 23, 1985, SP 35-147B, "Boric Acid Tank 1B Level Instrument Test, 1A Logic Test," was performed with BAT 1A operational. This test has not been required since January due to the ongoing refueling outage at the Kewaunee Nuclear Power Plant (KNPP).

Therefore, the revision of SP 35-147 allows the required surveillance to be performed in compliance with existing Technical Specifications with existing hardware. The new procedures also eliminated the need for operator manipulations as part of the performance of the procedure. In addition, SP 35-147A and SP 35-147B will be reviewed under the surveillance procedure review program established in response to additional corrective action 4. This review will be completed prior to the end of the current refueling outage and will ensure that SP 35-147A and SP 35-147B fully address the three items listed under additional corrective action 4.

Mr. J. G. Keppler
March 13, 1985
Page 2

Additional Corrective Action 2:

A review and evaluation of the current safety injection system hardware and technical specifications will be performed and modifications will be made if needed to minimize the difficulty in testing with one Boric Acid Tank operable and thus minimize the chances of error. This is expected to be completed prior to the end of the 1985 refueling/maintenance outage.

Current Status:

A review and evaluation of the current safety injection system hardware and technical specifications has been performed. No changes to the hardware or technical specifications have been identified at this time. The revision of surveillance procedure 35-147 has minimized the difficulty in testing the boric acid tank level transmitters with the other tank still operable and therefore has minimized the chances for error.

While this specific corrective action has been addressed, the technical specification review initiated by this corrective action is still ongoing. This evaluation is now addressing changes outside the original scope of this corrective action. Of course, should any modifications be deemed necessary, the NRC will be notified through the technical specification revision process. This corrective action is considered complete.

Additional Corrective Action 3:

The Control Room SI Ready Status Panel operation will be modified. The need for a modification was identified in the Control Room Design Review and an expedited priority will be assigned to this modification. Maintenance or other similar changes will also be made on an interim basis, until the permanent modification is implemented.

Current Status:

In response to this additional corrective action, WPSC has contracted a consultant to perform an evaluation of the SI Ready Status Panel and the control room annunciator and panel system as a whole. This evaluation will identify modifications that address the concerns of the Control Room Design Review and this additional corrective action. As stated in the cover letter to this attachment, further status updates are planned. Through these updates, we will keep you apprised of our progress.

Interim changes to this panel proved to be much less effective than anticipated at the time of the enforcement conference. The architect/engineer for the Kewaunee Nuclear Power Plant, along with WPSC nuclear personnel, performed an evaluation of the existing panel. In addition, field modifications were attempted on the panel itself. The results indicated that interim changes would not be able to provide an appreciable improvement in the contrast between the "DIM" and "BRIGHT" states of the windows. The only effective solution is the redesign of the panel mentioned in the preceding paragraph. A high priority will be assigned to the modification that affects this panel. In the interim, normal maintenance will continue to be performed on this panel as is done on all panels in the attempt to keep the panels as effective as possible.

Additional Corrective Action 4:

A review of all plant Surveillance Procedures will be performed, specifically addressing:

- a) compliance with plant Technical Specifications during test performance,
- b) ensuring that adequate provisions for independent verification of safety-related manipulations are included, and

- c) ensuring provisions for operator signoffs if operator manipulations of equipment are required.

This review will start immediately and be completed by July 1, 1985.

Current Status:

A committee of 10 individuals have been established to perform a review of all plant surveillance procedures. The review specifically addresses the three items listed in the corrective action statement and is currently in progress.

The committee consists of four senior reactor operators (SRO), a former SRO with an engineering degree, and five shift technical advisors (STA) with degrees in various engineering fields. The review committee draws from the operations, maintenance, plant technical support, nuclear services, and nuclear licensing and systems groups. In addition, the individual that has been assigned to assist the I&C group in response to additional corrective action 5 is a member of this committee. The makeup of the committee allows each procedure to be reviewed by an individual with an engineering degree and STA background and an individual with SRO knowledge.

The process of reviewing all plant surveillance procedures (SP) begins with the assignment of the SP to someone independent of the group responsible for performance of the procedure. The initial reviewer performs a review of the SP, ensuring the procedure addresses the three items listed in the corrective action statement. The second review is performed by a reviewer with a Senior Reactor Operator license. Both reviews are documented and all recommendations are passed on to the review coordinator. The review coordinator then ensures that all reviews and recommendations are consistent. Finally, the recommendations

are forwarded to the appropriate plant group supervisor for resolution. Any conflicts between the reviewers' recommendations and the appropriate plant group supervisor's implementation will be resolved by the Plant Operations Review Committee. In all, at least four individuals are involved in the review process for each SP.

Every SP has been assigned to its initial reviewer. Currently, the initial and SRO reviews are in progress. Also, monthly status meetings are planned beginning in March. We will keep you up-to-date on the progress of this review through future status updates.

Additional Corrective Action 5:

A person with operational knowledge and technical specification familiarity will be assigned to assist the I&C group in procedure review.

Current Status:

As mentioned in the status of additional corrective action 4, personnel with senior reactor operators (SRO) licenses are participating in the review of all plant surveillance procedures. A plant senior reactor operator is performing this SRO review for Instrument and Control (I&C) surveillance procedures. Following the completion of additional corrective action 4, he will continue to assist the I&C group in the procedure review process. This will provide the I&C group with the operational knowledge and technical specification familiarity necessary to ensure that high quality I&C procedures are maintained. This corrective action is considered complete.

Additional Corrective Action 6:

Reportability requirements will be reinforced with Shift Supervisors, Control Room Supervisors and Shift Technical Advisors, by further discussions stressing conservatism in the reporting requirements. This will be completed by February 15, 1985.

Current Status:

In response to this corrective action, the plant Technical Support Staff prepared a presentation highlighting the reportability requirements and emphasizing conservatism in reporting requirements. This presentation was provided to each Shift Technical Advisor by February 5, 1985. Individuals with an active Senior Reactor Operator license on the KNPP received the presentation by February 15, 1985. This corrective action is considered complete.

Additional Corrective Action 7:

An independent review by the corporate technical review group has been initiated. This review will specifically look at plant incidents that are related to personnel errors, experience level of the personnel involved, root causes of the errors, and corrective actions taken.

Current Status:

A technical review team of four individuals was created in response to the events of December 18, 1984, to assess plant incidents related to personnel error. The team provided a preliminary report for the enforcement conference based on their initial perceptions of available data. Since that time, the team has continued collecting data from 173 incident reports related to personnel error that have been written since 1973 at the Kewaunee Nuclear Power Plant. These incidents have been categorized as personnel error by QA. A computer data base has been established to facilitate data sorting and trending. The results and recommendations of the technical review will be incorporated into a final report which is tentatively scheduled for completion in May, 1985.