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SUBJECT: Responds to NRC 910510 ltr re violations noted in insp rept 50-305/91-07.Corrective actions:made significant revisions to procedure to clarify test method,acceptance criteria & threshold.

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June 17, 1991

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Inspection Report 50-305/91-007 (DRP)

Reference: 1) Letter from E.G. Greenman (NRC) to K.H. Evers (WPSC) dated May 10, 1991.

The attachment to this letter provides our thirty-day written response to the Notice of Violation identified in Reference 1. This letter is being provided on June 17, 1991 as discussed with R. C. Knop of NRC Region III.

In addition to the response to the Notice of Violation, you requested that Wisconsin Public Service Corporation (WPSC) address the concerns outlined in your cover letter of Reference 1. WPSC acknowledges the fact that Surveillance Procedure (SP) 06-077, "Main Steam Safety Valve Test," did not clearly define the test acceptance criteria. Also the basis for the testing methodology was not well documented. As described in the attached response to the violations, we have made significant revisions to the procedure to clarify the test method, the acceptance criteria, and the threshold at which generation of a Surveillance Procedure Exception Report (SPER) and Incident Report generation is warranted. Our evaluation has concluded that the major cause of the violations referenced in this inspection report were procedural inadequacies and not personnel failure to follow procedures. WPSC management recognizes the need to provide well written and well defined procedures and has ongoing activities to improve procedure format and content in all areas. These activities and the specific corrective actions as detailed in the response to each violation should prevent future violations in this area.

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Two minor areas of the inspection report merit clarification. During the inspection period the resident inspectors presented to the plant staff their concerns regarding recent testing of the main steam safety valves. An immediate investigation was initiated to validate these concerns. Following this investigation a SPER and an Incident Report were initiated to document the resolution of this issue. Although the resident inspectors were kept informed of the results of our investigation, the fact that a SPER and IR were issued following the initial investigation was not conveyed to them; this resulted in a false impression that WPSC was reluctant to initiate a SPER or an Incident Report. WPSC immediately recognized the fact that in order to resolve the inspectors' concerns and support any revisions to the procedure acceptance criteria, an analysis would be required. Previous experience and analysis had indicated that small changes in set pressure do not have a significant effect on the accident analysis conclusions. Since the plant was in a refueling shutdown with unit startup not scheduled to occur for a number of weeks, there was clearly no immediate safety concern. WPSC utilized significant utility and vendor resources to perform the analysis necessary to support the investigation. WPSC personnel addressed the concerns in a thorough and cautious manner to ensure that all aspects of this issue were properly addressed. The extensive WPSC effort necessary to resolve this issue prior to startup was an indication of the continuing WPSC practice of being responsive to NRC concerns.

On page 7 of the inspection report, during discussion of the WPSC overtime policy, the following statement appears; "These guidelines include administrative time (such as shift turnover) and official travel." Based on subsequent discussions with the Senior Resident Inspector it is understood that the overtime limits stated in ACD 2.15 exclude administrative time and official travel.

Lastly, we appreciated the opportunity during the week of June 3 to meet with Mr. Knop of the Region III office to discuss this response and our evaluation of each of the violations. In our view these types of meetings improve and strengthen communications between licensees and NRC Region III personnel. We support the continuation of these periodic interfaces.

If you have any questions concerning this response, please contact a member of my staff.

Sincerely,

for K. H. Evers
Manager - Nuclear Power

DSN/mjm
Attach.
cc - Mr. Patrick Castleman, US NRC
US NRC, Region III

LIC\NRC\N488A

Attachment

To

Letter from K.H. Evers (WPSC) to Document Control Desk (NRC)

Dated

June 17, 1991

Notice of Violation #1

Kewaunee Nuclear Power Plant (KNPP) Technical Specification 6.8 requires that activities affecting nuclear safety shall be accomplished in accordance with written procedures. The Wisconsin Public Service Corporation (WPSC) operational quality assurance program states that hold points are a means of verifying the conformance of an activity to specified criteria at critical points in that activity, and that such verification of conformance shall be performed by individuals not directly responsible for performing the work being verified.

Contrary to the above, on March 9, 1991, during the performance of surveillance procedure (SP) 06-077, "Main Steam Safety Valve Test," the hold point inspections required by the SP were performed by an individual directly responsible for performing the work in that the quality control (QC) technician assigned to verify the hold points for steam generator safety valve SD-1A1, participated in the conduct of the SP. Specifically, the QC technician obtained the steam generator pressure data used in the test and directed the activities of the test performers.

This is a Severity Level IV violation (Supplement 1).

WPSC Response

WPSC acknowledges the fact that the site Quality Control (QC) personnel became more involved with the work being performed than may be appropriate. We do not feel that there was any intentional failure to perform a hold point; however, we recognize the need for independence on the part of the QC inspectors. The successful operation of the Kewaunee Nuclear Power Plant is based on the team approach and sense of ownership and it is our philosophy to maintain quality control personnel involvement through meaningful discussions and interface during the work process. We will however emphasize the need to remain independent and evaluate the work from a quality perspective. WPSC will mandate less direct participation by the QC inspectors and strengthen administrative controls in this area.

QC supervision will hold a meeting with the QC personnel to review the applicable requirements of the Operational Quality Assurance Program and to emphasize that QC inspectors should not participate in the work activity to the extent that they begin to have direct responsibility for the area being inspected. We expect these actions to be completed by August 30, 1991.

Notice of Violation #2

KNPP Technical Specification 6.8 requires that activities affecting nuclear safety shall be accomplished in accordance with written procedures. KNPP ACD 2.16, "Incident Report," requires that an incident report shall be initiated for out-of-tolerance conditions which would result in a setpoint specified in the KNPP USAR being exceeded. KNPP USAR provides performance criteria for the steam generator safety valves, namely, that combined relieving capacity of all ten valves is 7,765,000 pounds mass of steam per hour at 1160 psig.

a. Contrary to the above, on April 16, 1990, while performing SP 06-077, "Main Steam Safety Valve Test," the licensee reset the lift setpoint for steam generator safety valve SD-1A5 at 1130 psig, outside the acceptance criteria of 1107-1127 psig specified in SP 06-077. This 1130 psig setpoint resulted in SD-1A5 being able to achieve full flow relief capacity at 1163 psig, a pressure which excceded the USAR full flow relief capacity pressure of 1160 psig. No incident report was initiated in response to this out-of-tolerance condition.

b. Contrary to the above on March 9, 1991, while performing SP 06-077, the licensee identified that the as-found lift setpoint for steam generator safety valve SD-1A1 was 1128 psig, 8 psig above the setpoint tolerance specified in the surveillance procedure. This value would result in the valve being able to attain its full flow relief capacity at 1161 psig, a pressure which exceeded the USAR full flow relief capacity pressure of 1160 psig. No incident report was initiated in response to this out-of-tolerance condition.

This is a Severity Level IV violation (Supplement 1).

WPSC Response

WPSC feels it is important to clarify the events in example b associated with the as-found setpoint of 1128 psig for valve SD-1A1 during March of 1991. Step 6.5 and 6.6 of SP 06-077 (Rev. J) provided procedural guidance regarding actions to be taken if the measured lift pressure was or was not within the required tolerance respectively. If the first lift was within the stated tolerance, the lift was considered successful and no additional testing of this particular valve was required. However if the first lift was not within the tolerance, a second and third lift of the same valve should be performed. If the third lift was not within tolerance, an Exception Report and Work Request were required to be written. In this particular case, the first lift of valve SD-1A1 was not within tolerance however the next two lifts were considered within tolerance. Therefore, by the surveillance procedure guidance, no SPER was necessary. Also, basis for the acceptance criteria in SP 06-077 Rev. J was not well defined, therefore determining valve failure was somewhat subjective.

The lack of clear guidance in SP 06-077 resulted in the failure to initiate a SPER or Incident Report as appropriate. The guidance in the procedure indicated that a SPER need be generated if the third lift failed. The inference is that out of tolerance conditions on the first lift need not be evaluated nor documented on a SPER. This is clearly not the intent. An incident report should be written in accordance with ACD 2.16 for a failure of safety-related equipment. The failure to clearly define the acceptance criteria made it difficult to define valve failure. The lack

of guidance regarding the basis for the acceptance setpoint ranges and the testing methodology utilized in this procedure resulted in failures to initiate these reports when required.

WPSC has revised SP 06-077 to clearly define setpoint acceptance ranges and has documented the analysis supporting these values. In addition the procedure has been clarified to include the values at which a SPER needs to be written. The procedure also clearly defines the value at which a valve test must be considered a failure. These revisions will ensure that appropriate evaluation of as-found and as-left setpoints are conducted and that such evaluations are properly documented.

Notice of Violation #3

10 CFR 50.59 requires licensees to perform written safety evaluations to document that changes to the facility as described in the safety analysis report do not involve an unreviewed safety question. The KNPP USAR states that the combined relief capacity of all ten steam generator safety valves is 7,765,000 pounds mass per hour at 1160 psig.

Contrary to the above, on April 16, 1990, the licensee changed the lift setpoint of steam generator safety valve SD-1A5 from a range of 1107-1127 psig as specified in SP 06-077 to 1130 psig, a value which would result in the valve being able to attain its full flow relief capacity at 1163 psig. No safety evaluation was performed to determine if this elevation of the maximum relief capacity of the steam generator safety valves would result in an unreviewed safety question.

This is a Severity Level IV violation (Supplement 1).

WPSC Response

The as-left setpoint of 1130 psig for valve SD-1A5 was documented on a Surveillance Procedure Exception Report (SPER). The evaluation of the SPER acknowledges that the setpoint range in SP 06-077 is 1107-1127 which is conservative in respect to the code allowable for a valve that is stamped/rated at 1127 psig. The reviewer concluded that since the as-left value was within 1% of the setpoint (1127) the as-left setpoint was acceptable because it was well within the ASME Code acceptance range. The reviewer did not recognize that although the as-left value is acceptable by ASME Code the as-left value must still support the USAR assumptions.

This violation is based on the fact that the USAR states that the combined capacity of all ten steam generator safety valves is 7,765,000 pounds mass per hour at 1160 psig. The NRC inspector concluded that without further analysis to support full relief capability at greater than 1160 psig the accident analysis assumes full lift of all valves at 1160 psig.

WPSC has performed analysis to support as-left values in excess of the acceptance criteria specified in Rev. J of SP 06-077. The as-left value of 1130 psig for valve SD-1A5 was determined to be of no safety significance. The procedure has been revised to clarify the acceptance criteria for the as-found setpoints as well as the as-left setpoints. A section has been added to the procedure specifically addressing the resetting (as-left) of safety valves.

In addition to the clarifications presented in the revised procedure, WPSC has also drafted revisions to the KNPP Technical Specifications basis and the KNPP USAR to better define the design and analysis assumptions associated with the steam generator safety valve setpoints. The USAR revision will be completed by July 22, 1991. The change to the technical specification basis will be submitted to the NRC by August 30, 1991.

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