

December 14, 2004

MEMORANDUM TO: Darrell J. Roberts, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: G. Edward Miller, Project Engineer /RA/
Project Directorate I, Section 2
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: HOPE CREEK GENERATING STATION, FACSIMILE TRANSMISSION,
DRAFT REQUEST FOR ADDITIONAL INFORMATION (RAI) TO BE
DISCUSSED IN AN UPCOMING CONFERENCE CALL (TAC
NO. MC5173)

The attached draft RAI was transmitted by facsimile on December 14, 2004, to Mr. Michael Mosier, PSEG Nuclear, LLC (PSEG). This draft RAI was transmitted to facilitate the technical review being conducted by the staff and to support a conference call with PSEG in order to clarify certain items in the licensee's submittal. This draft RAI is related to PSEG's submittal dated December 1, 2004, regarding an application requesting approval of a proposed alternative to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code requirements in the repair of the N2K reactor vessel nozzle. Review of the RAI would allow PSEG to determine and agree upon a schedule to respond to the RAI. This memorandum and the attachment do not convey a formal request for information or represent an NRC staff position.

Docket No. 50-354

Enclosure: Draft Request for Additional Information

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DRAFT REQUEST FOR ADDITIONAL INFORMATION

REGARDING AMENDMENT REQUEST TO

PERFORM NON-ASME CODE REPAIR

HOPE CREEK GENERATING STATION

DOCKET NO. 50-354

By letter dated December 1, 2004, PSEG Nuclear, LLC (PSEG) submitted relief request HC-RR-I2-W01 for the Hope Creek Generating Station (Hope Creek), seeking U.S. Nuclear Regulatory Commission approval of proposed alternative. Specifically, the proposed change would allow an alternative to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) requirements in the repair of the N2K reactor vessel nozzle. The NRC has developed the following draft questions during its review of the application.

1. In the enclosure of your submittal, you stated that the root cause evaluation has not been completed. Describe the plan and schedule for completion of your root cause evaluation?
2. When was hydrogen water chemistry and NobleChem implemented at Hope Creek? In view of the detected flaw at the subject weld (N2K), discuss its effectiveness in mitigating IGSCC initiation and propagation.
3. Provide ultrasonic testing (UT) inspection history of weld N2K. Was IGSCC detected in any other dissimilar metal welds at Hope Creek?
4. You stated that N2K weld was examined in part in accordance with Risk Informed classification RA. Describe the Risk Informed classification RA and the inspection frequency associated with this weld classification.
5. You stated in page 3 of your submittal and page 4 of its attachment that an Alloy 152 electrode may also be utilized for local repairs to the underlying weld metal. Please confirm that ASME Code Case-638 will not be applied to the repair welding using Alloy 152 since the subject Code Case is limited to the welding using gas tungsten arc welding (GTAW) temper bead technique.
6. Clarify the acceptance criteria in ASME Section XI Nonmandatory Appendix P that you propose to use for UT examination of weld overlay. It should be noted that Appendix P has not been incorporated in ASME Code nor endorsed by NRC.
7. For the relief from system hydrostatic test, you referenced Code Case N416-1. Please confirm that you will not take any exception to the subject Code Case such as in item (b) which states that NDE is required to be performed in accordance with that of the applicable Subsection of the 1992 Edition of Section III.

8. In support of the exception to Code Case-638 Paragraph 1.0(a) regarding the maximum allowable weld area, you referenced the conclusion of an EPRI Technical Report 1008454. Please provide a summary description of how the conclusion was reached including any testing data or analytical evaluation being performed.
9. To support the exception to Code Case-638 Paragraph 2.0(i) which requires that the average lateral expansion of the three heat affected zone (HAZ) impact tests shall be equal to or great than the average of the three unaffected base metal tests, please provide the following additional information:
 - a) What is the RT_{NDT} value for the N2K nozzle base material?
 - b) Provide justification for your assumption that the nozzle base material initial RT_{NDT} value is consistent with the initial RT_{NDT} value of the low alloy steel material used in the core region pressure boundary. Is there test data to support the assumption?
 - c) Provide reasons for why the referenced requirement in Paragraph 2.0(i) can not be met. Please identify any precedents of this exception that NRC has approved.
10. In page 8 of the Attachment under IWA-4610(a), you stated that AREVA Framatome ANP welding procedure qualification have been successfully performed using Alloy 52 Alloy welds on P-No. 3 Group No. 3 base material using the ambient temperature temper bead technique. However, in your submittal you are seeking exception to Code Case N-638 Paragraph 2.0(i) because the results of welding procedure qualification failed to meet the requirement specified in the subject paragraph. Please clarify this apparent discrepancy.
11. Provide technical justification to support the acceptance of not performing UT of the band area as required in Code Case-638 Paragraph 4.0(b).
12. Describe how the contact pyrometer will be calibrated in the temperature range that it will be used. If it has already been calibrated and its accuracy demonstrated, describe the results.
13. You requested the approval of the proposed alternative for the remainder of the plant life. The current staff position is that the staff will approve such alternative no longer than the remainder of the current ISI 10-year interval because the need for the proposed alternative may change with the improvement of the technology and the change of the regulation including ASME Code. Please provide a justification of why the requested duration is appropriate or revise the requested duration to the end of the next 10-year interval