PSEG Nuclear LLC
P.O. Box 236, Hancocks Bridge, New Jersey 08038-0236

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PSEG
Nuclear LLC

LRN-03-0344
LCR H02-013

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

HOPE CREEK GENERATING STATION – REQUEST FOR ADDITIONAL INFORMATION ON REACTOR PRESSURE VESSEL MATERIAL SURVEILLANCE PROGRAM
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

Reference: Letter LR-N02-0319, *Request For Change To Reactor Material Surveillance Program*, dated December 23, 2002

On December 23, 2002, PSEG Nuclear LLC (PSEG) submitted the referenced request for a change to Hope Creek Updated Final Safety Analysis Report (HCUFSAR), Section 5.3, "Reactor Vessel", and Appendix 5A, "Compliance with 10CFR50, Appendix G and H."

In a letter dated July 16, 2003, PSEG received a request from the NRC for additional information regarding reactor pressure vessel material surveillance program at Hope Creek Generating Station. Attachment 1 contains PSEG's responses.

If you have any questions or require additional information, please contact Mr. Michael Mosier at (856) 339-5434.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Executed on 08/14/03

D. F. Garchow
Vice President – Projects & Licensing

Attachment

A053
A008

C: Mr. H. Miller, Administrator – Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Richard Ennis, Project Manager – Hope Creek
U. S. Nuclear Regulatory Commission
Mail Stop 08B3
Washington, DC 20555-0001

USNRC Senior Resident Inspector – Hope Creek (X24)

Mr. K. Tosch, Manager IV
Bureau of Nuclear Engineering
PO Box 415
Trenton, New Jersey 08625

HOPE CREEK GENERATING STATION – REQUEST FOR ADDITIONAL INFORMATION REGARDING REACTOR PRESSURE VESSEL MATERIAL SURVEILLANCE PROGRAM

NRC Question 1:

Attachment 1 of your application dated December 23, 2002, stated that in a letter dated March 29, 2002 (ADAMS Accession No. ML021010214), PSEG committed to update fluence calculations in accordance with Regulatory Guide (RG) 1.190 by May 1, 2005. The commitment in the letter dated March 29, 2002, reads as follows:

> Based on approval of this request, new pressure-temperature limit curves will be submitted as part of the Hope Creek extended power uprate utilizing the methodology of Regulatory Guide 1.190. Submittal of the technical specification changes are targeted for May 2003 with implementation of the extended power uprate in the Fall 2004 outage.

In addition, PSEG's letter dated May 29, 2003 (ADAMS Accession No. MI-031620164) stated that the extended power uprate submittal is scheduled for September 2003. Please clarify the date of the commitment to update the fluence calculations in accordance with RG 1.190.

Response:

The current pressure-temperature limits, Technical Specification 3 /4.4.6, issued with Amendment 139 for Hope Creek are valid through Cycle 12. Cycle 12 ends in Fall 2004, requiring new pressure-temperature limits. It was originally planned that power uprate would also be implemented at the same time. However, due to changes in the review cycle, power uprate may not occur until after the Fall 2004 refueling outage. Therefore, based on this revised implementation schedule, the pressure-temperature limits update based on Regulatory Guide (RG) 1.190 will be decoupled from the power uprate submittal. The pressure-temperature limits based on RG 1.190 will be submitted by December 31, 2003. The new limits, while based on RG 1.190, will also include the effects of increased power level associated with power uprate.

NRC Question 2:

The NRC staff's letter dated February 1, 2002 (ADAMS Accession No. ML020380691), and the associated Safety Evaluation, provided the staffs approval of the BWRVIP ISP and specified the conditions for BWR licensees' participation in the ISP. The staff concluded that the BWRVIP ISP is acceptable for BWR licensee implementation provided that the licensee use one or more compatible neutron fluence methodologies, acceptable to the NRC staff to determine surveillance capsule and RPV neutron

fluences. The NRC's letter dated February 1, 2002, also stated that licensees who elect to participate in the program will need to submit a license amendment request to incorporate the ISP into the facility licensing basis. Attachment 2 of your application dated December 23, 2002, provided the proposed changes to the Hope Creek UFSAR that would be incorporated as a result of the amendment request. However, the proposed changes do not show the methodology that will be used. The UFSAR markup should be revised to reflect that the methodology used to perform the fluence calculations will be consistent with RG 1.190.

Response:

The markup of Section 5.3.1.6.2 of the Hope Creek Generating Station UFSAR has been revised to include reference to RG 1.190 for future fluence calculations. Revised page 5.3-11 is attached.

Replace with Insert 1

The withdrawal schedule of the three sets of specimens in the reactor is planned as follows:

1. The first set at the 30° azimuth was withdrawn during the 5th refueling outage.
2. The second set will be withdrawn when its exposure corresponds to fifteen effective full power years or at the time when the accumulated neutron fluence of the capsule corresponds to the approximate EOL fluence at the reactor vessel inner wall location, whichever comes first. This withdrawal will be scheduled for the nearest vessel refueling date based on the above criteria.
3. The third set will be held to the EOL (not less than once, nor more than twice the peak EOL vessel fluence at the vessel inside surface). This capsule may be held without testing following withdrawal.

A discussion of the extent of compliance to 10CFR50, Appendix H is provided in Appendix 5A.

5.3.1.6.2 Neutron Flux and Fluence Calculations

A description of the methods of analysis is contained in Sections 4.1.4.5 and 4.3.2.8. Future neutron fluence calculations will be performed in accordance with Regulatory Guide 1.190.

5.3.1.6.3 Predicted Irradiation Effects on Vessel Beltline Materials

Estimated maximum changes to initial RT_{NDT} and upper shelf