AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

www.exeloncorp.com

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An Exelon Company

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May 25, 2006
2130-06-20338

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

Oyster Creek Generating Station
Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Technical Specification Change Request No. 328 – Response to Request for Additional Information Concerning a Revision to Surveillance Requirements for Testing of Main Steam Line Electromatic Relief Valves

Reference: AmerGen letter 2130-05-20041 dated October 18, 2005, "Technical Specification Change Request No. 328 - Modify Surveillance Requirements for Testing of Main Steam Line Electromatic Relief Valves"

In the Referenced letter, AmerGen Energy Company, LLC (AmerGen) requested a change to the Technical Specifications included in Oyster Creek Operating License No. DPR-16. The proposed change modifies Technical Specifications (TS) Surveillance Requirement (SR) 4.4.B.1 to provide an alternative means for testing the main steam Electromatic Relief Valves (EMRVs). These valves provide overpressure protection and automatic depressurization relief functions. The proposed change will allow demonstration of the capability of the valves to perform their function without requiring that the valves be cycled with steam pressure while installed.

Attached is our response to a request for additional information concerning this Technical Specification Change Request.

If any additional information is needed, please contact Tom Loomis at (610) 765-5510.

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

Respectfully,

5/25/06
Executed On

Pamela B. Cowan
Director - Licensing & Regulatory Affairs
AmerGen Energy Company, LLC

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Enclosure: (1) Response to Request for Additional Information

cc: S. J. Collins, Administrator, USNRC Region I
G. Edward Miller, USNRC Project Manager, Oyster Creek
M. S. Ferdas, USNRC Senior Resident Inspector, Oyster Creek
Director, Bureau of Nuclear Engineering, NJDEP
File No. 05036

ENCLOSURE 1

TECHNICAL SPECIFICATION CHANGE REQUEST No. 328

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

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Reference: AmerGen letter 2130-05-20041 dated October 18, 2005, "Technical Specification Change Request No. 328 –Modify Surveillance Requirements for Testing of Main Steam Line Electromatic Relief Valves"

Question:

The proposed Technical Specification change would eliminate on-line testing of the Electromatic Relief Valves (EMRVs) at Oyster Creek and proposes that surveillance be performed during maintenance activities every 24 months. In the past, the on-line testing provided more frequent verification of the EMRV safety function during plant operation. Recent operating experience at the Quad Cities plant indicates that significant degradation of EMRVs and their actuators has occurred after only a few months of plant operation, due to flow-induced vibration of the main steam lines. Some parts of the EMRVs and their actuators were found degraded, such that they would not have performed their safety function. The Quad Cities EMRVs and actuators have been stiffened and hardened to withstand the operational vibration, have been dynamically tested for the operational vibration conditions, and have been instrumented to measure the vibration within the actuators. Please provide a discussion of the applicability of the Quad Cities operating experience to Oyster Creek and the ability of the Oyster Creek EMRVs to remain functional for the proposed 24-month period between surveillances. Please include a comparison of the vibration levels, an evaluation of the need to similarly modify the EMRVs and actuators, an evaluation of the need to similarly instrument them, and a discussion of relevant operating experience.

Response:

The failures of the Quad Cities Electromatic Relief Valve solenoid actuators have been attributed to Main Steam Line vibration levels exceeding the design capabilities of the components during operation at Extended Power Uprate (EPU) levels. The root cause was determined to be a failure to correct the source of the steam line vibrations first identified in 1978. EPU operation increased the vibration and this induced the ERV failures.

These findings were communicated via internal Operating Experience to Oyster Creek Generating Station.

In review of the root cause, Oyster Creek has not been licensed to operate in EPU conditions similar to Quad Cities that could result in changes to the main steam line vibrations. The Electromatic Relief Valves (EMRVs) at Oyster Creek are not currently monitored for vibration levels. The solenoid actuator failures identified at Quad Cities do not directly apply to the deletion of the on-line testing requested by this Technical Specifications Change Request. The on-line testing, which is performed prior to exceeding 5% power during plant startup, would not identify the failures experienced at Quad Cites.

A review of Oyster Creek Corrective Action Reports since 2000 has not identified any vibration issues associated with chronic EMRV degradation.

Oyster Creek actuators are rebuilt during refueling outages. During this activity an as-found actuation test and resistance measurement is performed, visually verifying the smooth travel of the plunger. The plunger, plunger head, bolt, washer, nut, and sleeve bushing are inspected for any signs of mechanical stress. Each spring bracket and its brass guide sleeve are inspected for signs of extensive rubbing, wear and/or looseness and the spring guide posts and base plates are inspected for signs of weld cracks or guide posts looseness, ridges, grooves, or burrs.

In summary, Oyster Creek has not been licensed to operate in extended power uprate conditions that would increase main steam line vibrations and possibly exceed EMRV design capabilities. The EMRVs at Oyster Creek are not currently monitored for vibration levels. A review of Corrective Action Reports since 2000 has not identified any vibration induced degradation that would prevent the Oyster Creek EMRVs from remaining functional for the proposed 24-month interval between surveillances. This six (6) year period includes three refueling outages and is considered relevant for this evaluation. No significant wear has been found on the EMRV actuators that would indicate Oyster Creek EMRVs are experiencing degradation similar to the Quad Cities EMRVs.

The need to instrument the EMRVs to determine current vibration levels was not considered necessary based on a review of Corrective Action Reports since 2000. The need to modify the Oyster Creek EMRVs to address excessive vibration levels was not deemed necessary based on the review of the Corrective Action Reports.