

AmerGen Energy Company, LLC
200 Exelon Way
Suite 345
Kennett Square, PA 19348

www.exeloncorp.com

2130-02-20217
August 12, 2002

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

Subject: Radiological Consequence Analysis For Control Room Operators At Oyster
Creek Generating Station (TAC No. MA3465)

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

This letter completes the AmerGen Energy Company, LLC (AmerGen) commitment contained in AmerGen letter to the NRC dated February 9, 2001 (2130-01-20023) to evaluate the effect of polyvinyl chloride (PVC) electrical cable insulation installed inside containment on the suppression pool water pH post-accident. This evaluation was to determine if the portion of the elemental iodine resulting from pool re-evolution, previously described in AmerGen letter to the NRC, dated January 12, 2001 (2130-00-20309), would be affected by a lowering of the pH since this potentially would impact the calculated dose consequences.

AmerGen has performed an evaluation and determined that credit for the sodium pentaborate injected by the Standby Liquid Control (SLC) System as part of the expected operator response to a Design Basis Loss-of-Coolant Accident (LOCA) with core damage provides a sufficient means of buffering the suppression pool. Buffering the suppression pool prevents the pH from falling to a value less than 7 during the 30-day control room dose calculation period.

The mass of sodium pentaborate injected is 1460 lbm (1125 moles). Conservatively ignoring the expected chemical form of fission product cesium introduced to the containment at the same time as the radioiodine, which is likely to be a base or a buffer, the worst-case suppression pool pH at 30 days, accounting for the effect of polyvinyl chloride electric cable inside the primary containment, is 7.9. This is substantially above the pH value of 7 at which re-evolution of radioiodine might become a concern. This evaluation is documented in Polestar Applied Technology, Inc. Calculation No. PSAT 05201H.05, Revision 2, "Suppression Pool pH for OCNGS Control Room Habitability."

A003

The control room radiation dose analysis previously submitted in AmerGen letter to the NRC, dated January 12, 2001 (2130-00-20309) included a small contribution from the late re-evolution of radioiodine. Therefore, this dose remains conservative given the finding of this pH re-examination that no radioiodine re-evolution will occur.

No new regulatory commitments are established by this submittal. If any additional information is needed, please contact David J. Distel at (610) 765-5517.

Sincerely,



Michael P. Gallagher
Director, Licensing & Regulatory Affairs
Mid-Atlantic Regional Operating Group

Cc: H. J. Miller, Administrator, USNRC Region I
P. S. Tam, USNRC Senior Project Manager, Oyster Creek
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek
File No. 96059