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

PSEG Nuclear LLC

LR-N10-0076

MAY 25 2010

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

Hope Creek Nuclear Generating Station
Independent Spent Fuel Storage Installation
NRC License No. NPF-57
NRC Docket Nos. 50-354 and 72-048
NRC Part 72 Certificate of Compliance 1014

Subject: Response to NRC's Request for Disposition of Non-Helium Leak Tested Holtec Multi-Purpose Canisters

References:
1. NRC-SFST Record of Telephone Conversation, "Follow-up Actions Regarding NRC Enforcement Discretion Letter No. EA 09-190," dated December 1, 2009
2. NRC Enforcement Action 09-190, "Exercise of Enforcement Discretion – Holtec International," dated August 6, 2009, NRC Docket No. 72-1014
3. Holtec Letter to NRC, "Reply to EA-09-190," Dated September 2, 2009
4. NRC Letter to Holtec, "Response to Holtec International (Holtec) Reply to EA-09-190", Dated January 12, 2010

In a telephone conversation between the NRC Division of Spent Fuel Storage and Transportation and representatives from the Holtec Users Group (Reference 1), the NRC requested certain information from licensees pertaining to HI-STORM Multi-Purpose Canisters (MPCs) that had not been helium leak tested as described in Reference 2. PSEG Nuclear, LLC (PSEG) is submitting this letter in response to that request. PSEG has deployed a total of 12 MPC-68 canisters containing spent fuel from the Hope Creek Generating Station in HI-STORM 100S Version B overpacks at the Independent Spent Fuel Storage Installation (ISFSI). Four casks were placed at the ISFSI in late 2006 and early 2007. Eight additional casks were placed at the ISFSI in mid-2008. The eight MPC-68 canisters placed at the ISFSI in 2008 were not helium leak tested in the fabrication shop. Reponses to each item requested from licensees in Reference 1 are provided below.

1. Canister Heat Load

MPC-68 serial numbers 1021-147 through -154 were loaded with spent fuel having decay heat loads ranging from 13.6 kW to 16.2 kW. These heat loads are all below the 21 kW heat load threshold referred to in Reference 1. Therefore, no further action is required.

NMSS01

2. Radiological Monitoring

PSEG Nuclear maintains a number of Thermoluminescent Dosimeters (TLDs) around the Artificial Island site for required dose monitoring. The closest TLD to the ISFSI is identified as TLD-1S1, located just east of the ISFSI. Data has been collected from this TLD from the time before any casks were placed at the ISFSI through 2008 after 12 casks had been placed at the ISFSI. A baseline (no cask) monthly dose at this TLD location and the doses for four casks and 12 casks at the ISFSI are shown in the table below.

Year	Monthly Dose (mRad/std)
2006 (no casks)	4.18
2007 (4 casks)	4.54
2008 (4-12 casks)	4.77
2009 (12 casks)	4.81

The measured monthly dose near the ISFSI increased by 8.6 percent from having no casks at the ISFSI in 2006 to having four casks at the ISFSI in 2007. After eight more casks were added in 2008 (a factor of 3 increase in the number of casks), the measured monthly dose increased by only 6.0 percent, which is less than proportional to the increase in the number of casks. This likely is attributable to the cask arrangement on the ISFSI, which could add distance and/or self-shielding between the casks and the TLD location.

The dose data indicate a less-than-proportional increase in dose as casks are added to the ISFSI. The data provide no evidence that the eight untested MPC-68 canisters deployed at the ISFSI in 2008 are leaking. These eight MPCs were fabricated in accordance with the ASME Section III Code and the shop pressure boundary welds were non-destructively examined (including radiography) in the same manner as the first four Hope Creek MPCs and several hundred MPCs constructed for other Holtec customers in the past decade. Radiography and other non-destructive examination techniques, as well as field hydrotesting after fuel loading, make it highly unlikely that a weld flaw exists that would grow into a leakage location. PSEG is confident, based on the radiation dose data and the non-destruction examination and hydrotesting, that it is highly unlikely that any of the eight untested MPCs are leaking. Therefore, no additional dose from effluents needs to be added to the estimated direct dose calculated to demonstrate compliance with 10 CFR 72.104, as described in the PSEG 72.212 Report. The 72.212 Report is being revised to summarize this issue as described herein.

3. Corrective Action Program

PSEG entered this issue into its corrective action program to determine operability, extent of condition, and corrective actions required upon being informed that MPC-68 canisters were delivered to the site that had not been helium leak tested in the fabrication shop. The investigation revealed that eight untested canisters had been loaded and deployed at the ISFSI as discussed above. An operability evaluation was performed and, based on information supplied by Holtec in their response to the violation (Reference 3), the eight loaded canisters were deemed to be operable.

The investigation also revealed that four MPC-68 canisters delivered for use in the 2010 loading campaign at Hope Creek had not been leak tested. Administrative controls were put in place to prevent use of these canisters until such time as leakage testing was completed. The four canisters were leak tested on-site in April 2010. The results indicate that all four MPCs meet or exceed the initial fabrication leak test parameters.

There are no regulatory commitments contained within this letter. If you have any questions please contact Timothy Devik Hope Creek Regulatory Assurance at (856) 339-3108.

Respectfully,

Paul Davison

Paul Davison
VP Operations Support
PSEG Nuclear LLC

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

Mr. R. Ennis, Project Manager Salem and Hope Creek
U.S. Nuclear Regulatory Commission
One White Flint North
Mail Stop O8 B1A
11555 Rockville Pike
Rockville, MD 20852

USNRC Senior Resident Inspector – Hope Creek (X24)

USNRC Senior Resident Inspector – Salem (X24)

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

HC Commitment Tracking Coordinator (H02)