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BY FAX AND OVERNIGHT MAIL

March 3, 2000

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

Subject: USNRC Docket Nos. 72-1008 and 72-1014
TAC Nos. L22019 and L22221

Reference: Holtec Project No. 5014

Dear Sir:

The purpose of this letter is to provide the Spent Fuel Project Office (SFPO) with an updated schedule and scope description for two upcoming amendment requests for the HI-STAR and HI-STORM 100 spent fuel storage systems. We believe this information may be helpful to the SFPO in assigning technical staff resources over the next few months. In recognition of the near-term needs of our clients, we have been working for several months on the preparation of two amendment requests; one each for the HI-STAR and HI-STORM 100 systems. Consistent with SFPO's earlier direction to submit related amendments on HI-STAR 100 and HI-STORM 100 concurrently, both amendment requests will be forwarded on March 31, 2000. The proposed changes and additions in these amendment requests include:

1. Restoration of MPC-32

As you are aware, the MPC-32 basket was included in the HI-STAR 100 storage submittal through the entire review process, including two rounds of RAIs, only to be removed in the last month of the review in order to expedite the licensing process. The MPC-32 has been reviewed by all NRC technical disciplines except for the criticality evaluation related to soluble boron credit permitted under 10 CFR 72.

2. New MPC-24E and MPC-68FF

These two new MPC baskets are close variants of the approved MPC-24 and MPC-68F baskets. The MPC-24E is an optimized basket design that will allow loading of more highly enriched fuel than currently authorized for the MPC-24 and will accommodate damaged fuel assemblies. In fact, the MPC-24E is different from the previously licensed MPC-24 only with respect to the inter-cell gaps (flux traps). Therefore, the structural and thermal-hydraulic characteristics are virtually identical to

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the MPC-24. The criticality and confinement analyses, however, are substantially different. The MPC-68FF combines the thickened top portion of the MPC-68F shell with the maximized ¹⁰B loading in the Boral neutron absorbers of the standard MPC-68, to allow storage of a wide range of BWR damaged fuel and fuel debris. This change involves only the criticality discipline.

3. Generic BWR Damaged Fuel

Holtec's designers have created a damaged fuel container suitable for nearly all BWR fuel types to expand the capability of the MPC-68 to include damaged fuel and fuel debris in up to 16 fuel storage locations. The principal review disciplines affected by this proposed change are structural, criticality, shielding, and thermal.

4. PWR Fuel Control Components

In our November, 1999 amendment request that is currently under NRC review, we proposed adding Burnable Poison Rod Assemblies (BPRAs) and Thimble Plug Devices (TPDs) to the authorized contents of the HI-STAR 100 storage system. In the March 31, 2000 amendment requests, we will propose to expand the scope of non-fuel hardware authorized for loading to include Control Rod Assemblies (CRAs), Axial Power Shaping Rods (APSRs), and other similarly designed devices with different names. The principal review discipline for this scope of work is shielding.

5. Regionalized Fuel Loading

We will propose to expand the presently approved uniform loading provisions in the HI-STORM 100 CoC to include regionalized storage wherein spent nuclear fuel (SNF) with higher heat load is stored in Region 1 (the central core region of the basket) and the lower heat load SNF is stored in Region 2 (peripheral locations in the basket). Regionalized fuel loading will enable our customers to make long-range defueling plans in an informed manner while an NRC-approved methodology for handling high burnup fuel is being determined. This change will involve the shielding and thermal disciplines. At this time regionalized fuel loading will be proposed for only the HI-STORM 100 System.



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6. HI-STORM 100S

To accommodate a broader range of customer needs, Holtec has developed a shorter HI-STORM overpack, known as the HI-STORM 100S. This overpack design will accommodate the same MPCs as its previously approved cousin, the HI-STORM 100. However, a shortened overpack and a new top lid design will decrease the overall height of the system for those users who intend to perform the MPC transfer inside their Part 50 facility, where door heights can become limiting. This proposed change will involve the structural, shielding, and thermal disciplines.

Aside from the six above-mentioned items, both amendment requests will contain a small number of minor improvements resulting from lessons learned in the fabrication shop. The HI-STORM amendment request will also include those items requested for HI-STAR in November, 1999, such as the Dresden Unit 1 damaged fuel canister and thoria rod canister, and other minor fuel parameter changes.

If you have any questions or require additional information, please contact us.

Sincerely,

Approval

Brian Gutherman, PE
Licensing Manager

K.P. Singh, Ph.D., PE
President and CEO

cc: Ms. Marissa Bailey, USNRC
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