Request for Supplemental Information (non-proprietary)

By letter dated September 28, 2018, Holtec International submitted an application to the U.S. Nuclear Regulatory Commission for Certificate of Compliance No. 1040, Amendment No. 4 to the HI-STORM UMAX System, pursuant to the requirements of Part 72 of Title 10 of the *Code of Federal Regulations* (10 CFR 72).

This request for supplemental information (RSI) identifies additional information needed by the NRC staff in connection with its review of this amendment application. Each RSI below describes information needed by the staff to complete its acceptance review determination of the subject application.

Shielding and Radiation Protection

1. Provide the revised final safety analysis report (FSAR) drawings and pages from the shielding and radiation protection chapters that incorporate Version B of the closure lid.

The proposed amendment request to modify the dose rate limits and measurement location description in Section A.5.3 of the technical specifications is based on the inclusion of both the original lid design and a Version B lid design. However, the revised FSAR drawings and pages that incorporate and evaluate the dose rates associated with the UMAX for the new lid have not been provided.

This information is needed to be able to evaluate compliance with 10 CFR 72.236(d) and to ensure the proposed technical specification is appropriately based on the system design, as modified, and the analyses for the design.

2. Provide the proposed technical specification dose rate limit for the UMAX lids.

The submittal indicates that the applicant is proposing a revised dose rate limit. However, the submittal does not include a proposed technical specification change page that shows the proposed limit. Thus, it is not clear what limit is being proposed and the staff cannot determine whether or not that limit is appropriately based on the system design, as modified, and the shielding analysis for the design.

This information is needed to be able to evaluate compliance with 10 CFR 72.236(d).

3. Provide the FSAR drawings for the proposed MPC-37 Type 1 canister.

The submittal indicates that a new canister type is being added to the UMAX design. However, no drawings (neither new drawings nor revised drawings for the currently included MPC-37 canister) have been provided that describe that canister type. Thus, the staff cannot evaluate the proposed canister and whether the UMAX with the new canister has been adequately analyzed to meet the regulatory requirements in 10 CFR Part 72. Any drawings, whether new or revisions of existing drawings, should provide sufficient detail to describe the new MPC-37 Type 1 canister. If the proposed canister is to be included in a revision of the drawings for the

existing MPC-37 canister, the revised drawings should identify all the differences between the MPC-37 and the MPC-37 Type 1 canisters.

This information is needed to be able to evaluate compliance with 10 CFR 72.236.

4. Provide an evaluation of the impacts on the criticality safety analysis of the changes in design between the MPC-37 and the MPC-37 Type 1 canister.

One of the design differences involves the basket flow holes, with the periphery flow holes being closed in the Type 1 canister's basket versus open in the MPC-37 canister's basket. This difference could introduce a preferential flooding scenario that has not been considered in the criticality analysis for the MPC-37 canister. Thus, the amendment application should address the impacts of the design differences on the criticality analysis, including addressing preferential flooding, to show the Type 1 canister will remain sub-critical under all relevant configurations.

This information is needed to be able to evaluate compliance with 10 CFR 72.124 and 72.236(c).