NRC FORM 699 (9-2003) U.S. NUCLEAR REGULATORY COMMISSION

CONVERSATION RECORD

DATE: 06/11/2009

TIME: 11:00am

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	TELEPHONE NO.
Stefan Anton, Luis Hinojosa	856-797-0900

ORGANIZATION: Holtec International

SUBJECT: Shielding and Criticality RAIs for the HI-STAR 180 package application

TYPE OF CONVERSATION
- [ ] VISIT
- [ ] CONFERENCE
- [x] TELEPHONE
  - [ ] INCOMING
  - [x] OUTGOING

SUMMARY *(Continue on Page 2)*

NRC Attendees: Andrew Barto, Jeremy Smith, Pierre Saverot

The teleconference call was scheduled to allow Holtec the opportunity to discuss the shielding and criticality RAIs for the HI-STAR 180 package.

RAI 5-1: This RAI is similar to the Open Technical Issue numbered 5-3 from the previously rejected application. Staff said that it did not see any justification for the use of SAS2H/ORIGEN-S codes for high burnup fuels. Holtec explained that an evaluation of uncertainties was added to Section 5.2.3 of the SAR while section 5.4.6 provides for a comparison with other conservatisms in the analysis. Holtec also said that, like for the licensed HI-STORM 100 system, it takes a 5% penalty on heat loads and source terms. Staff said that it will take another look at section 5.4.6 of the application.

RAI 6-1: Holtec will either revise the criticality analysis results to include the reactivity effect of the potential gaps in the neutron absorber panel walls or add a bias. Staff said that RAI 6-1 is related to RAI 6-4 in the sense that even small effects need to be included to be conservative.

RAI 6-2: Holtec agrees and will provide the reference.

RAI 6-3: Staff said that this RAI was triggered by the words "control components" which "have a small if not negligible effect on reactivity". Staff is looking for clarification because control rods do have an effect on reactivity. Staff also stated that Holtec should come up with a limiting criterion to put into the CoC, e.g. a 19 cm bounding criteria. If outside the limit, the fuel will be put into a fresh fuel assembly location. Holtec agreed to provide information on a control rod inserted into the upper 19 cm of the assembly for the entire irradiation of the assembly that would show a negligible effect on reactivity.

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ACTION REQUIRED

None

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Pierre Saverot		06/11/2009

ACTION TAKEN

TITLE OF PERSON TAKING ACTION	SIGNATURE OF PERSON TAKING ACTION	DATE

CONVERSATION RECORD (Continued)

SUMMARY *(Continue on Page 3)*

RAI 6-4: Holtec agreed, said that it understood the question, and will revise the burnup credit analysis.

RAI 6-5: Holtec agreed that some text is missing in Section 6.B.3 of the application.

RAI 6-6: Holtec will revise the application to state the cycle lengths and down times assumed in the isotopic depletion analysis for burnup credit and perform a one cycle evaluation.

RAI 6-7: Holtec agreed to revise the application and discuss how uncertainties in the recorded burnup values are accounted for in the alternative burnup confirmation method.

RAI-7-2: The loading procedure will be revised to include steps related to the verification of the assembly burnup.

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