HOLTEC INTERNATIONAL

Holtec Center, 555 Lincoln Drive West, Marlton, NJ 08053
Telephone (856) 797-0900
Fax (856) 797-0909

November 19, 2013

John Goshen, P.E., Project Manager – Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety and Safeguards

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

Docket No. 72-1014
Certificate of Compliance (CoC) No. 1014

Subject: Issuance of Holtec Information Bulletin (HIB) 61

References: [1] HIB 61 Rev. 0 "Burnup and Enrichment values for Site Specific Dose Analyses"

Dear Mr. Goshen:

Recently the USNRC expressed interest in reviewing Holtec Information Bulletins (HIBs), which are principally used by Holtec to document relevant issues and events pertaining to fuel storage at nuclear plants and to communicate them to the Holtec Users' Group (HUG) members, the company's personnel, affected suppliers, and other stakeholders. To that end Holtec hereby submits the attached HIB 61 [1].

The HIBs are prepared, internally reviewed and issued expeditiously after an event is determined by the company to be significant to warrant a HIB. Events that merit a HIB may be from suggestions of HUG members, issues identified in the industry at large, or corrective action notifications under 10 CFR Parts 71, 72 or 50 licensees.

HIB 61 was issued on October 28, 2013 in response to general licensees inquiries. It provides clarification and simplifies the site boundary and CoC dose analysis.

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If you have any questions, then please contact me at (856)-797-0900 ext. 3844.

Sincerely,

Royston Ngwayah
Licensing Engineer
Holtec International

cc: (letter via email)
Michele Sampson, USNRC
Holtec Marlton
HUG Licensing Subcommittee

Enclosure 1: HIB 61 Rev. 0 "Burnup and Enrichment values for Site Specific Dose Analyses"

HSP-1003 Exhibit 7.1

HOLTEC INFORMATION BULLETIN (HIB)*

Parsing the present to protect the future

Title of the Bulletin: Burnup and Enrichment values for Site Specific Dose Analyses

CoC Holder:	Holtec International	HIB No. (sequential):	61	**Revision Log:**	Name	Date
System Name:	HI-STORM 100	Ref. Nuclear Plant:	Holtec users	Draft sent for HUG review		7/31/2013
Holtec Program No.:	5014	Period of Occurrence (m/y):	N/A	Author (Rev. 0):	SPA	10/28/2013
CoC/Amendment No. (if applicable):	N/A	Affected Users:	All	Reviewer (Rev 0):	RRN	10/28/2013
Affected Component(s):	MPC	Affected equipment or part:	MPC fuel basket			
Urgency Level*:	4	Event Category**:	H			
Probable Cause***	N/A	72.48 Applicable (Yes or No) If yes, then list 72.48#.: N/A	No			
Holtec's Corrective Action # if Applicable:	QI-1353	10 CFR Part 21 Applicable (Yes or No) If yes, Date NRC Informed:	No			

Legend

* (1) High (Immediate attention required by user); (2) Medium (Action by users should occur within 10 days of receipt); (3) Low (Any required actions should occur as soon as practical); (4) Non- consequential/For Information (No action is required by user) **Note: Severity level indicates the needed urgency of acting on this bulletin to ensure safety of operating or soon -to- be - commissioned SSCs provided by Holtec. This notice should be incorporated prior to next loading campaign, if applicable.**

**H: Holtec system related; P: Peer system related; G: Industry generic; Q: Guided by the Company's (proactive) quality initiative program

***(1) Weakness in Mechanical Design (inappropriate or unachievable tolerances, drafting error, etc.); (2) Unsuitable analysis (erroneous input data, inappropriate analysis methodology, or defect in the computer code utilized); (3) Improper material selection (poor weldability, machinability, lamination concerns, etc.); (4) Inadequacy in the client's ISFSI operation procedure; (5) Inadequacy in a procedure provided by Holtec; (6) Administrative deficiency (such as failure to transmit information to the Client); (7) Human Error; (8) Manufacturing Deficiency; (9) Error in procurement, (10) Not event based, part of quality enhancement initiative, (11) miscellaneous.

POLICY STATEMENT & APPLICABILITY

The Holtec Information Bulletin (HIB) is principally used by the company to document relevant industry events pertaining to fuel storage at nuclear plants and to disseminate the knowledge gleaned from such events to the Holtec Users' Group (HUG) membership, the company's personnel, affected suppliers, and other stakeholders. While the great majority of the events cataloged in the HIBs focus on our system, a HIB may be issued on industry events involving another nuclear supplier system where the lesson learned can be beneficially applied in the Company's fuel storage program. A HIB is prepared, internally reviewed, and issued expeditiously after an event is determined by the company to be significant to warrant dissemination. HUG members are encouraged to contact NPD Program Manager to suggest events that merit a HIB. Revised versions of the HIB may be distributed as the analysis and evaluation of the event proceeds.

A HIB may also be issued to inform/alert our stakeholders of non-event derived information that is deemed to merit immediate release to assist the Company's customers. Such information may pertain to enhancements in system design/operations proactively developed by the Company or to identify latent errors/weaknesses in the Company's information base discovered from ongoing operations.

Finally, the Company uses the HIB as the vehicle, if applicable, to notify Part 71, Part 72 and Part 50 licensees of immediate and/or interim corrective actions to be taken in response to a development (such as notification of a potential Part 21 filing). HIBs are prepared by the Nuclear Power Division of Holtec International and are aimed to help improve the fuel management program of the Company and all of its customers/suppliers. Accordingly, the Company expects its clients and suppliers to take appropriate action pursuant to this bulletin. This bulletin is subject to internal reviews to ensure accuracy and clarity, and, as such, may be used in the corrective action process, if applicable, under the Company's QA program. This form is stored in g:\generic\HIB\ directory.

While Holtec has reviewed this document against Holtec's FSAR for applicable equipment, it is recommended that Clients review the document and take appropriate internal actions as needed.

HOLTEC INFORMATION BULLETIN (Cont'd)

ISSUE BACKGROUND & CATEGORIZATION

Problem statement:
Clarification is needed on FSAR Table 5.2.24 which shows burnup and enrichment combinations for BWR and PWR fuel

PROBABLE CAUSE (IF APPLICABLE)

Potential Causes:

N/A

LESSONS LEARNED & GUIDANCE

(Describe Holtec's planned activities and guidance to other stakeholders to implement the Lessons Learned)

For a given fuel assembly type the gamma and neutron source terms used in the radiation transport analysis, and hence the dose rates generated by the fuel assembly, depend principally on the burnup, initial enrichment, and cooling time of the fuel assembly. Source terms are affected by those parameters as follows:

- Source terms increase with increasing burnup
- Source terms increase with reducing enrichment
- Source terms increase with reducing cooling time.

The source term effects of burnup and enrichments stated above create some complication when an attempt is made to determine a principally bounding combination for a given fuel population to be used in site-specific dose analyses, since lower burned assemblies typically have lower initial enrichments. Hence it is not initially clear if an assembly at a higher burnup and enrichment bounds that at a lower burnup and lower enrichment, since the source term reduction from the reduced burnup could be overcompensated by the source term increase from the reduced enrichment, resulting in a net increase in source term and possibly dose rate. It is impractical to evaluate every burnup and enrichment combination for a given fuel population. Therefore, typically a limiting set of burnup and enrichment is used and analyzed for a given fuel population rather than a single combination.

Table 5.2.24 in the HI-STORM FSAR contains initial fuel enrichments for PWR and BWR fuel, and for a number of burnup ranges. The initial purpose of this table was to show the conservative enrichments that were used for the analyses at various burnups documented throughout the shielding analyses in the FSAR. However, a comparison of source terms was performed for all burnup and enrichment combination listed in that table, and it was concluded that higher burned assemblies listed in the table bound the lower burned assemblies, both with the enrichments listed in the table. The FSAR text related to this table has been expanded (via ECO) to discuss this, and provide further details to the use of the values in this table. This can be useful as it may reduce the number of burnup and enrichment combinations that are required to bound a specific fuel population, and therefore simplify the site boundary and CoC dose analysis. Since the table and the method of source term calculations have not been changed since Rev 0 of the FSAR (except for higher burnups being added to the table), this can be used for site boundary dose analyses under any Amendment of the HI-STORM 100.

DISTRIBUTION: All members of the Holtec User Group (HUG), other stakeholder (clients, suppliers, etc). This bulletin is classified as non-proprietary (can be forwarded to third parties as appropriate).

ATTACHMENTS (List all attachments, if any): None