

# **CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES**

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
9375	0	71-9375	USA/9375/B(U)-96	1 OF	4

## 2. PREAMBLE

- a. This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.
3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION

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| <ol style="list-style-type: none"> <li>a. ISSUED TO (<i>Name and Address</i>)<br/> <b>Holtec International<br/> Krishna P. Singh Technology Campus<br/> 1 Holtec Blvd<br/> Camden, NJ 08104</b> </li> </ol> | <ol style="list-style-type: none"> <li>b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION<br/> <b>Holtec International Report No. HI-2146312,<br/> Safety Analysis Report on the HI-STAR ATB 1T<br/> Package, Revision TBD, dated TBD</b> </li> </ol> |
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## 4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

## 5.

### (a) Packaging

- (1) Model No.: HI-STAR ATB 1T
- (2) Description

### **HI-STAR ATB 1T Package**

HI-STAR ATB 1T is designed for transportation of radioactive non-fuel waste and hardware. The package consists of the HI-STAR ATB 1T Cask fitted with one of five available types of waste packages (Types A through E as presented in Table 7.1.2 of the application). Waste packages Types A through D consists of a waste basket within a sealed secondary container and the contents in Condition 5(b). BFA-Tank (the secondary container) and BFA-Tank Cassette (the waste basket), collectively referred to as the secondary packaging, are configured according to the drawings in Condition 5(a)(3). Waste package Type E consists of the contents in Condition 5(b) and optional steel dunnage. The HI-STAR ATB 1T Cask provides a containment boundary, heat rejection, and gamma shielding. The secondary packaging (for waste packages Types A through D) provides supplemental gamma shielding. The outer dimensions of the HI-STAR ATB 1T Packaging are approximately 4267 mm long, 2343 mm wide and 2926 mm high. The maximum gross weight of the loaded HI-STAR ATB 1T package is 113 Metric Tons.

### **Packaging Body**

The HI-STAR ATB 1T Cask is a rectangular-parallelepiped multi-layer steel-weldment with a

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**5.(a)(2) Description (continued)**

removable closure lid sealed by a custom designed locking system. The outer surface of the cask inner structure is buttressed with steel for gamma shielding. Aluminum and stainless steel impact absorbers are attached to the gamma shielding structure outside the containment boundary, on the side and end walls of the cask, lid, bottom plate, corner surfaces and corners of the cask. The closure lid features a dual o-ring joint designed to ensure its containment function. The containment system consists of the Closure Lid, Containment Wall Plates, Containment Baseplate and Closure Lid Locking Wedges.

**Secondary Containers:**

There are four BFA-Tanks (BTs) design variants each corresponding to waste package Types A through D. BFA-Tanks are steel rectangular parallelepiped weldments with bolted lids. BFA-Tanks provide supplemental gamma shielding depending on the thickness of its shielding components. BFA-Tank variants are identified by wall thicknesses, with greater wall thickness corresponding to increased overall shielding capacity. BFA-Tanks have external dimensions of approximately 3300 mm long, 1300 mm wide and 2300 mm high.

**Waste Baskets:**

There are four BFA-Tank Cassette (BTCs) design variants each matched to a specific BFA-Tank variant according to the drawings in Condition 5(a)(3) to make up waste package Types A through D. BTCs are rectangular steel weldments that include a baseplate and a removable upper cover plate or lid. BTCs provide supplemental gamma shielding depending on the thickness of its shielding components.

**(3) Drawings**

The packaging shall be constructed and assembled in accordance with the following Holtec International Drawings Numbers:

- (a) HI-STAR ATB 1T Cask      Drawing 9786, Sheets 1-7, Rev. 5
- (b) BFA-Tanks and Cassettes      Drawing 9876, Sheets 1-3, Rev. 7

**5.(b) Contents****(1) Type and Form of Material**

- (a) Segmented and/or non-segmented solid, radiation activated and surface contaminated reactor-related hardware. Cutting debris (chips) and metallic or ceramic filter media prepacked in separate non-hermetic containers. Exact payload will vary from shipment to shipment. Contents are dewatered according to Chapter 7 of the application.

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## 5.(b)(1) Contents (continued)

- (b) Steel dunnage (if needed) for waste package Type E.
- (c) Maximum decay heat: 1.75 kW
- (d) Post-irradiation minimum cooling time as listed in Table 7.1.2 of the application.

## (2) Maximum Quantity of Material Per Package

- (a) Co-60 activity not to exceed the quantities in Table 7.1.2 of the application.
- (b) Co-60 specific activity not to exceed the quantities in Table 7.1.2 of the application.
- (c) Radionuclides (excluding Co-60) with Gamma Energies > 0.45 MeV activity not to exceed the quantities in Table 7.1.2 of the application.
- (d) Radionuclides (excluding Co-60) with Gamma Energies > 0.45 MeV specific activity not to exceed the quantities in Table 7.1.2 of the application.
- (e) The mass limits for fissile materials not to exceed the quantity in Table 7.1.2 of the application.
- (f) Maximum weight of contents: 51 Metric Tons including secondary packaging.

## 6. In addition to the requirements of Subpart G of 10 CFR Part 71:

- (1) The package shall be prepared for shipment and operated in accordance with Chapter 7 of the application.
- (2) The package shall meet the acceptance tests and be maintained in accordance with Chapter 8 of the application.

## 7. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.

## 8. For the cask to be used in the US, the BFA-Tanks and BFA-Tank Cassettes shall be manufactured under a US NRC approved QA Program.

## 9. Expiration Date: TBD, TBD.

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## REFERENCES:

Holtec International application dated TBD.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

TBD, TBD  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Date: TBD, TBD

