

HI-STAR 330 & HI-STAR 240: A Robust Container for Storage, Transportation & Disposal of Class B/C RadWaste Material



Two new innovative Type B Transport Casks designs, named HI-STAR 330 and HI-STAR 240 are being introduced by Holtec International as a part of the Company's long-term drive to enhance ALARA and protect worker safety in decommissioning programs.

The HI-STAR 330 is currently undergoing licensing by the U.S. Nuclear Regulatory Commission (NRC) and will be available for use in the fourth quarter of 2020. The HI-STAR 330 has been specifically designed to store or transport, via rail or barge, Class B and C radioactive waste material to the nuclear industry's various licensed disposal facilities for final disposal. For areas where shipments by rail or barge are not possible, Holtec is completing the design of the HI-STAR 240 Type B transportation cask. Designed to be transported by truck, Holtec plans to submit a license application to the NRC for the HI-STAR 240 by the end of this year.



**Disposal Liner on Pool Alignment Fixture
(The Disposal Liner will be shipped inside
HI-STAR 330 to a Licensed Disposal Facility)**

The HI-STAR 330 offers two significant advantages over existing Type B transport casks. First, its disposal volume that is two to four times what is currently available for transporting Type B waste and second, a rectangular configuration that minimizes the amount of dismemberment of the waste required before packaging. The HI-STAR 330 accommodates two different disposal liners, which are provided with liner shields having variable wall thickness that augment the cask's integral shielding.

Each liner shield is designed with external dimensions of 12'3" x 5'11" x 9'6" (3.74m x 1.80m x 2.90m), compatible with the internal cavity of the HI-STAR 330. The liner shields accommodate higher activity levels while maximizing waste volumes, resulting in a positive impact on the overall cost of transportation and disposal of Class B and C waste material. Descriptions of each liner shield is provided below:

- The HI-STAR T-100 liner shield has a larger cavity that accommodates a disposal liner with higher waste volumes. The total internal volume of the T-100 is 272 cubic feet (7.70 cubic meters).
- The HI-STAR T-150 liner shield has greater shielding, which accommodates higher activity waste material. The total internal volume of the T-150 is 240 cubic feet (6.80 cubic meters).



**Loaded Disposal Liner Inside a
Liner Shield at Holtec's Oyster
Creek Decommissioning Site**

HI-STAR 240 is a smaller and lighter version of HI-STAR 330. With an internal cavity volume of 72 cubic feet (2.04 cubic meters), the HI-STAR 240 is designed to hold 10,000 lbs (4,536 kgs) of waste material. Using a HI-STAR 240 disposable liner, the wall thickness can also be adjusted to accommodate the proper shielding for packaging Class B & C radioactive waste material.

As part of the NRC licensing process, Type B transportation casks are designed to survive severe accidents. This rigorous process ensures the structural integrity of the cask during transportation and its ability to safely store the waste material under the most extreme conditions.