

Summary of NRC-Holtec Pre-Decisional Enforcement Conference (January 9, 2019)

**A Presentation to the
Vermont Nuclear Decommissioning Citizens Advisory Panel
January 31, 2019**

Tony Leshinskie, VT State Nuclear Engineer
Anthony.Leshinskie@vermont.gov

PLEASE NOTE

This presentation does not reflect official policy or position of Vermont State (or Federal) Agency.

The presentation is only intended to provide information about a recent Nuclear Regulatory Commission Pre-Decisional Enforcement Conference (PEC) regarding Holtec's Dry Cask spent fuel storage systems.

Holtec Apparent Violations Identified by NRC

A recent NRC Inspection at Holtec International manufacturing facilities reported two potential regulatory violations concerning Holtec's Dry Cask Storage Systems:

- ▶ Holtec failed to recognize that an implemented Dry Cask component design change required prior NRC approval
- ▶ Consequently, required evaluations demonstrating the change's potential impact on Dry Cask performance were not submitted to the NRC.
- ▶ Potential violations of NRC Regulations specified in Federal Code 10 CFR 72.48
 - Design change resulted in delivery of damage components to the decommissioning San Onofre Nuclear Generating Station
 - Similar components were delivered to Vermont Yankee (although no damaged components identified at VY)

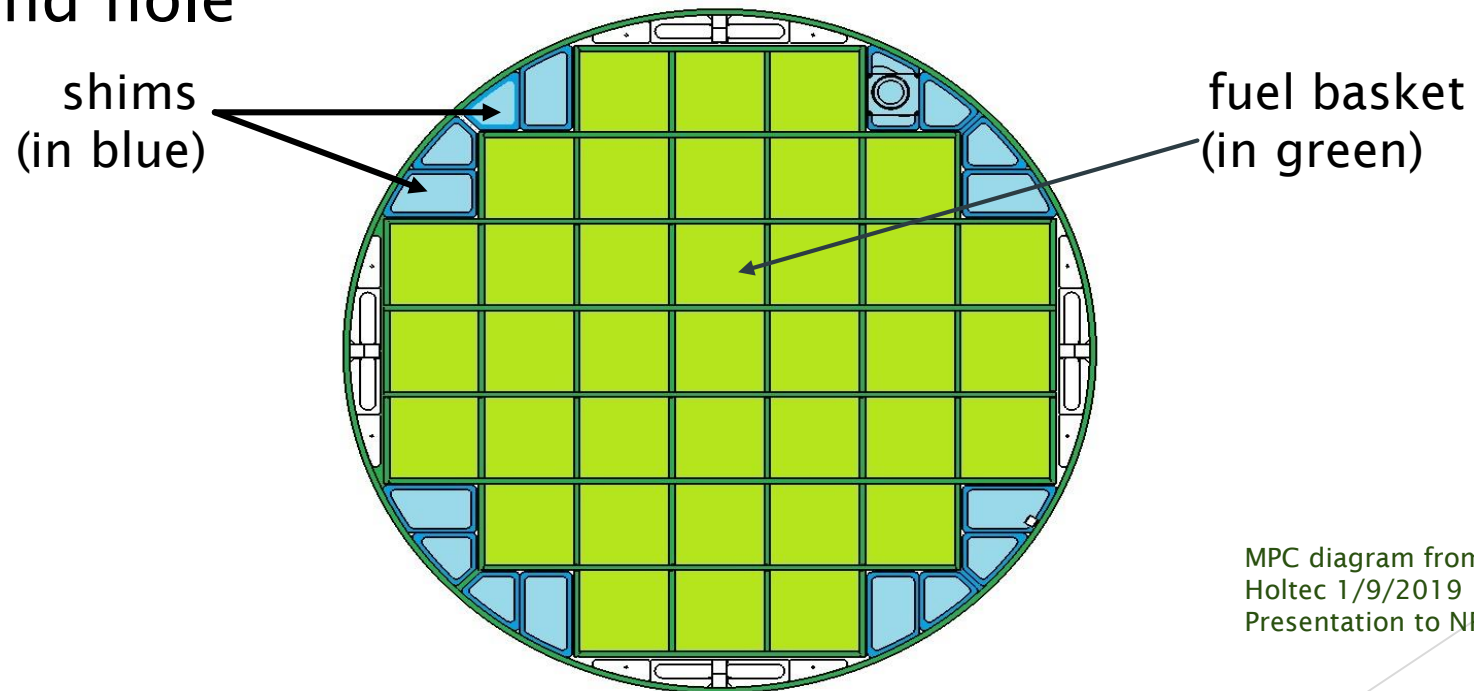
Pre-Decisional Enforcement Conference (PEC)

The PEC provided Holtec with any opportunity to describe its actions in response to the Apparent Violations

- ▶ The suspect design change and its impact were described
- ▶ Holtec acknowledged that its actions violated 10 CFR 72.48
- ▶ Holtec evaluations indicating that the design change did not impact the Dry Cask's ability to safely cool and store spent nuclear fuel were extensively discussed
- ▶ Corrective Actions to Holtec's Design Change processes outlined
- ▶ NRC's assessment of the Apparent Violations and Holtec's responses continues
 - No NRC decision on Enforcement Action has been made yet
 - NRC did state that, so far, no immediate safety concerns with Holtec Dry Cask Storage Systems had been identified.

The Design Change of Concern

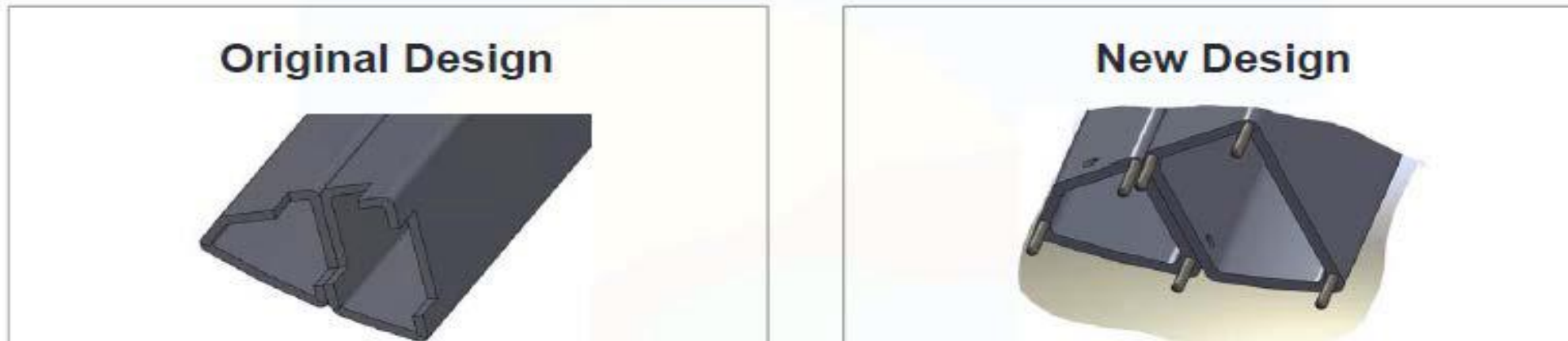
The fuel basket within a Dry Cask's Multi-Purpose Cannister (MPC) includes several shims (essentially spacers) to fill what would otherwise be empty space between the fuel basket's "square peg" within an MPC's "round hole"



MPC diagram from
Holtec 1/9/2019
Presentation to NRC

The Design Change of Concern (Part 2)

Holtec introduced a separate “leg” (called a shim stand-off) component at the bottom of the shims as a means of enhancing helium flow at the bottom of the MPC. Previously, these legs were integral to the shims.



The bottom “legs” for the fuel basket was not changed

Holtec's Reported Findings

- ▶ Cooling within the MPCs will continue within Dry Cask System Design Specifications even if all of the shim stand-offs were to fail (dropping the shims to the bottom of the MPC)
 - ▶ Broken shim stand-offs only seen at San Onofre
- ▶ No impact on Dry Cask System seismic capabilities
- ▶ Corrective Actions implemented at Holtec
 - ▶ Enhanced 10 CFR 72.48 evaluation process
 - ▶ Design / Manufacture processes cross-training
 - ▶ Potential manufacturing & system delivery impacts considered in enhanced processes
 - ▶ Shims reverted to original design

VY Impact

- While similar shim stand-offs were received and used at Vermont Yankee, component inspections conducted in early 2018 found no damaged components
- VY fuel was loaded to a lower 25 kW thermal load rather than the 36.9 kW design limit for the MPCs
- Holtec's subsequent evaluations, if accepted by the NRC, would apply to the Dry Casks at VY

NRC's final decision is expected in 30 to 60 days from the PEC (i.e. between February 9 and March 9)