HI-STORE: A Consolidated Interim Storage Facility for Used Nuclear Fuel and HLW

January 12, 2017

Joy Russell, Vice President of Corporate Business Development, Holtec International

HI-STORE Project Update

- Holtec and ELEA Team
- Site Location
- Technology
- HI-STORE Characteristics
- Site Layout
- Licensing
- Summary
Holtec & ELEA Team

- Holtec International
  - Advanced dry storage technology
  - Experience in licensing fuel storage facilities
- Eddy-Lea Energy Alliance, LLC
  - Long-standing alliance of the Cities of Carlsbad & Hobbs and the Counties of Eddy & Lea
  - Formed in 2006 under New Mexico’s Local Economic Development Act
- Holtec & ELEA agreed to develop HI-STORE using Holtec’s HI-STORM UMAX on ELEA site

Populace: Robust scientific & nuclear workforce

Project enjoys strong support:
- Local communities
- State and Local government

HI-STORE Site Location

- 1,000 acres: Geologically stable, dry, elevated land
- Developed infrastructure: electric, water, roads & rail
- Remote location:
  - 35 miles from nearest town
  - Midway between Carlsbad & Hobbs, NM
- Studied extensively during GNEP process
- Data for environmental report available
HI-STORE Technology:
HI-STORE UMAX

- Holtec's Below grade Dry Storage Technology
- Canister is entirely below grade
- Licensed to store canisters up to 75 ¾ inches in diameter, and up to 213 inches tall

HI-STORE Characteristics

- Operational Advantages
  - Single System
  - Canister placed into storage or removed in less than one shift
- Maximizes Security
  - Facility is visually inconspicuous
  - Profile < 2 ft tall
  - Less visible target from the air
  - Reduced visibility from public land
  - No area of obstructed view
- Maximizes Safety
  - Minimize dose to environment & crew
  - Virtually immune to environmental disasters - hurricanes, floods, tornados, earthquakes
  - Designed to withstand crashing aircraft or on-site fire without any radiological consequences
HI-STORE Characteristics

- HI-STORE will be a universal storage facility
  - Will store any US-origin commercial nuclear fuel currently packaged in dry storage canisters, or stored in the nation’s fuel pools
  - No repackaging of fuel required

Site Layout
Total Storage Capacity 10,000 canisters
Initial Storage Capacity 500 canisters
Facility utilizes 500 of the 1000 acres available
Operations could commence 2022
Two Part Approach to Licensing

Part 1. HI-STORM UMAX FSAR Amendment

- August 2016 Submitted HI-STORM UMAX License Amendment:
  - Added NUHOMS 24PT1 canister for vertical storage
  - Standard HI-TRAC (transfer cask) and HI-STORM UMAX designs are utilized for NUHOMS canisters
- In succession update HI-STORM UMAX certificate to:
  - Add canisters from specific shutdown / decommissioned plants
  - Add all canisters licensed to store SNF
Two Part Approach to Licensing

Part 2. Site Specific License Application
- March 2017: Submit Site Specific License Application per 10 CFR 72
  - Initial application - 500 canisters
  - Future amendments for additional canisters up to 10,000
  - Reference the amended HI-STORM UMAX Certificate and FSAR for technical details
- Pre-submittal Meeting Dec 6, 2016: Environmental Report focus
- Next Pre-submittal Meeting late January 2017
- NRC audit week of February 13, 2017

Summary

- HI-STORE:
  - Universal solution for the Nation’s SNF & HLW
  - Has strong State and Local support in NM - Consent
  - Designed to be operated with utmost ease & maximum safety
  - Supplements long-term repository contemplated by DOE
- Licensing effort well underway:
  - HI-STORM UMAX Certificate – Amendment requested August 2016
  - Site Specific License – March 2017