Holtec International – Central Interim Storage Facility for Spent Fuel and HLW (HI-STORE)

NRC DSFM REG CON 2015 - November 19, 2015

Dr. Stefan Anton, Vice President of Engineering
Holtec International
HI-STORE

- Project Overview
  - Partnership and Site Location
  - Technology
  - Site Layout
  - Licensing
  - Schedule

- Holtec Experience
  - PFS
  - Humboldt Bay
  - Trojan
  - Callaway
  - Ukraine Central Storage Facility

Below-grade Storage at Humboldt Bay Power Plant, in Eureka, CA
Partnership

- Partnership between Holtec and ELEA (Eddy-Lea Energy Alliance) to license, construct and operate a central interim storage facility

- ELEA is an Alliance of the Cities of Carlsbad & Hobbs and the Counties of Eddy & Lea
The ELEA Site

- ELEA purchased 1,000 acres of land approximately halfway between Carlsbad and Hobbs, N.M.
- Land studied extensively during Global Nuclear Energy Partnership (GNEP) process
- Remote location, 35 miles from nearest population
- Geologically stable
- Dry area

- Infrastructure present, including rail
- Preexisting robust scientific and nuclear operations workforce
- Excellent location for future repository nearby
- STRONG CONSENT FROM AREA
SE New Mexico’s Nuclear Corridor
HI-STORM UMAX
Holtec’s Belowgrade 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
Site Layout - Phase 1 Construction

- Secure Area
- Rail Spurs from SWRR
- Operations & Security
- 200 HI-STORM UMAX Canisters
- Cask Transfer Facility
- Batch Plant
Site Layout

- Final configuration provides space for 4000 canisters, requiring approximately 130 of the 1000 acres
Two Part Approach to Licensing

- Amend HI-STORM UMAX General License:
  - Update General License for canisters from shutdown / decommissioned plants – Priority Waste
  - Add additional Holtec canisters
  - Future: Update General License for all canisters with SNF or HLW

- License Holtec Facility under 10 CFR 72 site-specific license
  - Initial application will request 500 canisters - Priority Waste
  - Future amendments for additional canisters up to 4000
# Project Timeline

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<td>Begin Detailed Design</td>
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<td>Begin Operations/Receipt of first UNF Shipments</td>
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**On Track for License Application Submittal in June 2016**
Holtec’s Relevant Experience

- Private Fuelstorage (PFS)
- Humboldt Bay
- Trojan
- Callaway UMAX
- Ukraine Central Storage Facility
Private Fuel Storage (PFS)

- Holtec gained valuable experience by supporting the licensing of PFS
- Holtec’s above ground storage system was approved for use
- Over 4,000 systems were expected to be used
- Demonstrated integrity even considering aircraft impact (F-16)
Belowgrade Dry Storage at Humboldt Bay Site

- 6 transportable Holtec HI-STAR HB systems stored on-site
  - Each canister is stored completely below grade
- 390 spent BWR fuel assemblies stored on-site
Trojan ISFSI

- Hybrid dry storage system:
  - VSC-24 Overpack
  - Holtec MPC-24E/EF

- Site Specific License

- Holtec designed ancillary equipment to work with the hybrid system

- Holtec loaded 34 casks in 9 months
HI-STORM UMAX (Callaway)–CECs in Storage at HMD
HI-STORM UMAX (Callaway)–CEC Placement
HI-STORM UMAX (Callaway)–Completed ISFSI
Holtec has Interim Storage Experience
- Ukraine’s Central Storage Facility

- Holtec is under contract with Ukraine’s national utility to establish (turnkey) a Central Storage Facility for Ukraine’s Reactors
- Expected Completion date: 2017
- Savings to Ukraine’s treasury: over $1 billion in six years of operation
HI-STORE Summary

- Holtec has the knowledge, technology and experience for the projected Central Interim Storage Facility in New Mexico
- Under the partnership with ELEA, a 1000 acre area is available for the facility
- Licensing effort is well underway for submittal to USNRC in June 2016
Thank You!

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