



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

NRC DSFM REG CON 2016 – December 8, 2016

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Holtec International

HI-STORE Project

- Project Status
- Holtec and ELEA Team
- Site Location
- Site Layout
- Technology
- HI-STORE Characteristics
- Licensing
- Environmental Report
- Summary



HI-STORE Project Status



■ Licensing Phase 1

✓ August 2016: Licensing Amendment Request submitted to store horizontal canisters in vertical orientation in the HI-STORM UMAX

✓ Under NRC Review

■ Licensing Phase 2

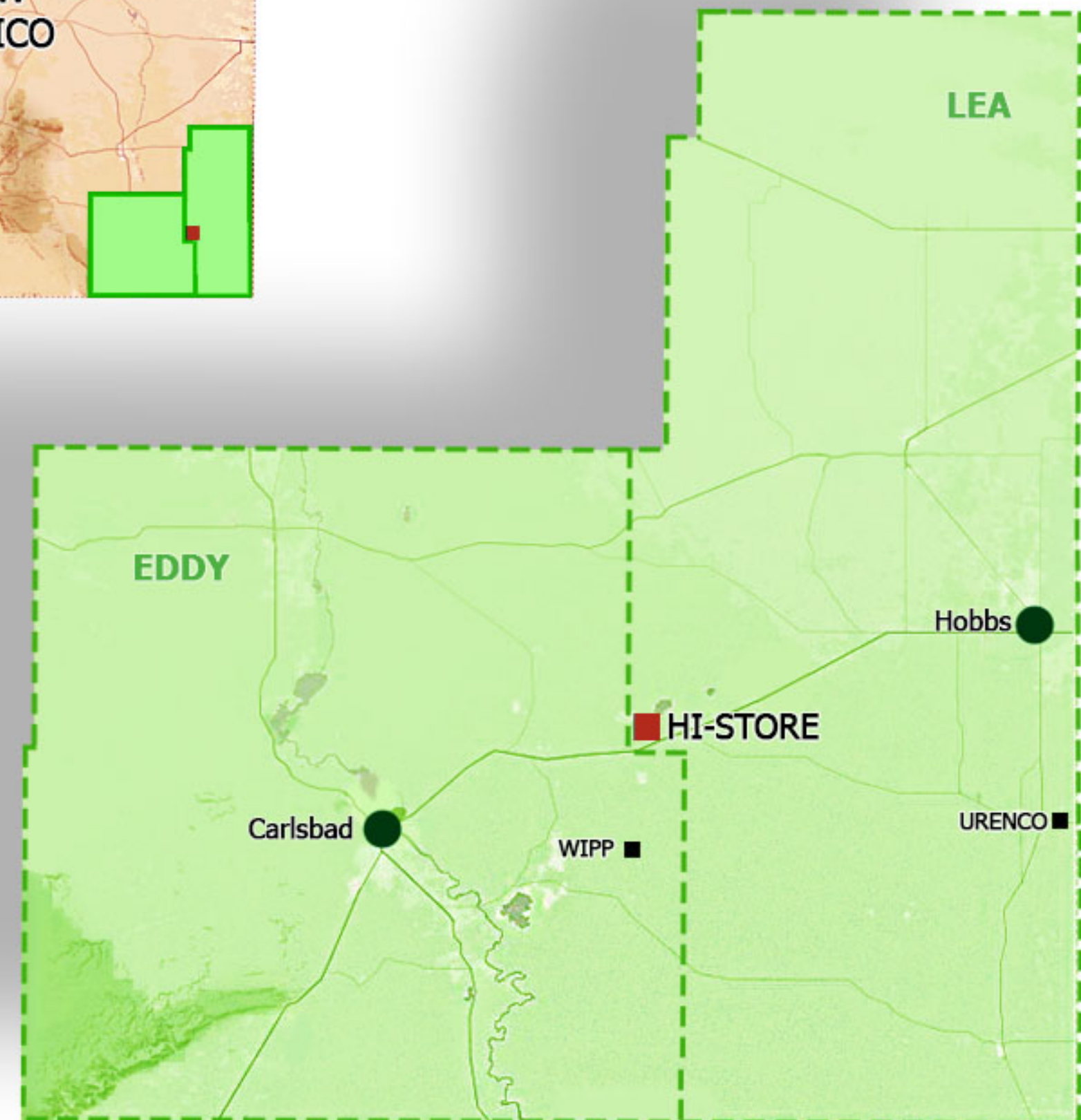
✓ Draft ER Report. Details presented to NRC on December 6, 2016

✓ Site Specific License Application scheduled for March 2017

Holtec & ELEA Team



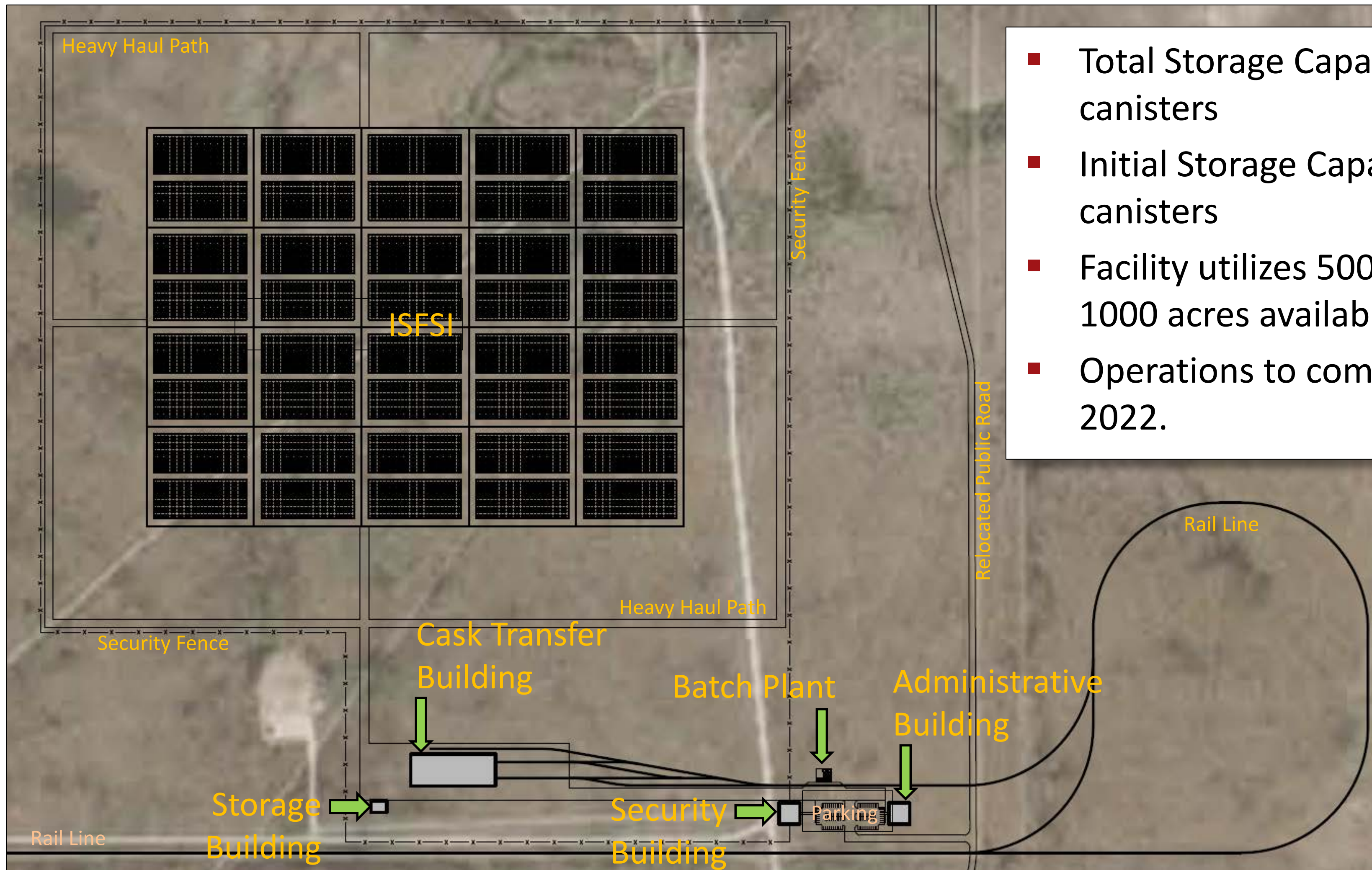
- Holtec International
 - ✓ Advanced dry storage technology
 - ✓ Experience in licensing fuel storage facilities
- Eddy-Lea Energy Alliance, LLC
 - ✓ Long-standing alliance of the Cities of Carlsbad & Hobbs and the Counties of Eddy & Lea
 - ✓ Formed in 2006 under New Mexico's Local Economic Development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



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
- Populace: Robust scientific & nuclear workforce
- Project enjoys strong support:
 - ✓ Local communities
 - ✓ State and Local government

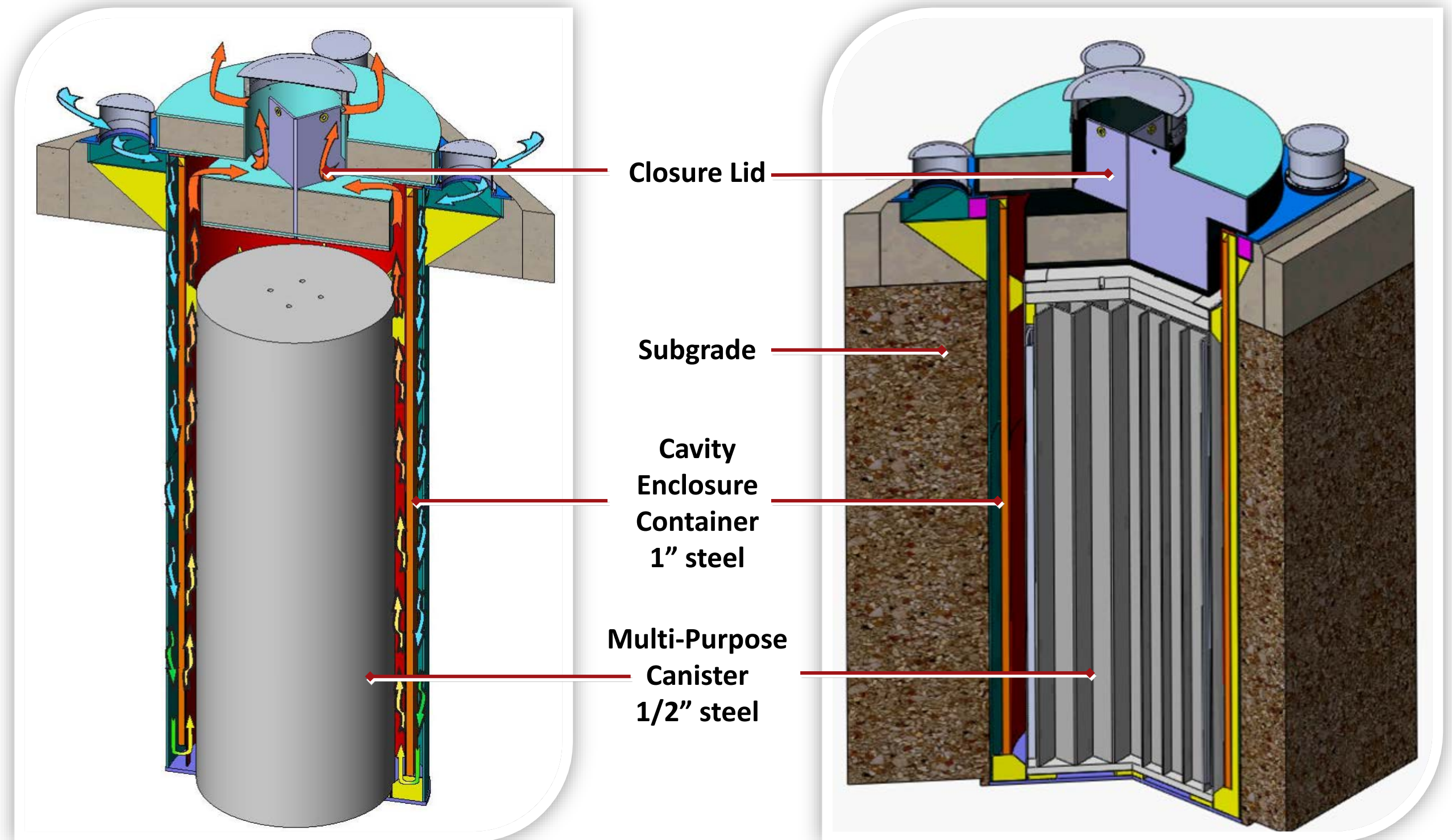
HI-STORE Site Layout



- Total Storage Capacity 10,000 canisters
- Initial Storage Capacity 500 canisters
- Facility utilizes 500 of the 1000 acres available
- Operations to commence 2022.

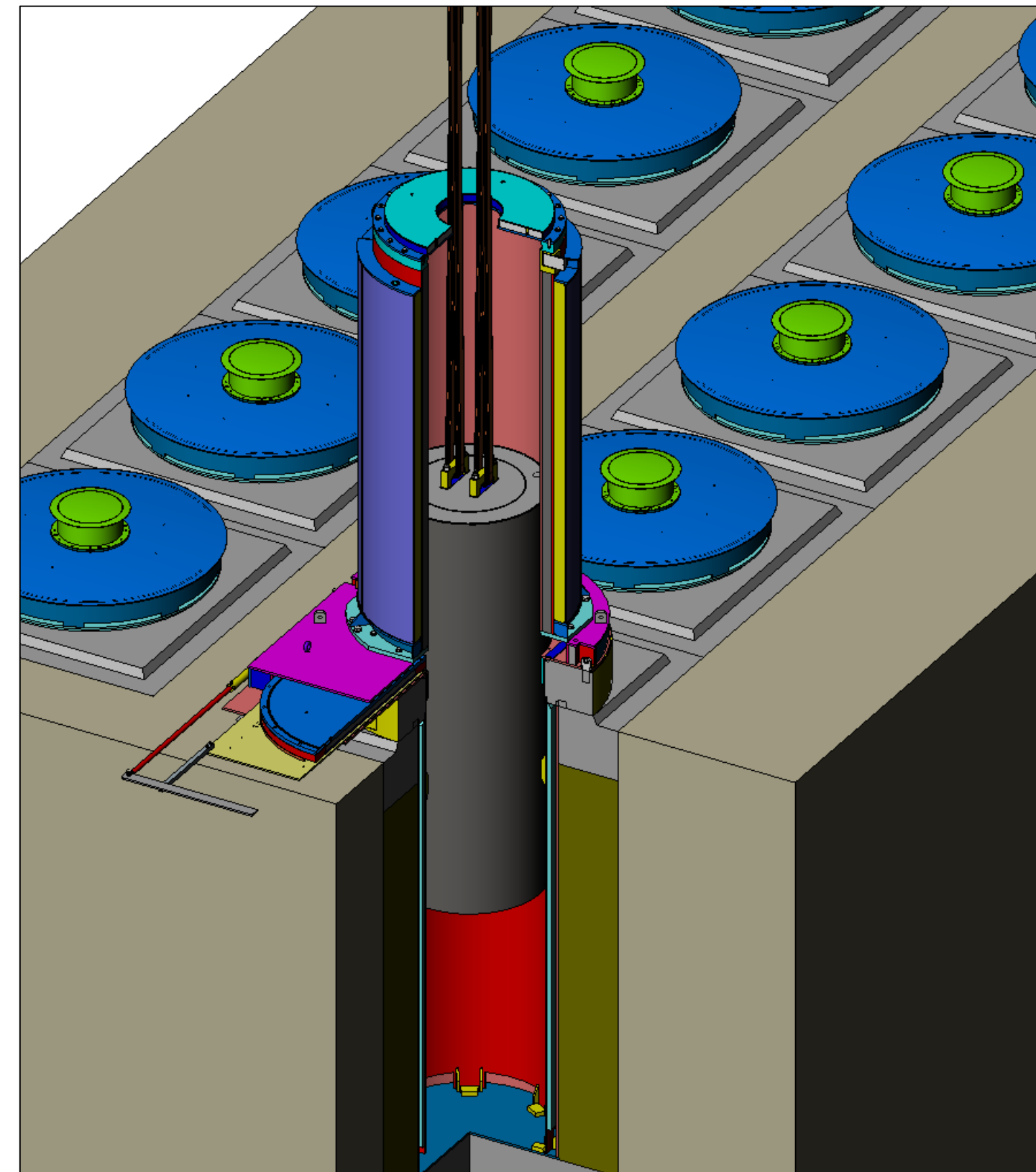
HI-STORE Technology: HI-STORM UMAX

- Holtec's Belowgrade Dry Storage Technology
- Canister is entirely below grade
- Licensed to store canisters up to 75 $\frac{3}{4}$ inches in diameter, and up to 213 inches tall



HI-STORE Characteristics

- Operational advantage
 - ✓ 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.



Part 1. HI-STORM UMAX FSAR Amendment

- August 2016: HI-STORM UMAX License Amendment:
 - ✓ Added NUHOMS canisters for vertical storage
 - ✓ Standard HI-TRAC (transfer cask) and HI-STORM UMAX designs is utilized for those canisters
- In succession:
 - ✓ Add canisters from specific shutdown / decommissioned plants
 - ✓ Update HI-STORM UMAX certificate for all canisters projected to store SNF

Two Part Approach to Licensing



Part 2. Site Specific License Application

- March 2017: 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
- Environmental Report under Preparation by TetraTech

Environmental Report: Summary of Initial Findings



- No notable environmental impacts.
- Land use and visual impacts compatible with surrounding area.
- Site is flat with relatively low seismic hazard.
- Groundwater approximately 300-400 feet deep. No floodplains or jurisdictional wetlands.
- No habitats for threatened and endangered species on Site or area.
- Temporary increases in hydrocarbons, particulate matter, and fugitive dust during construction. No sensitive areas within 10 miles of Site.
- Cultural resources being identified; potential impacts considered low.
- Isolated Site. Human health impacts low.

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