



THE TEXAS SOLUTION

Overview of Waste Control Specialists' Operations
March 2015



WCS Safety and Quality Focus

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- WCS maintains strong, overarching commitment to safety and quality
- WCS promotes a safety culture consistent with the best nuclear utilities and DOE sites:
 - Trust-based organization
 - Open communication free from concerns over reprisal
 - All workers have right *and obligation* to report safety and quality concerns
 - Management practices conservative decision-making



WCS Current Facilities

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LSA Pad

Federal Facility

Byproduct Facility

Compact Facility

Hazardous Waste
Landfill

Administration Buildings and
Treatment Facility



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What Makes WCS Different: Compact Waste Facility (CWF)

- Location, Geology, Design, Community, Operations, Oversight
- CWF (commercial facility) most robust LLW facility ever built
- 100 foot below grade concrete reinforced cell
- 45 foot cap and cover
- Waste disposed in modular concrete canisters (MCCs)
- No waste is comingled or combined with any other generator waste.





What Makes WCS Different: Risk Minimization

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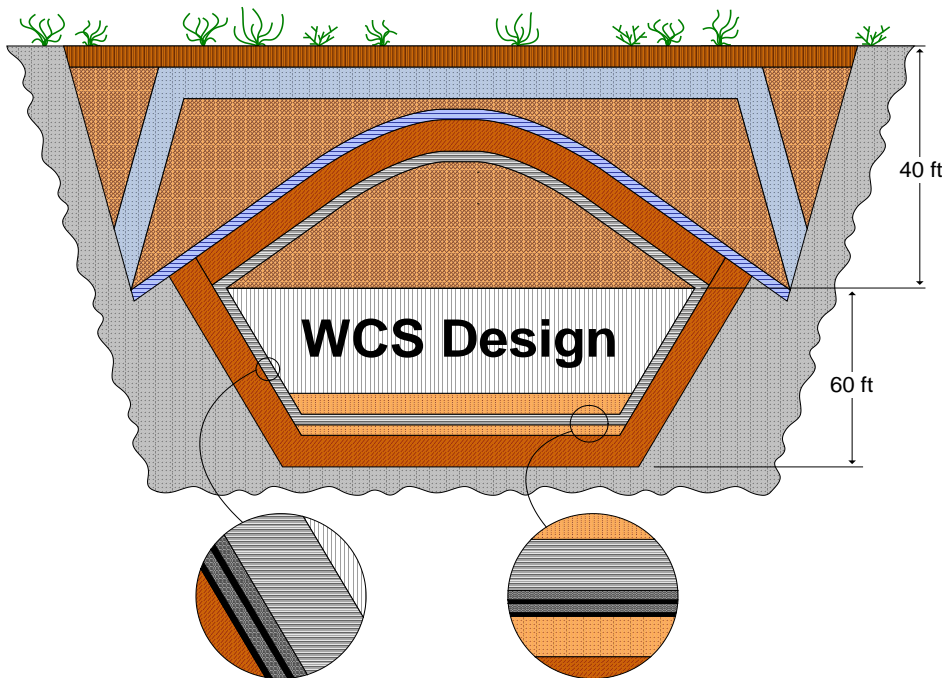
- WCS Commercial facility (CWF) currently licensed to dispose of 9.0 million cubic feet and 3.9 million curies of waste located on 15,000 acres (25 square miles).
- Title: State of Texas takes immediate title to waste and assumes all future liability---Certificate of Disposal issued within 7 days.
- Experience: Since April 2012, WCS CWF has safely received and disposed of hundreds of Cask Shipments without incident and with no demurrage charges to customers.
- Worker Safety: WCS worked over 7 years and almost 2 million hours without a lost time accident.
- Radiation Protection: WCS is below ALARA goals for year.



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WCS Landfill Design Andrews, TX

WCS Landfill Liner Design



- Multi-layered cover system up to 45 feet thick
- Depth to waste at least 25 feet below surface
- 9 ft. liner system on top of red bed clay which is less permeable to water than concrete and 600 feet thick
- Closest measurable water 225 feet

Legend

	Undisturbed Ground
	Clay Liner (10 ⁻⁹ cm/s H.C.)
	Clay Liner (10 ⁻⁷ cm/s H.C.)
	Protective Soil/Sand
	Geosynthetic Liner
	Concrete Liner
	Low Level Waste
	Leveling Fill
	Biointrusion Layer
	Drainage Layer
	Evapotranspiration Layer

WCS CWF – Native Clay



04/16/2011 09:22



CWF During Construction

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08/10/2011 11:19



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CWF Progress 2012 - 2014





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Modular Concrete Canisters – Meeting Disposal Stability Requirements



80" D x 110" H

Cylindrical MCC



MCC Opened for Waste Placement



114" L x 92" W x 110" H

Rectangular MCC



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Disposal in MCCs





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MCC Liner Transfer to CWF via Goldhofer Remote Transport



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WCS RT-100 Cask

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- RT-100 is 76,500 lbs; made of stainless steel with lead shielding holds 160 cubic feet of LLW
- Hauled by team drivers on a specially designed trailer





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First Large Components

- Completed in July '14
- Barge to Houston
- Rail to WCS





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TRU Storage

- In February, WIPP had radiation release that shutdown facility from receiving waste for disposal from LANL
- DOE, through their contractor at WIPP, entered into a contract with WCS to store LANL waste during shutdown
- Shipments to WCS were suspended when breached drum was discovered to have originated from LANL



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Receipt of TRU

- Receipt of TRU for storage pending the reopening of WIPP





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SWBs with Nitrate Salts

- LANL discovered nitrate salts were treated with organic kitty litter which could cause a heat event
- Received temperature advice from LANL that SWBs should be less than 130 degrees F
- SWBs put in MCCs for better protection
- To maintain the safest configuration possible, WCS placed the suspect SWBs in the Federal Waste repository.
- Remainder of non-nitrate salts continue to be stored in the original storage location and configuration



GTCC Rulemaking - TCEQ

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- WCS submitted a Petition for Rulemaking that would provide a disposal pathway for GTCC and GTCC-like LLW on July 21, 2014
- Provides a disposal pathway for GTCC and GTCC-like LLW stranded for decades
- Recognizes that an Agreement State may be authorized to regulate disposal of non-commercial GTCC-like LLW



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A Texas Solution

- In April 2014, Governor Rick Perry requested state leadership consider the interim storage of SNF in Texas based on a study conducted by the TCEQ
- Allows Texas to recoup more than \$700 million they have paid into the Nuclear Waste Fund
- Indefinite storage onsite at Comanche Peak and South Texas Project not adequate
- WCS has begun the process of licensing a Centralized Interim Storage Facility

Gov. Perry Calls for 'Texas Solution' for State's Used Nuclear Fuel

April 9, 2014—Gov. Rick Perry is asking state lawmakers to “develop a Texas solution” for the used nuclear fuel and high-level radioactive waste “currently residing in our borders,” citing the federal government’s failure to build a permanent repository.

In a [March 28 letter](#) to David Dewhurst, lieutenant governor and Senate president, and House Speaker Joe Straus, Perry said the federal government had “betrayed” the people of Texas as well as other states storing used nuclear fuel at reactor sites because “after contributing billions of dollars to fund a federal solution for [high-level waste] disposal, ... a federal solution still does not exist.”

Perry portrayed his proposal as a response to the interest in a storage or disposal facility expressed by some New Mexico communities. “The New Mexico proposed site is approximately 50 miles from the Texas border, and we must ensure our citizens are protected,” Perry wrote.

“We have no choice but to begin looking for a safe and secure solution for [high-level waste] in Texas,” he said, adding that it would allow the state’s citizens to recoup the “more than \$700 million” they have paid to the federal Nuclear Waste Fund—a fee that consumers of nuclear energy have been paying on their electric bills since 1983. The fund, with interest, has grown to more than \$35 billion.

He said his decision is based on a [report](#) issued at his request by the [Texas Commission on Environmental Quality](#). While the report acknowledges that the state’s South Texas Project and Comanche Peak nuclear energy facilities are safely storing their used nuclear fuel, it says their indefinite storage on site “is not an adequate solution.”

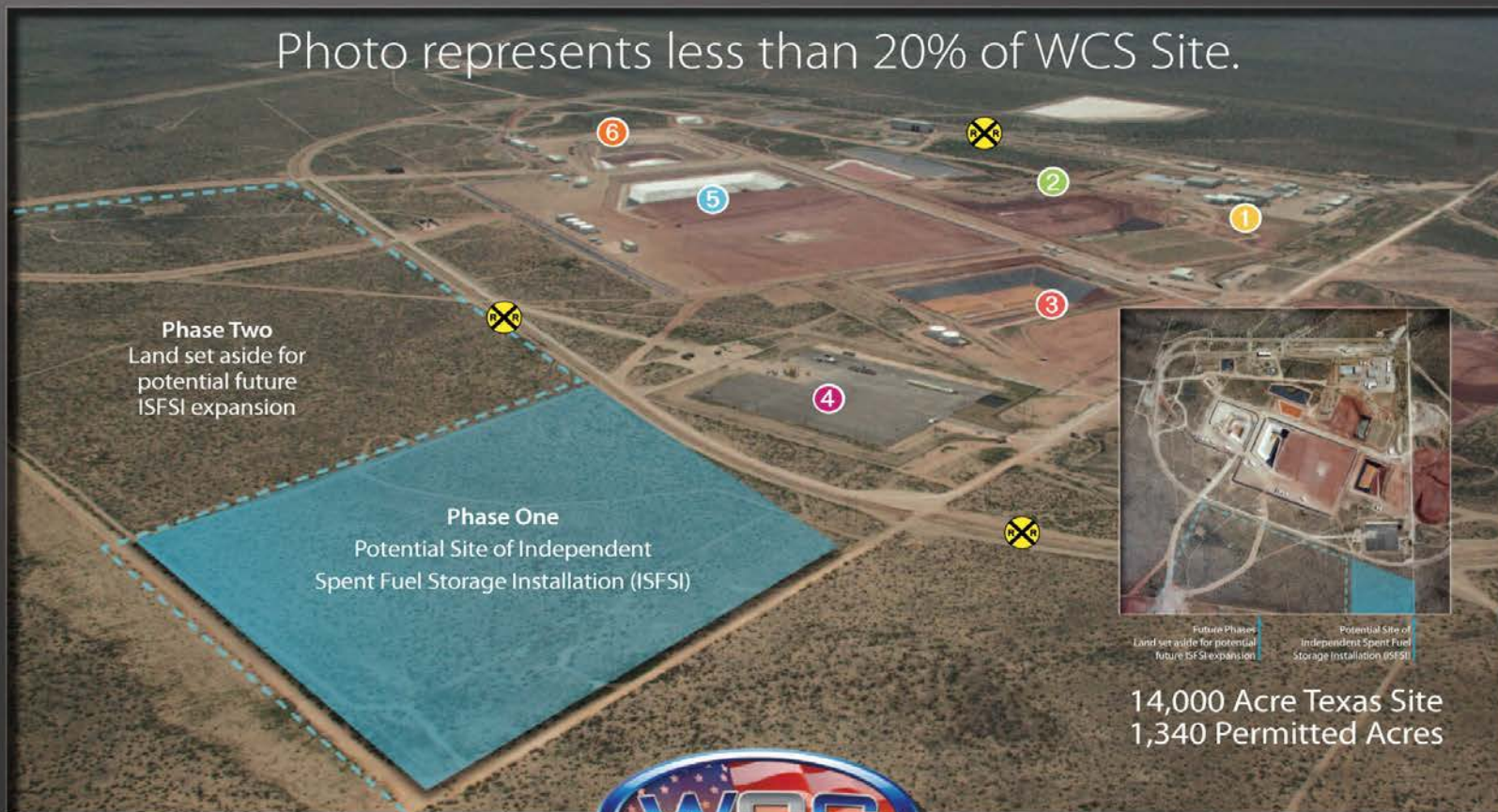


Location of Storage Pad

POTENTIAL SITE OF INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI)

- ① Treatment & Storage
- ② Hazardous Waste Landfill
- ③ Byproduct Disposal Facility
- ④ Low Level Storage Pad
- ⑤ Federal Waste Facility
- ⑥ Compact Waste Facility

Photo represents less than 20% of WCS Site.



14,000 Acre Texas Site
1,340 Permitted Acres





Timeline

WCS PATHWAY TO INTERIM CONSOLIDATED USED NUCLEAR FUEL STORAGE

