SE NM's Nuclear Corridor

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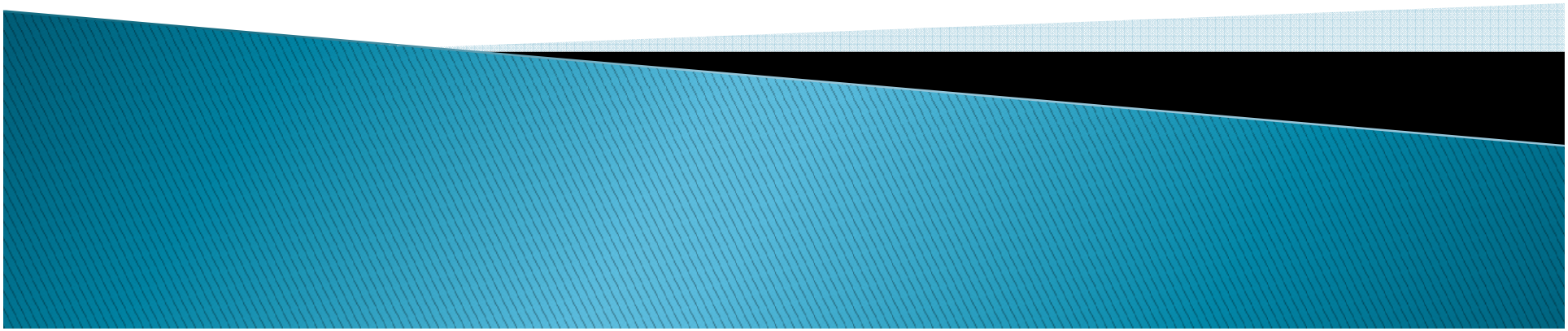
SE New Mexico's Nuclear Corridor

- Operational Nuclear Faclities
  - Waste Control Specialists
  - URENCO Enrichment Plant
  - Waste Isolation Pilot Plant
- Proposed Nuclear Facilities
  - International Isotopes
  - Eddy-Lea Interim Storage Site (ELEA)
  - DHLW repository adjacent to WIPP



SE New Mexico's Nuclear Corridor

WCS low-level radioactive waste

WCS

- **Full service radioactive and hazardous waste services**

Disposal

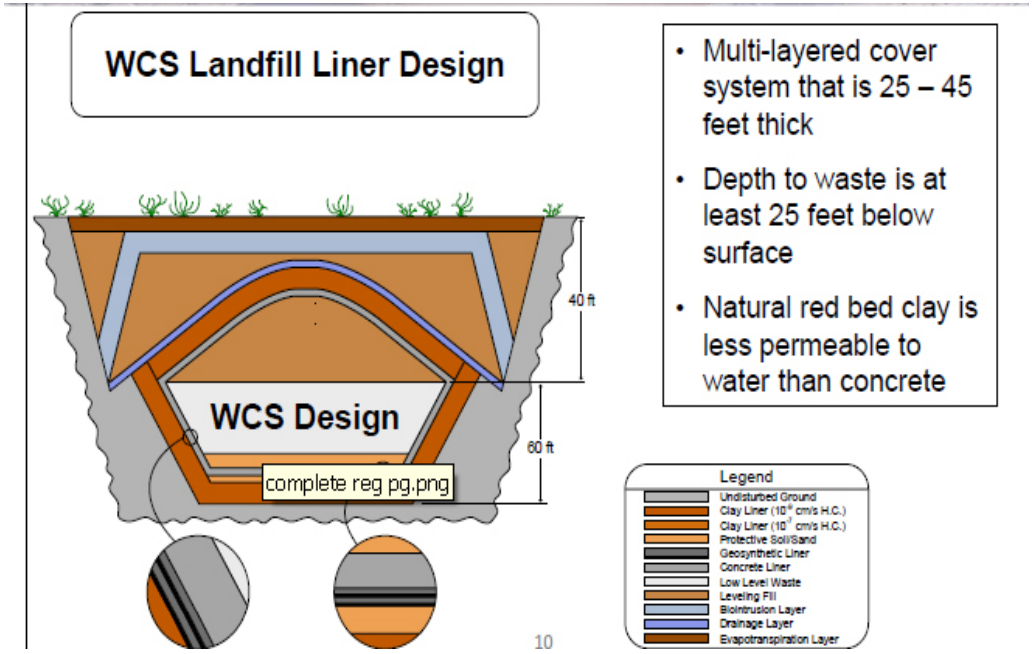
- Low-level and mixed radioactive waste
- RCRA/TSCA Regulated Waste
- Texas Exempt Waste
- Byproduct Material

Storage

- Radioactive Waste, incl. GTCC LLRW, Transuranic Waste, Sealed Sources, and Byproduct Material
- RCRA/TSCA Waste

Treatment/Processing

- Mixed LLRW (MLLW)
- RCRA/TSCA Waste
- Exemption to treat and store Special Nuclear Material (SNM) below certain concentration limits based on criticality – U.S. NRC in November 2001



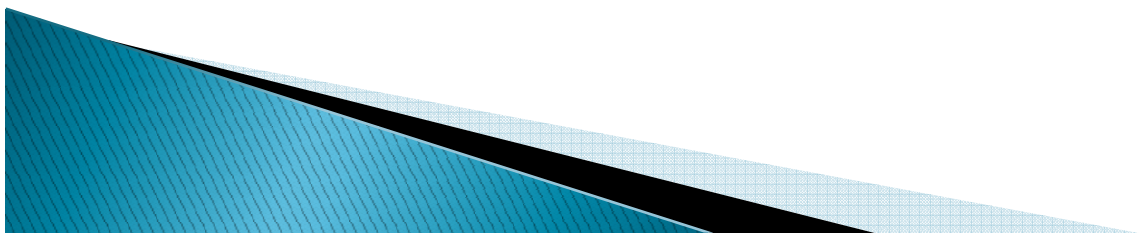
TX Compact Waste Disposal Facility:
2,310,000 cubic feet and 3,890,000 curies
Federal Waste Disposal Facility:
26,000,000 cubic feet and 5,600,000 curies
Storage Faciity:
8,100,000 cubic feet and 5,500,000 curies of containerized Class A, Class B, and Class C

- Community support is critical to the success of WCS
- WCS began the process in the early 1990's and began initial construction at the site in 1996
- WCS now has ~180 employees with an average salary of $70,000

URENCO USA

URENCO USA

- Uranium enrichment facility with corporate headquarters located in Eunice, NM
- Operational with expansion underway
- Approximately 350 full-time URENCO USA employees
- Facility currently has approximately 1000 construction related staff
- Nuclear Regulatory Commission approval to operate was received June 10, 2010



URENCO USA

- URENCO USA uses centrifuges to spin UF6 gas at high speed to separate U-235 from the heavier U-238 isotopes.
- This process creates low enriched uranium with an increase of U-235 from 0.7 percent to commercial grades of 3-5 percent.

Transportation

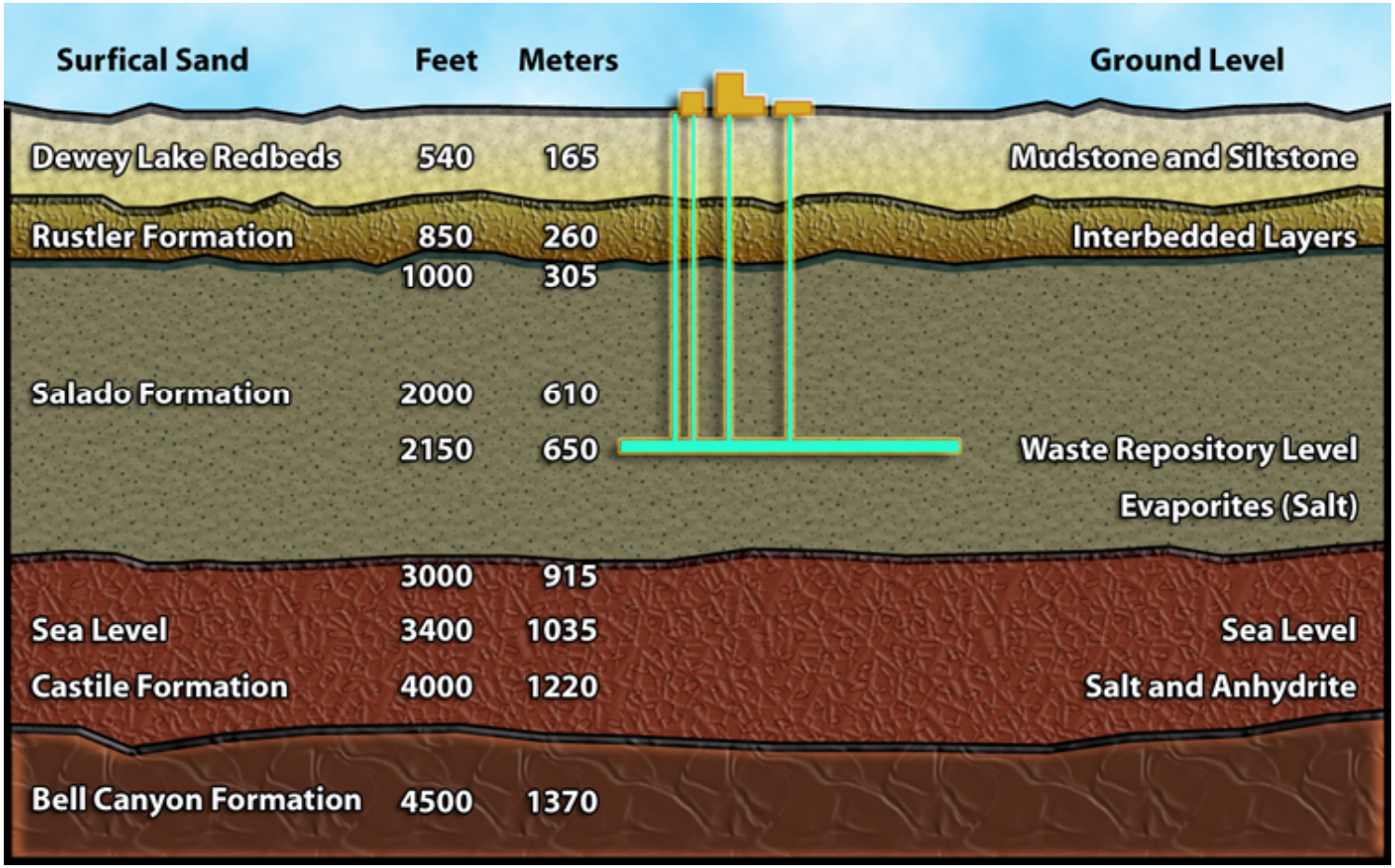
WASTE ISOLATION PILOT PROJECT

WIPP is America's only deep geologic repository for the permanent disposal of defense-generated transuranic (TRU) radioactive waste left from research and production of nuclear weapons.

Salt Is The Reason For WIPP's Location

- Stable geology
- Lack of water
- Impermeable to water
- Easy to mine
- Fractures close
- Plastic quality of salt allows it to encapsulate the waste
- No engineered barriers needed

Geologic Profile



WIPP CLOSURE ANIMATION

International Isotopes

Depleted Uranium
De-Conversion
And
Fluorine Extraction
Project

Historically – the DU "tails" issue has not been addressed

- 1.6 Billion pounds Currently stored by DOE.

- Paducah: 39,000 Cylinders – 4 lines (~1,500 cylinders/yr) = 26 years of processing time

- Portsmouth: 25,000 Cylinders – 3 Lines (~1,125 cylinders/yr) = 22.2 years of processing time

- Embroiled in political chaos

International Isotopes

AREVA

Facility:	Eagle Rock Enrichment
Location:	Idaho Falls, ID
Opening Date:	2015
Full Production Date:	2019
Capacity:	6.6 million SWU/yr

urenco

Facility:	Louisiana Energy Services
Location:	Eunice, NM
Opening Date:	June 2010
Full Production Date:	2015
Capacity:	5.7 million SWU/yr

USEC
A Global Energy Company

Facility:	American Centrifuge
Location:	Piketon, OH
Opening Date:	TBD
Full Production Date:	TBD
Capacity:	3.5 million SWU/yr

GE Energy

Facility:	Global Laser Enrichment
Location:	Wilmington, NC
Opening Date:	TBD
Full Production Date:	TBD
Capacity:	3.5 – 6.0 million SWU/yr

U.S. based enrichment capacity is growing with four U.S. facilities currently in development International Isotopes will be located almost adjacent to the URENCO facility.

International Isotopes

Upcoming Developments

Safety Evaluation Report:	May 2012
Final EIS:	August 2012
Expected NRC License:	September 2012
Construction:	Fall 2012
Main Facility Constr.	2013
Begin Operations	2014

Eddy Lea Energy Alliance

- ELEA is an LLC that includes the cities of Hobbs and Carlsbad, New Mexico, and Eddy and Lea counties
- ELEA purchased 1,000 acres of land approximately halfway between Carlsbad and Hobbs for potential use
- Land studied extensively during Global Nuclear Energy Partnership process
- Includes land ideal for interim storage, as well as other future facilities

Eddy Lea Energy Alliance

Why ELEA Interim Storage Site?

- Remote location
- Geologic stability
- Dry area
- Infrastructure present, including rail
- Pre-existing robust scientific and nuclear operations workforce
- Excellent location because future repository may develop nearby
- Highly supportive community

Interim Storage Timeline

- May 25, 2012: Eddy-Lea Alliance issues application
- June 25, 2012: Eddy-Lea Alliance receives applications
- July 10, 2012 Eddy-Lea chooses best applicant
- August 15, 2012 completes contract with applicant
- August 15, 2012: Begin drafting New Mexico Host Agreement
- August 15, 2012: Begin Drafting NRC Application
- December 31, 2012: Interim Storage legislation passes
- December 31, 2012: Complete New Mexico Host Agreement complete
- January 31, 2013: Commitment to funding
- March 31, 2013: Submit NRC Application (SAR,SER,EIS to follow)
- March 2016: Record of Decision on NRC Application
- TBD: Transportation, contractor schedule, DOE Funding Plan

WASTE ISOLATION PILOT PROJECT

WIPP is America's only deep geologic repository for the permanent disposal of defense-generated transuranic (TRU) radioactive waste left from research and production of nuclear weapons.

WIPP and available LWA

16 square mile LWA with WIPP footprint

Why Salt?

- Lack of Water
- Impermeable to water
- Easy to mine
- Fractures close
- Plastic quality allows it to close in and encapsulate waste

Defense High Level Waste

- DOE is responsible for this waste and the budget to create a repository
- Cleaner financially to DECOUPLE
- DHLW is old, cold and worthless
- Reprocessing decision 30 years away
- Next logical step to build confidence
- Must meet commitments to states to remove DHLW or law suits
- Transportable by highways
- It is more efficient to expedite disposal of DHLW in a defense-only repository (e.g., WIPP), saving potentially up to $75 billion rather than starting from scratch

Legal & Regulatory Changes

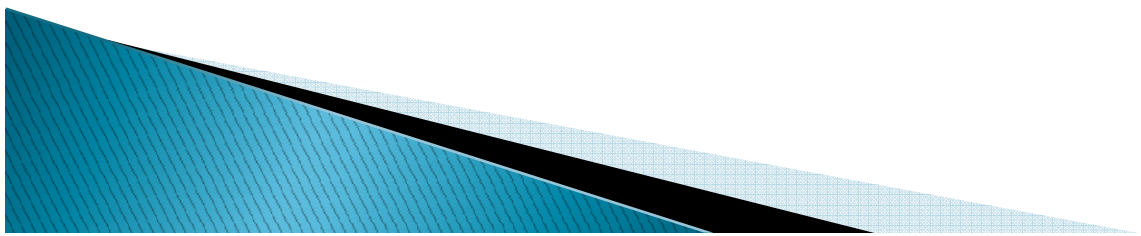
- 1987 NWPA amended to authorize consent based process to be used for selecting and evaluating repository sites
- Act should be modified to allow consent based process to site, license, and construct multiple storage facilities with adequate capacity and to clarify the use of the NWF for this purpose
- EPA 40 CFR Part 191 needs to be standardized and should be generic to implement NRC 10 CFR Part 60
- “Safety and other performance standards and regulations should be finalized prior to the site selection process.

10CFR72: Licensing Requirements for Independent Storage of SNF, HLW & Reactor-Related GTCC

- Establishes requirements for licensing an ISFSI
  - Can be licensed to any person in the U.S. (§72.2(b)) [FedCorp included]
  - Limited to storage of power reactor SNF, power reactor-related GTCC, & other rad material associated with SNF storage (no HLW) (§72.3)
  - If DOE owns then cannot be located at any site of candidate HLW repository (§72.96)
  - NRC does not prohibit DOE from owning and operating an ISFSI
- Establishes requirements for licensing an MRS
  - Includes allowance to store HLW but only "from civilian nuclear activities" (72.3)
  - Up to 10,000 MTHM until repository receives material (15,000 MTHM thereafter)
  - Construction may only begin after construction on an approved repository begins
  - Must be co-located with repository (72.96)
  - Must not be located at any site of candidate HLW repository or in Nevada (72.96)

What Is A Consent Based Strategy?

- A Cooperation and Consultation Process with the states will be critical – WIPP model
  - Establishes standards of expectation in agreement
    - Communication process
    - Oversight
    - Reporting
    - Meeting licensing requirements
- Establish standards



Questions???