WCS

ANDREWS, TEXAS

Southern States Energy Board

December 2014

WCS Safety and Quality Focus

- 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

Design Changes

- First compact disposal facility for Class A, B and C LLW in over 30 years
  - Added 9 million cubic feet of disposal capacity for nuclear power plants and other commercial generators
- First federal offsite disposal facility for Class A, B and C LLW and MLLW in over 30 years
  - Added 26 million cubic feet of disposal capacity for DOE
- First direct disposal option for Class B/C LLW since 2008
- Depth and robust liner design are more protective than previous industry standards
- Transfer of ownership to Texas or DOE is more protective than previous industry standards

Clive Facility
(Previous Industry Standard for Class A)

Barnwell Facility
(Previous Industry Standard for Class B/C)

WCS Compact Facility (New Industry Standard)

Waste Changes

- Most innovative dewatering system in 30 years
  - Allows transport casks to be used more efficiently
- First facility with complex treatment services at the same site as the disposal facility
  - One-stop-shop with less transportation costs
- First new licensed Type B cask in 30 years (large volume)
  - Certificate of Compliance was received in less than two years and is currently operating
- First large components disposed of 100’ below grade – four steam generators

WCS RT-100 Cask

- RT-100 is 76,500 lbs; made of stainless steel with lead shielding; 11 ft high, 8.5 ft wide and holds 160 cubic feet of LLW
- Hauled by team drivers on a specially designed trailer

First Large Components

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

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
- DOE had been striving to meet a significant regulatory milestone (June 2014) related to the removal of combustible TRU from LANL when the WIPP incidents occurred

Receipt of TRU

- **Receipt of TRU for storage pending the reopening of WIPP**

LANL Shipments to WCS

- Shipments to WCS were suspended when breached drum was discovered to have originated from LANL
- WCS received 40% of planned shipments before stoppage
  - 39 shipments containing 599 standard waste boxes (SWBs) between April 1 and May 1, 2014
  - Includes 73 SWBs of nitrate salts bearing waste from same waste stream as breached drum at WIPP

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 be 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

TRU Storage in MCC

GTCC Rulemaking - TCEQ

- WCS submitted a Petition for Rulemaking that would provide a disposal pathways 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

GTCC Rulemaking - NRC

- NRC Commissioners directed Staff to prepare a report on GTCC LLW on September 24, 2014
- Report to address history, types of GTCC waste streams, and disposal challenges, including risk-significant sealed sources
- Staff anticipated issue report in May 2015

IN RESPONSE, PLEASE
REFER TO: M140918

September 24, 2014

MEMORANDUM TO: Mark A. Satorius
Executive Director for Operations

FROM: Annette Vietti-Cook, Secretary /RA/

SUBJECT: STAFF REQUIREMENTS – BRIEFING ON MANAGEMENT OF LOW-LEVEL WASTE, HIGH-LEVEL WASTE, AND SPENT NUCLEAR FUEL, 9:00 A.M., THURSDAY, SEPTEMBER 18, 2014, COMMISSIONERS' CONFERENCE ROOM, ONE WHITE FLINT NORTH, ROCKVILLE, MARYLAND (OPEN TO PUBLIC ATTENDANCE)

The Commission was briefed by an external panel and the NRC staff on the management of low-level waste, high-level waste, and spent nuclear fuel. The external panel included Jeffrey Williams, Project Director, Nuclear Fuels Storage and Transportation, Office of Nuclear Energy, Department of Energy; Charles Maguire, Director, Radioactive Materials Program, Texas Commission on Environmental Quality; Thomas Cotton, Vice President of Complex Systems, LLC; Nigel Mote, Executive Director, U.S. Nuclear Waste Technical Review Board; and Jim Williams, High Level Radioactive Waste Program Manager, Western Interstate Energy Board.

The staff should provide the Commission with the results of the byproduct financial scoping study and provide recommendations on next steps.

The staff's paper on NRC's regulatory history on greater-than-class-C (GTCC) waste disposal should include a discussion on the types of GTCC waste streams and disposal challenges, including risk-significant sealed sources.

cc: Chairman Macfarlane
Commissioner Svinicki
Commissioner Ostendorff
OGC
CFO
OCA
OIG
OPA
Office Directors, Regions, ACRS, ASLBP (via E-Mail)
PDR

SNF and HLW Storage

- The federal government is responsible for the disposal of SNF produced by commercial nuclear reactors in the U.S.
- The Nuclear Waste Policy Act of 1982 required Presidential approval of a final disposal facility recommended by DOE
  - Requires the ratepayers of commercial nuclear reactors to pay fees for a permanent geologic repository
- In 2002, President George W. Bush approved DOE's recommendation to dispose of SNF at the Yucca Mountain facility in Nevada
- NRC received an application from DOE to license Yucca Mountain in 2008
- The Obama administration suspended actions needed to complete the construction and licensing of Yucca Mountain

Blue Ribbon Commission

- Blue Ribbon Commission was chartered to evaluate best approach for the federal government to manage the back-end of the nuclear fuel cycle
- Consensus-based licensing in a community willing to host an interim spent fuel storage facility is a cornerstone of the Commission's findings
- Blue Ribbon Commission recommended development of an interim spent fuel storage facility until a permanent repository became operational
- Interim storage of SNF maybe for 60-100 years until a repository is constructed and licensed

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 discussing the possibility of licensing a Centralized Interim Storage Facility with the community in Andrews

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."

Questions?

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