



# **Disposition of DOE High Activity Waste**

**Session 61 – WM 2011 Symposia**

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**March 2, 2010**

# WCS Services

## Disposal

- LLRW/MLLW (TCEQ License # R04100 & Permit # HW-50397 )
- RCRA/TSCA Regulated Waste (TCEQ Permit # HW-50358; EPA Authorization)
- Texas Exempt Waste (TCEQ Permit # HW-50358)
- Byproduct Material (TCEQ License #R05807)

## Storage

- Radioactive Waste, incl. GTCC LLW, Transuranic Waste, Sealed Sources, and Byproduct Material (TCEQ License # R04971)
- RCRA/TSCA Waste (TCEQ Permit # HW-50358)

## Treatment/Processing

- Mixed LLRW (MLLW) (TCEQ License # R04971)
- RCRA/TSCA Waste (TCEQ Permit # HW-50358)
- Exemption to treat and store Special Nuclear Material (SNM) limited concentration vs. total grams – U.S. NRC in November 2001



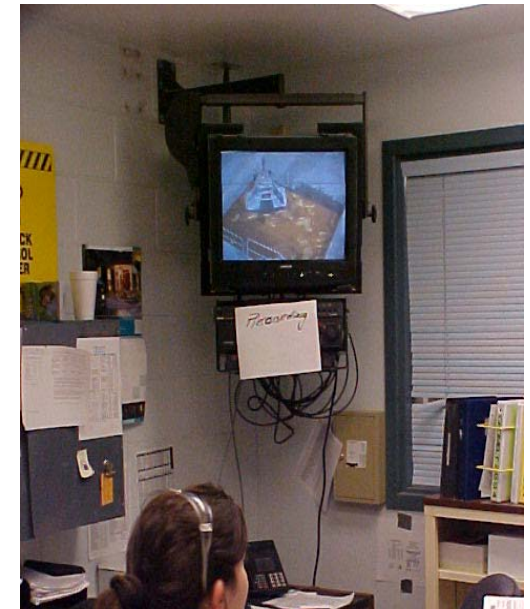
# Looking North – Wide View





# Treatment

The 20,000 ft<sup>2</sup>, negative-pressure, Mixed Waste Treatment Facility (MWTF) with remote-controlled mixing and external monitoring and recording in an 85 yd<sup>3</sup> pan



## Select On-Site Radionuclide Limits



# Large Possession Limits Allow High Concentration &

## High Dose Rate Waste for Treatment

- 35,000 curies (Ci) of Category I\* (e.g., Am, Cm, Pu, Ra)
  - 2,000 Ci may be liquid
- 20,000 Ci of Category II\* (e.g., Pb-210, Sr-90)
- 200,000 Ci of Category III\* (e.g., Co-60, Cs-137, I-129)
- 2,000,000 Ci of Category IV\* (e.g., Cs-135, Tc-99)
- 150,000 Ci of Sealed Sources (SNM concentration limits apply)

\* Categories defined in the Texas Administrative Code (TAC) Title 30, Part 336.1231

# Volumetric Storage Limits

Not to exceed 1,802,865 ft<sup>3</sup> with the following building/area limitations:

1. 8,000 ft<sup>3</sup> in the Stabilization Building
2. 36,750 ft<sup>3</sup> in the Container Storage Building (CSB)
3. 262,440 ft<sup>3</sup> in three Bin/Bulk Storage Units (BSUs); each BSU is divided into three bin/bulk storage areas (BSAs 1-9), of which one (BSA-1) is covered
4. 1,500,000 ft<sup>3</sup> on the Low Specific Activity (LSA) pad



# Container Storage Building (CSB)

- ❖ Currently stores some Greater than Class C LLW



- ❖ Provides for Shielded Storage





## **Radioactive Waste Disposal Licenses**

- **Byproduct License issued May 2008**
  - **Currently allows for 30,000 yd<sup>3</sup> disposal**
  - **Began Operations October 2009**
  
- **LLRW and Mixed LLRW Disposal**
  - **License order granted January 2009**
  - **All conditions met for final license September 2009**
  - **DOE signed Agreement to take ownership of the Federal Landfill January 2010**
  - **No package dose-rate limit in license**





## Licensed LLW Disposal Capacity

- **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 total
  - 8,100,000 cubic feet and 5,500,000 curies of containerized Class A, Class B, and Class C
- **License Term - 15-years with provision for 10-year renewals**

# Experience with High Dose Rate Packages

- Commercial resin liners received for storage
  - Contact dose up to 320 R/hr



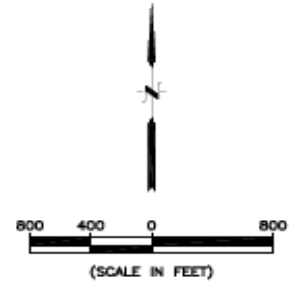
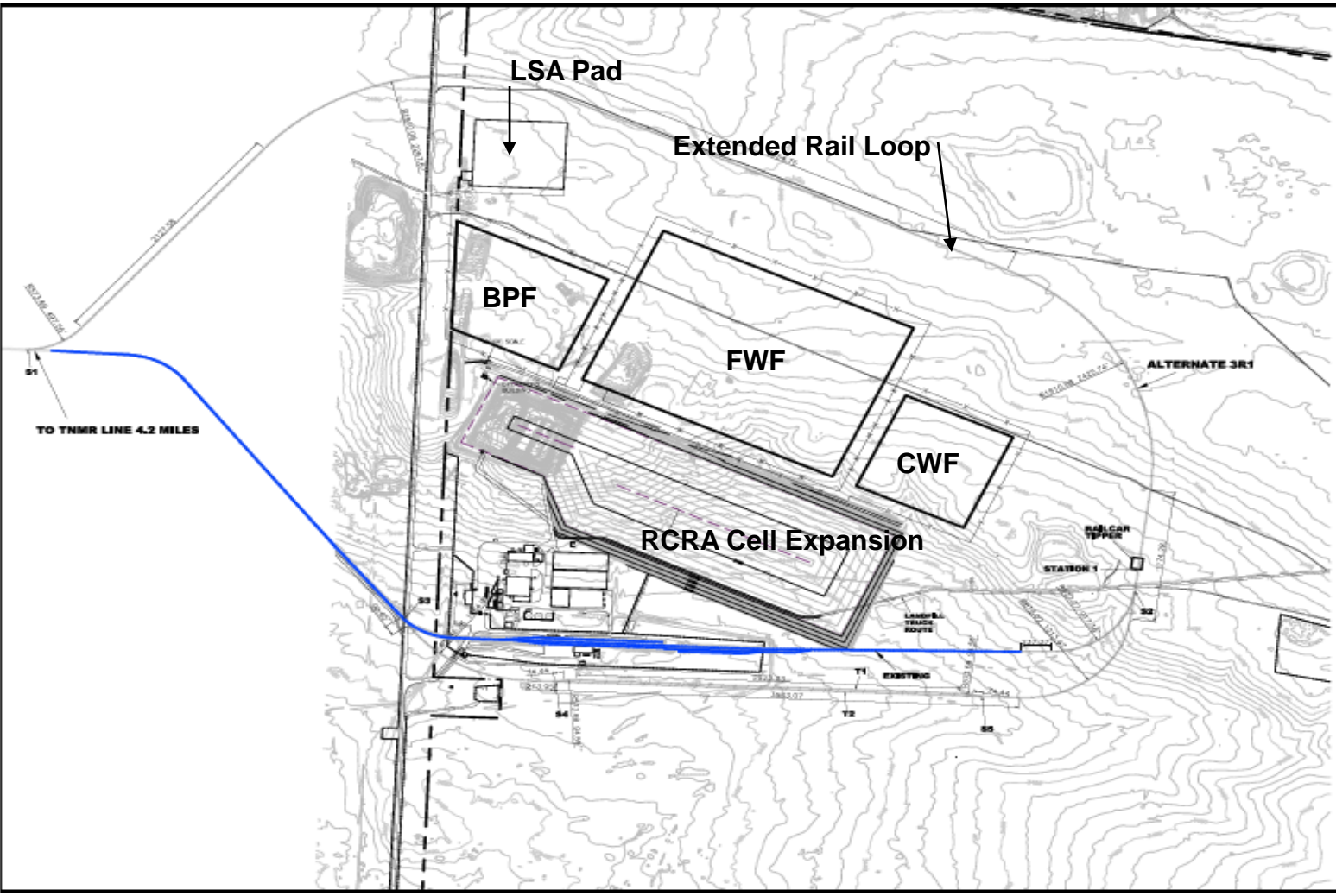


## Update on Disposal Construction

- Construction started Feb. 6, 2011
- Compact Facility to be complete Summer 2011
  - CWF ready for operations – Fall 2011
- FWF construction complete – Late 2011
  - FWF ready for operations – Early 2012



# Planned Infrastructure Improvements



**NOTE:**  
1. ALTERNATE 3 TOTAL TRACK LENGTH 22,990 FT

REV.	DATE	DESCRIPTION	DR BY	APP BY

**WASTE CONTROL**  
SPECIALISTS LLC

**CRONK-JOYCE INC.**  
ENGINEERS AND CONSULTANTS  
812 WEST BURNETT ST. - 871-8087  
AUSTIN, TEXAS 78701

FOR: WASTE CONTROL SPECIALISTS LLC  
ANDREWS COUNTY, TEXAS

**SHEET TITLE:**  
ALTERNATE 3R1 TRACK LAYOUT

DES BY	SLC	SCALE	1" = 800'
CHK BY	SLC	PROJECT NO.	080808
APP BY	SLC	CUI NO.	080808
DATE ISSUED	11-09-2008	SHEET	1 OF 1 SHEETS
		FRAME NO.	3



# Update on Disposal Construction

