

Waste Control Specialists Site Overview LLW Forum – Oct 2023



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## What We Do

- Safe Disposal of Low-Level Radioactive Waste (LLRW)
- Essential service for:
  - Nuclear Power Plants
  - Hospitals and Research Laboratories
  - Oil and Gas NORM
  - Industrial Customers
  - US Government (DOE, DOD, etc.)









### WCS Site – Andrews TX

14,000 acres (permitted area is 1,400 acres)4 landfills, treatment facilities, rail access

Byproduct Facility

> Hazardous Waste Landfill

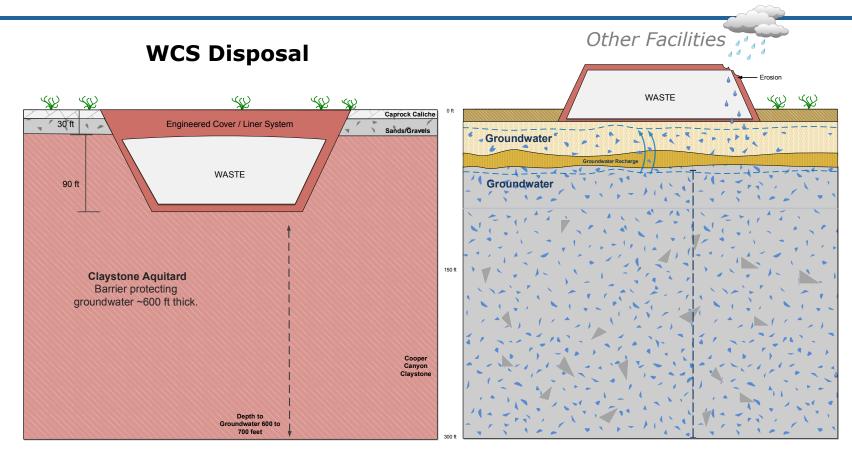
Federal Facility

> Rail Offload

Administration Buildings

Treatment Facilities Compact Facility

### WCS Environmental Protection (vs. Generic Facility)



#### Key Attributes of WCS site:

- 1) Sub-Grade Design
- 2) Natural Claystone Barrier
- 3) No viable pathway to groundwater

- WCS Performance Assessment examines site geology, surface water and groundwater, future weather changes, residential and intrusion scenarios, and future land uses
- Facility meets Texas regulatory requirement for protection for one million years



#### WCS is the Newest and Most Robust LLRW facility in the US

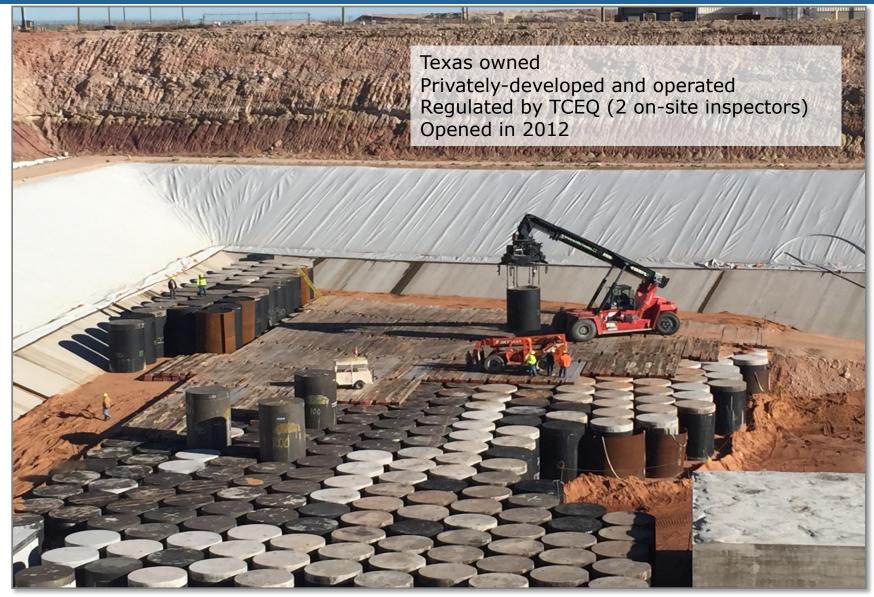
## Performance Assessment

- Uses sophisticated GoldSim-based modeling
- Integrated PA for entire site
- PA examines site geology, surface water and groundwater, potential future weather changes, residential and intrusion scenarios, and possible future uses of the land
- Evaluated to one million years
- Current disposed inventory has a peak dose of 0.5 millirem per year at 170,000 years from closure

	lermann, Chairman
Emily	Lindley, Commissioner
Bobby	Janecka, Commissioner
Toby	Baker, Decutive Director
	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
	Protecting Texas by Reducing and Preventing Pollution
	October 30, 2019
Ra	. Jay Cartwright diation Safety Officer and Discussion
Wa	diation Safety Officer and Director of Environment, Safety, Health, and Quality
P.0	D. Box 1129 drews, Texas 79714
Re	2018 Updated Performance Assessment
De	ar Mr. Cartwright:
The	TCEQ has completed its review of the 2018 Updated Performance Assessment (PA) for the npact Waste Facility and the Federal Waste Facility, submitted on Newson (PA) for the
Cor	apact Waste Facility and the Federal Waste Facility, submitted on November 29, 2018 in ordance with license condition (LC) 89 of Radioactive Material University and the second
18 C	onsidered complete and is superior in a contractive material License (RMI) R04100 The D4
the	onsidered complete and is approved. An updated PA is now required every five years from date of this letter as stated in LC 89 of RML R04100, and shall include the following:
1.	A revised determination of the
	complete carbonation of the cement mass, the carbonation rate, and the time of complete carbonation resulting from any changes in the canisters, disposal facilities, woid filling material, or other relevant modifications gines due have no set.
2.	void filling material, or other relevant modifications since the last PA;
	A new sensitivity and uncertainty analysis to reflect any changes in inventory, facility design, or other relevant modifications since the last PA; and
3.	
	uranium (DU) waste will be placed – once shipments of large quantities of DU to WCS for disposal have been initiated – due to the expected decades large quantities of DU to WCS for
	the DU for disposal and the require the decades long process of transporting
	disposed at the greatest depth possible in the disposed with R04100 that the DU shall be
Pleas	Confact Hans Weger at (510) 200 0 (01
Sincer	rely,
RI	2 0
D.I	Rousand
Radio	/ Forbes, Director active Materials Division
AF/hw	
cc: Day	e Carlson, Ryan Williams, Jay Britten, Chris Shaw, M.S., CHP, RRPT, Gregory G. DiCarlo
	diasi, etc., RRP1, Gregory G. DiCarlo
	P.O. Box 13087 • Austin Texas 78711 2007 • 510 200
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### Compact Waste Facility





## CWF Phase 2a Cell Construction

#### **CWF Phase 2a**

- Construction started 2/15/23, with projected construction completion 11/22/2023
  - Poly liner installation is complete
  - Concrete liner install started
  - In service 02/29/2024
- Constructed space summary projected on 02/29/2024
  - Phase 1 will have over 100,000 cubic feet remaining
  - Phase 2a provides 425,000 cubic feet of new space
  - 525,000 cubic feet of CWF disposal space available





# Compact Facility Status – TCC Meeting Items

#### CWF Licensed Capacity

- 9,000,000 ft3
- 3,890,000 Ci (decay corrected)
  - Can be increased to 8,000,000 Ci upon request and TCEQ approval

#### Current CWF Disposal TX Fiscal Year to date – 9/1/2022 to 8/31/2023 (12 months)

- 54,336 ft3
- 106,990 Ci (decay corrected)

#### <u>Total CWF LLRW Disposal since inception – to 8/31/2023 (11 years)</u>

- 307,687 ft<sup>3</sup> (3.4% of licensed capacity)
- 583,668 Ci decayed (28 % of licensed capacity)

Other Licensed / Permitted Capacity

- Federal Waste Facility 26,000,000 ft<sup>3</sup>
- *Exempt Facility 62,000,000 ft*<sup>3</sup>
- Byproduct Facility 810,000 ft<sup>3</sup>
- *WCS Site Total* ~ 100,000,000 ft<sup>3</sup>



### License Renewal / Amendment 40

#### Amendment 40

- Summary/Benefits
  - Authorizes LANL TRU removal from FWF to Perma-Con
  - RCRA Exempt RS-5.0.0 changes
    - Annual RCRA cell volume limit increase from 3.5M ft3 to 10M ft3
    - Adds some additional isotopes
  - Adds financial assurance funding for new Phase 2A cell
  - Environmental monitoring changes to align with new CWF Phase 2A cell
- Status
  - Submitted to TCEQ 6/9/23
  - Anticipated approval by TCEQ by year end

#### WCS License Renewal – Expiration September 10, 2024

- Renewal application submittal required 1 year in advance of license expiration date
- Submitted 8/28/23 on schedule
- In timely renewal status



### Federal Waste Facility





### Federal Waste Facility - DU Disposal

June 2023 - 60 cylinders from Paducah

August 2023 – 120 cylinders from Portsmouth

September 2023 – 120 cylinders from Paducah





### Federal Waste - LANL TRU Waste

#### Storage

- Continued storage in FWF, 74 Standard Waste Boxes remain inside 35 Modular Concrete Containers (MCCs)
- Texas AG letter to DOE 4/11/23
- DOE responses to AG provide plan for removal
  - Removal Sept 2023 Feb 2024
  - Offsite shipment July 2026 Dec 2026

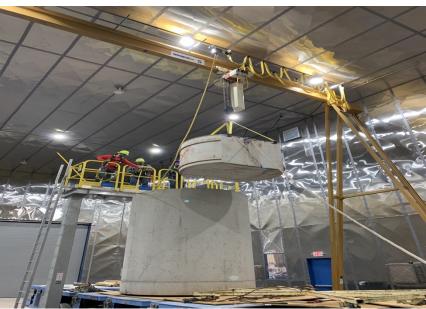
#### **Relocation to Surface Facility**

- Phase 1 prepare to move waste from FWF:
  - Construction of "PERMA-CON" structure completed
  - Equipment installation completed June 2023
  - Mock-ups completed July 2023
  - WCS ready to move LANL TRU
- Phase 2 operations, expected in 2024

#### Future

- Phase 3 (New) Offsite shipment support to WIPP in 2026
  - DOE is evaluating "overpacking" at WCS as a form of treatment to remove D001 waste code







## **Transportation Casks**

- ► The most modern and state-of-the-art casks in service
- Provides protection of the public and the environment in the event of the most severe accident scenarios
- Regulated by the Nuclear Regulatory Commission and the Department of Transportation







# WCS Local Support

### Our Staff Lives in the Community

- Largest private employer in Andrews county
- 160 employees, primarily in Texas
- Employees are involved in the community

### Local Engagement

- WCS office and staff presence in center of town
- Tours and education events

### **Financial Support**

- Surcharges (up to 31.25% of gross receipts)
  - \$76.5 million to Texas (11 years) = \$7M/y
  - \$17.3 million to Andrews (11 years) = \$1.6M/y
  - Grand Total: \$93,816,823
  - Paid in addition to normal agency cost reimbursement and other fees and taxes
- Significant contributions to Community Activities (in addition to surcharges)
  - Scholarships, Education Foundation, Public Safety, Sports Teams











