Draft Regulatory Basis for Disposal of Greater-than-Class C (GTCC) and Transuranic Waste (TRU)

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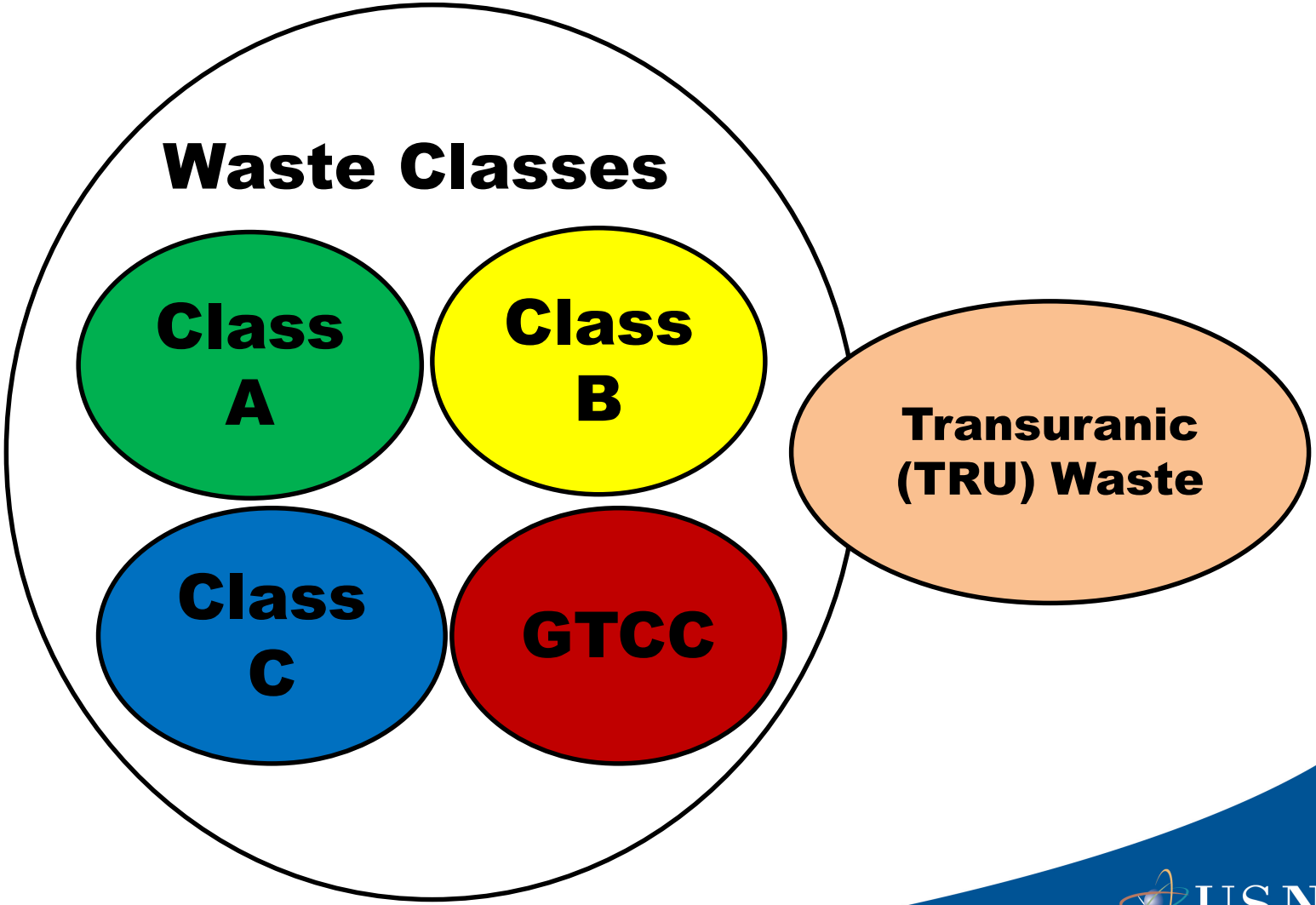
Purpose of Meeting

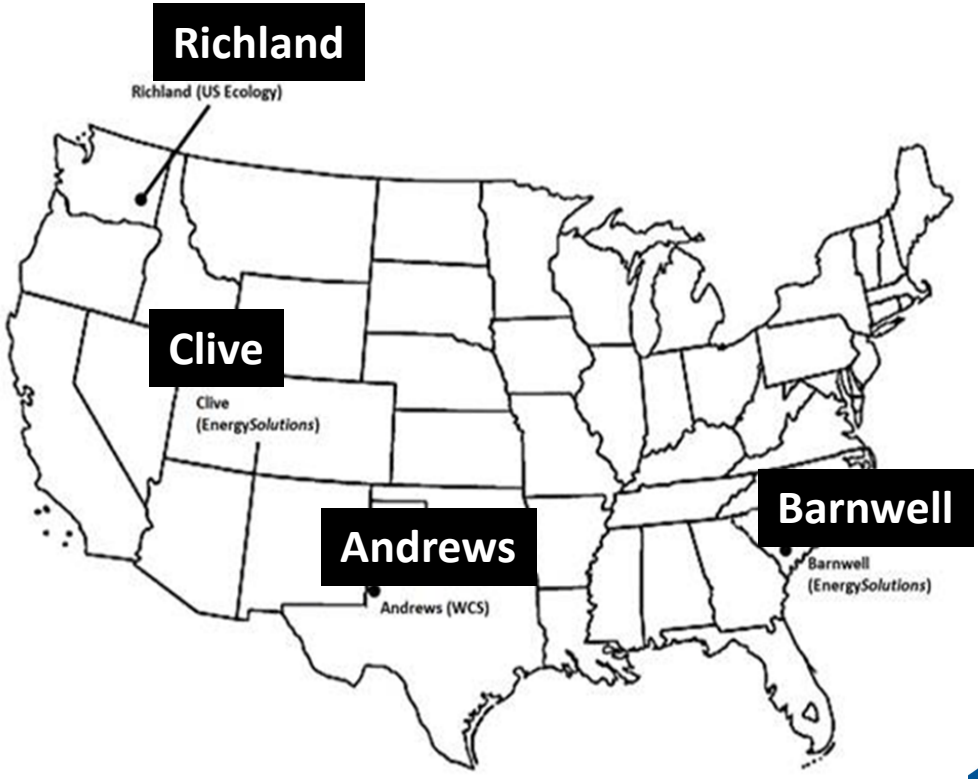
- Stakeholder participation and involvement
- Assist public comment on draft regulatory basis for the disposal of GTCC waste
- Supports NRC's openness strategy and cumulative effects of regulation initiative

Part 61 Low Level Waste Disposal



Commercial Low-Level Radioactive Waste Disposal Facilities

- **US Ecology**
  Richland, WA
  Accepts Class A, B, and C waste
- **Energy*Solutions***
  Clive, UT
  Accepts Class A waste only
- **Waste Control Specialists**
  Andrews, TX
  Accepts Class A, B, and C waste
- **Energy*Solutions***
  Barnwell, SC
  Accepts Class A, B, and C waste



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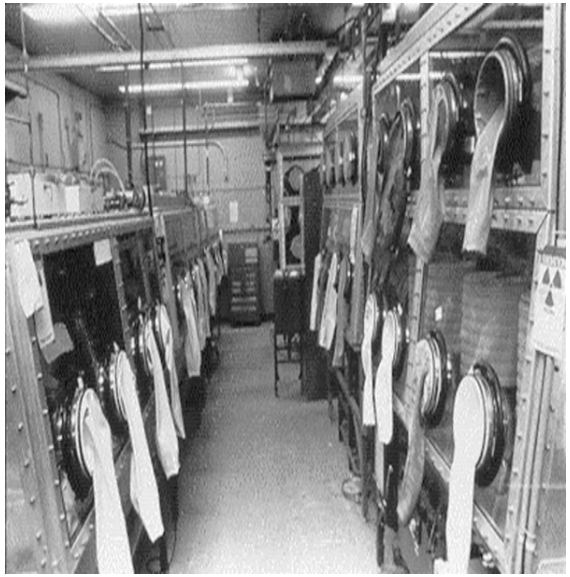
Three categories of GTCC Waste

Activated Metals

Sealed Sources



Other Wastes

GTCC Waste Disposal: A Federal Responsibility

- **LLRW Policy Amendments Act of 1985**
  NRC – License the GTCC waste disposal facility
  DOE – Develop recommendations and options for the safe disposal of all GTCC waste – completed February 1987

- **Energy Policy Act of 2005**
  DOE - responsible for completing activities needed to provide a GTCC waste disposal facility
  - GTCC Environmental Impact Statement (EIS)
    - Draft GTCC EIS – February 18, 2011
    - Final GTCC EIS – February 24, 2016
  - Report to Congress on GTCC Disposal Alternatives – November 14, 2017
  - Await Congressional Action

NRC Activities Related to GTCC Waste Disposal

- January 30, 2015 - Texas requested clarification on Agreement State authority
- July 17, 2015 - SECY-15-0094 - Historical And Current Issues Related To Disposal of GTCC Waste
- December 22, 2015 - SRM-SECY-15-0094 - prepare a regulatory basis for the disposal of GTCC waste through means other than deep geologic disposal after completion of the Part 61 rulemaking and address TRU waste definition
- October 23, 2018 - SRM-M181011 - decouple to the extent practical the GTCC draft regulatory basis from Part 61 rulemaking

Current GTCC Activities

- **Published Draft Regulatory Basis for comment in the *Federal Register* on July 22, 2019 (84 FR 35037)**

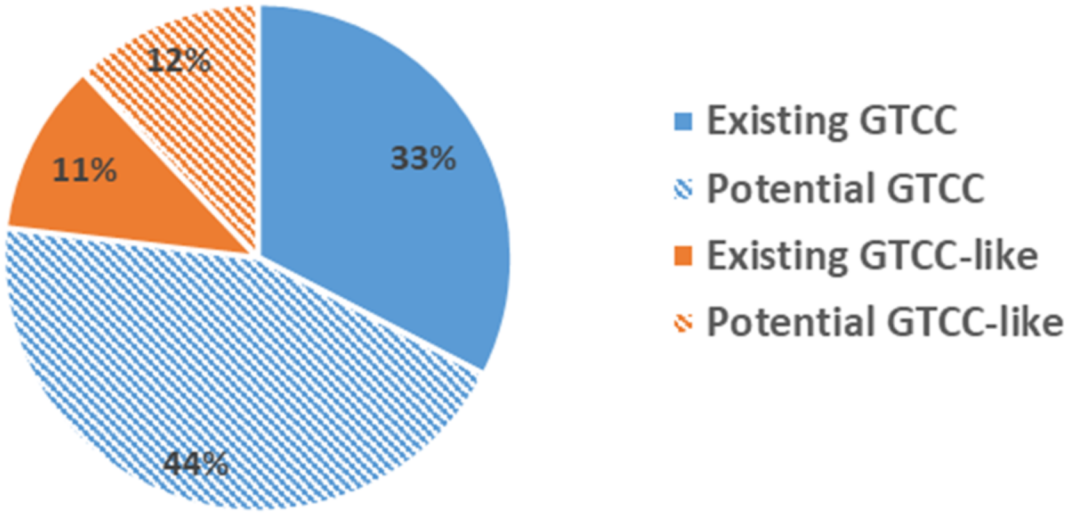
- **Process**
  - Webinar on August 22, 2019
  - Public Meeting in Austin, TX on August 27, 2019
  - 60-day public comment period ends September 20, 2019

DRAFT Regulatory Basis: NRC Staff's Processes and Preliminary Findings

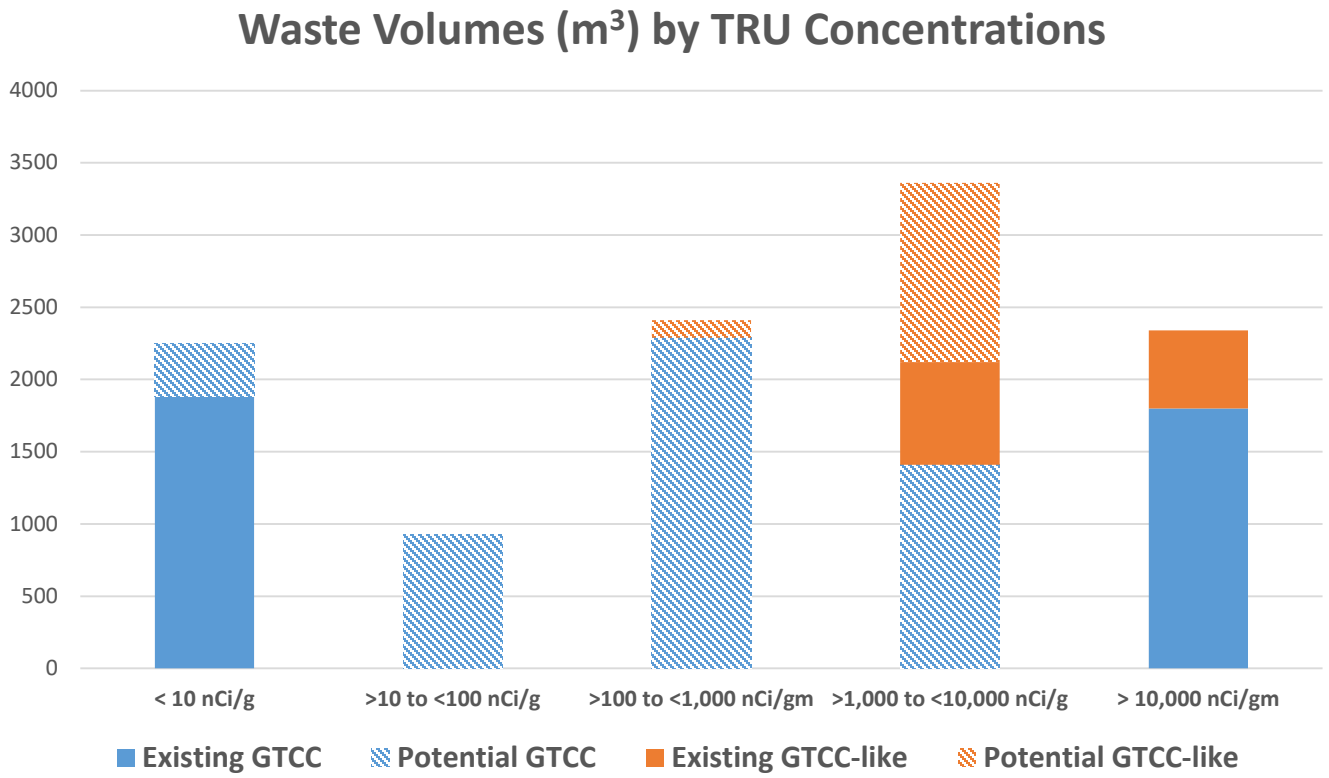
- Evaluated GTCC waste described in DOE's Final Environmental Impact Statement for GTCC Waste (published in 2016)
- Presented three alternatives for implementation of GTCC disposal under 10 CFR Part 61 (i.e., no regulatory change, develop new guidance, and conduct a rulemaking)
- Found the majority of GTCC waste is potentially suitable for near-surface disposal (approximately 80% by volume)
- Found that most (approximately 95%) of the potentially suitable GTCC waste could be regulated by an Agreement State

GTCC Waste Volumes

(GTCC: 8675 m^3 and GTCC-like: 2610 m^3)



Transuranic Radionuclides



Key Assumptions of Technical Analysis

- **Disposal facility design**
  - near surface disposal
  - average disposal thickness of one waste container
- **Exposure assessment**
  - activated metals (stainless steel) low degradation rates
  - consistent with early 1980's Part 61 analysis

Preliminary Hazards Assessment

- **Operational hazards (workers and offsite public)**
  - remote handled packages
  - consideration for fire protection
- **Offsite releases (after closure of facility)**
  - mobile, long-lived radionuclides
- **Intruder exposure**
  - excavation scenario
  - drilling scenario

Technical Analysis Perspectives

- **Most GTCC waste potentially suitable for near-surface disposal**
  - analysis of specific site and inventory required
- **GTCC waste containing TRU radionuclides presents challenges**
  - release of Pu from an operational fire
  - consideration of fissile material during operations
  - intruder - excavation scenario
  - intruder - drilling scenario

For Additional Information:

- Federal Rulemaking Website:
  Go to https://www.regulations.gov and search for Docket ID **NRC-2017-0081**

- NRC's Public Web Site for GTCC:
  https://www.nrc.gov/waste/llw-disposal/llw-pa/gtcc-transuranic-waste-disposal.html

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How to Provide Comments

- *Federal Register* notice (84 FR 35307) provides various methods of submitting comments:
  - Federal Rulemaking Website:

    Go to https://www.regulations.gov and search for Docket ID NRC-2017-0081
  - Email comments: Rulemaking.Comments@nrc.gov
  - Fax comments: 301-415-1101
  - Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff
  - Hand deliver comments: 11555 Rockville Pike, Rockville, MD 20852; between 7:30 a.m. and 4:15 p.m. (ET) on Federal workdays; telephone: 301-415-1677

Submitting Comments

- **Include Docket ID NRC-2017-0081 on all correspondence**

- **Comment period ends September 20, 2019**

Questions?