




Optimizing Waste Disposal for the New Millennium
A Utah Perspective

March 11, 2015

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Utah Division of Radiation Control

Overall Agency Priorities


- Assure that low-level radioactive waste (LLRW) management within Utah is protective of public health and safety and the environment
- Foster and work within a regulatory framework that is transparent and predictable
- Institute agency/program efficiencies
- Build public and regulated community confidence
- Enhance information sharing
- Assure that adequate planning and resources are in place for long-term stewardship of the Clive site



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Program Activities


- Process that includes early stakeholder involvement to vet critical issues
- Commitment between licensee and Utah Division of Radiation Control (UDRC) to schedules and work completion
- UDRC website and EnergySolutions list-serve
- Utah Dept. of Environmental Quality (DEQ) commitment to put documents and information on-line real time for the public



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Program Activities


- Agency budget /fees creates more accountability
- Greater emphasis on research and documentation of information underlying license and permit actions (s.B 11, 2012 Gen. Session)
- Low-level radioactive waste (LLRW) licensing and permitting procedures



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Program Activities

- Utah Radiation Control Board
 - Rulemaking actions
 - Civil penalty revision (\$10,000 per violation)
 - Categorize and set time frames for LLRW licensing and permitting actions
 - Implementation of Atomic Energy Act requirements for public participation in 11e.(2) byproduct material licensing actions
 - Generator site access requirements revisions
 - Part 37 requirements for Category 1 and Category 2 radioactive materials
 - Administrative procedures changes
 - Shift from trial-type process to administrative record process

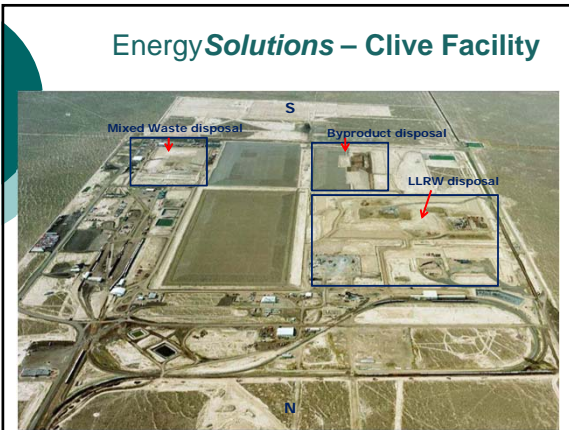


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Energy Solutions – Clive Facility Tooele County



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Priorities: Low-Level Radioactive Waste

EnergySolutions

- Radioactive Materials License renewal
- Ground Water Permit renewal
 - Approved – October 2014
- Revised final cover design
- Evaluation of Performance Assessments
 - Depleted Uranium
 - Erwin Resin Solutions waste processing/blending
- Sealed Source Variance
 - Completed – Dec. 31, 2014

Aerial – EnergySolutions, Clive Facility

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Priorities: Low-Level Radioactive Waste

EnergySolutions

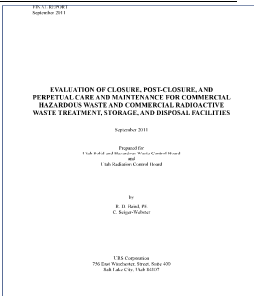
- Environmental Monitoring Plan Revision
 - Approved – October 2014
- Annual Financial Surety Update

Aerial – EnergySolutions, Clive Facility

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Assure Planning and Resources for Long-Term Stewardship


- Unique – private ownership of Clive facility
- Long-term stewardship fund for perpetual care
- Long-term role of state
- Periodic report from Utah Radiation Control Board
 - Includes recommendation regarding long-term stewardship



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Utah Perspective – Regulatory Framework

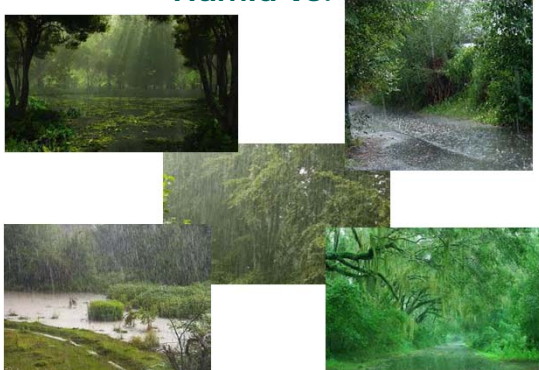
- Depleted uranium
- Site-specific performance assessments



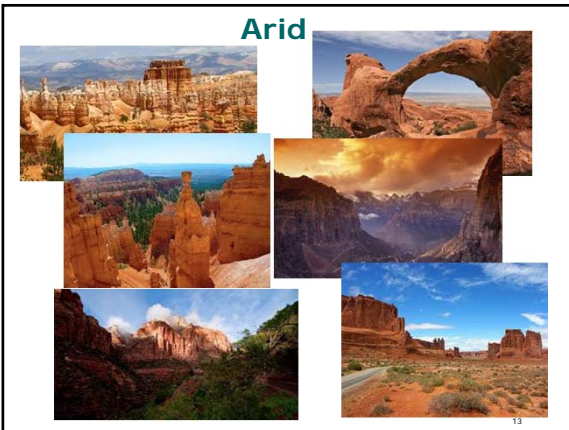
EnergySolutions – Clive Facility

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Humid vs.




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Utah – Depleted Uranium (DU) Rule


- **December, 2009:**
Utah Radiation Control Board Action:
 - Approves changes requiring DU Performance Assessment and approval by the Director before disposal
- **January, 2010:**
 - Public participation / comment



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Utah – Depleted Uranium (DU) Rule


- **April, 2010:**
Utah Radiation Control Board action:
 - Approves changes to the proposed rule based on comments received
 - Change in Proposed Rule filed with the Utah Division of Administrative Rules
- **May, 2010:**
 - R313-25-8 (now R313-25-9) Final Rule published in the *Utah State Bulletin*
- **June 2, 2010:**
 - Effective Date of Final Rule



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Utah Depleted Uranium (DU) – Final Rule


- "Concentrated DU" means waste with DU concentrations greater than 5% by weight
- Land disposal of significant quantities of concentrated DU (> 1 metric ton in total accumulation) after June 1, 2010, shall submit a performance assessment (PA)
- PA revised as needed to reflect ongoing guidance and rulemaking from the NRC



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Utah Depleted Uranium (DU) – Final Rule


- Demonstrates that the performance standards specified in 10 CFR Part 61 (corresponding Utah rules) will be met for the total quantities of concentrated DU and other wastes, including wastes already disposed of and the quantities of concentrated DU the facility now proposes to dispose



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Utah Depleted Uranium (DU) – Final Rule


- PA compliance period a minimum of 10,000 years. Additional simulations performed for the period where peak dose occurs and the results shall be analyzed qualitatively
- No facility may dispose of significant quantities of concentrated DU prior to the approval by the Division Director of the performance assessment



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Utah Performance Assessments Rule


- **November, 2010**
Utah Radiation Control Board action:
 - Approves proposed revisions to establish conditions when a PA is required
- **February, 2011**
Utah Radiation Control Board action:
 - Approved additional changes based on comments



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Utah Performance Assessments Rule


- **Conditions for requiring a PA**
 - Waste was not considered in the development of the limits on Class A waste and not included in the analyses of the Draft Environmental Impact Statement (EIS) for 10 CFR Part 61
 - Waste is likely to result in > 10% of the dose limits during the time period at which peak dose would occur



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Utah Performance Assessments Rule

- **Conditions for requiring a PA**
 - Waste will result in > 10% of the total site source term over the operational life of the facility
 - Waste would result in an unanalyzed condition not considered in the development of R313-25 (10 CFR 61.55)



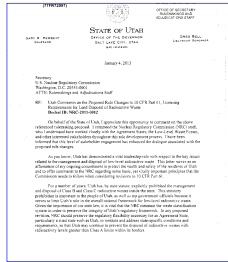
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NRC Part 61 Rulemaking -- WAC & Waste Classification

"This proposed revision must not either explicitly or by interpretation be a means to by-pass the existing waste classification requirements of Subpart 61.55."

"It is vital to Utah's Class B and Class C prohibition that the existing classification system of low-level radioactive waste remain in place, with the ability of a state, such as Utah, to enforce state prohibitions on wastes with higher radioactive levels."

-- Gov. Gary R. Herbert

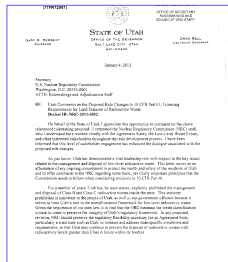


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NRC Part 61 Rulemaking -- Compatibility

"NRC should preserve the regulatory flexibility necessary for an Agreement State, particularly a sited state such as Utah, to institute and address state-specific conditions and requirements, so that Utah may continue to prevent the disposal of radioactive wastes with radioactivity levels greater than Class A limits within its borders."

-- Gov. Gary R. Herbert



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