

February 24 - 28, 2013 ♦ Phoenix, Arizona

Hot Topics and Emerging Issues – Commercial LLRW Management

Utah Update



Rusty Lundberg
Utah Department of Environmental Quality
Division of Radiation Control



Utah Update - LLRW Management

- Overarching State Priorities
- Clive Facility Priorities
- National Activities

Utah DRC – Agency Activities



Overarching State Priorities

- Assure that process of transporting and disposing of LLW at the Energy Solutions Clive facility is done with ultimate protection of public health and the environment
- Operate a regulatory framework that is transparent and predictable
- Assure that adequate planning and resources are in place for long-term stewardship of the site



Assure Protection of Public Health & Environment

- Lean Six Process review on permit procedures and staffing
- Re-organization of Division of Radiation Control to better address needs
- Hiring of additional highly qualified staff
- Greater emphasis on research and documentation of information underlying permit (S.B. 11, 2012 Gen. Session)



Transparent and Predictable Process

- Lean Six Sigma process that includes early stakeholder involvement to vet critical issues
- Commitment between regulated entity (ES) and DRC to schedules and work completion
- DRC website and ES list-serve
- DEQ commitment to put documents and information on-line real time for the public
- ES Flat-fee creates more accountability in DRC



Assure Planning and Resources for Long-Term Stewardship

- Unique private ownership of Clive facility
- Long-term stewardship fund for perpetual care
 - > Report to Utah Legislature (UCA 19-1-307)

FINAL REPORT September 2011

EVALUATION OF CLOSURE, POST-CLOSURE, AND PERPETUAL CARE AND MAINTENANCE FOR COMMERCIAL HAZARDOUS WASTE AND COMMERCIAL RADIOACTIVE WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

September 2011

Prepared for Utah Solid and Hazardous Waste Control Board and Utah Radiation Control Board

by

R. D. Baird, PE C. Seiger-Webster

URS Corporation 756 East Winchester, Street, Suite 400 Salt Lake City, Utah 84107



Operational Priorities for Clive Facility

- Sealed Source Variance Complete
- SempraSafe Determination Partial / In-progress
- Class A West Consolidation Approved
- Depleted Uranium Performance Assessment In progress
- 11e.(2) License Amendment: open cell area –
 Approved
- 11e.(2) & LLRW Licenses and Ground Water Permit Renewal Applications – Submitted during 2012, In progress



- Legislative Performance Audit
- Recommendations
 - Validate bulk waste streams (presence during sampling)
 - Review staff time spent validating ban on B&C
 - Expand USDOT requirements inspections to all days and time waste accepted

REPORT TO THE

UTAH LEGISLATURE

Number 2012-10



A Performance Audit of The Division of Radiation Control

September 2012

Office of the LEGISLATIVE AUDITOR GENERAL State of Utah



- Recommendations (cont.)
 - UDRC full authority to travel to place of origin and review on-site packaging & sampling of waste before shipment
 - Reporting requirements to determine foreign waste
 - Legislature require
 greater government
 audit access to
 EnergySolutions due to
 unique land ownership

REPORT TO THE

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- **Performance Audit** Follow Up
 - Utah Legislature H.B. 124, 1st Subst.
 - Requires generator site access permittees to allow our agency access to their facility as a condition of permit approval
 - Increases the maximum civil penalty from \$5,000 to \$10,000 per violation

LEGISLATIVE GENERAL COUNSEL & Approved for Filing: T.J. Nuttall & ₡ 02-15-13 9:16 AM ₡.

H.B. 124 1st Sub. (Buff)

Representative Brad L. Dee proposes the following substitute bill:

RADIATION CONTROL AMENDMENTS 2013 GENERAL SESSION STATE OF UTAH Chief Sponsor: Brad L. Dee Senate Sponsor: _ LONG TITLE

This bill amends provisions related to the regulation of radioactive waste disposal.

Highlighted Provisions:

This bill:

11

15

22

- 12 amends provisions relating to the funding of radioactive waste disposal regulation;
- grants rulemaking authority to the Radiation Control Board relating to radioactive

waste licensing;

- increases civil penalties for the violation of certain provisions;
- provides for Division of Radiation Control access to radioactive waste disposal

facilities under certain circumstances; and

makes technical changes

19 Money Appropriated in this Bill:

20

Other Special Clauses:

- Utah Code Sections Affected:
- AMENDS: 24
- 25 19-1-108, as last amended by Laws of Utah 2010, Chapter 17





Performance Audit Follow Up

- **Utah Legislature** H.B. 124, 1st Subst.
 - Establishes time frames for completeness reviews and reviews of licensee responses
 - Authorizes the Utah **Radiation Control Board to promulgate** rules regarding categorizing different levels of applications, setting review time frames--with certain tolling provisions

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National - Current and Future Issues

- Part 61 Rulemaking
 - Utah's ban on Class B & C waste
 - > Period of performance (long vs. short lived)
 - > Commission Directive January 19, 2012
 - > SECY-13-001
- Branch Technical Position on Concentration Averaging & Encapsulation
- Branch Technical Position on Import of Non-U.S.
 Origin Radioactive Sources
- Draft Comparative Environmental Evaluation of Alternatives for Handling LLRW Spent IERs from Commercial NPPs

National Regulatory Activities

Keeping Up ???







Utah – Agency Activities Energy Solutions – Clive Facility



EnergySolutions - Clive Facility



- National security support
- Variance Approval:
 - Existing sealed source license prohibition
 - > Granted April, 2012
 - Allows disposal of certain Class A sealed sources
 - Approval letter found at

www.radiationcontrol.utah.go v/EnSolutions/docs/2012/Apr/ Variance.PDF



ORDIO BELL

Department of Environmental Quality

> Amando Smith Elecutive Directo

DEVENOR OF BUILDIANTION CONTROL. Rate Landing

April 11, 2012

Duniel Shrum, Vice President, Regulatory Affairs EnergySolutions, LLC. 423 West 300 South, Suite 200 Sult Lake City, Utah 84101

RII: Radioactive Materials License (RML) UT 2300249: EnergySolutions' Variance Request to License Condition 16A which Prohibits the Disposal of Sealed Sources at the Clive, Utah Facility

Dear Mr. Shrum:

On August 2, 2011, EnergySolutions submitted to the Division of Radiation Control (DRC) variance request (CDI1-0216) to RML UT 2300249. Currently, License Condition 16A prohibits disposal of sealed sources at the Clive facility. In a meeting on August 18, 2011, EnergySolutions presented their request to DRC staff. EnergySolutions made this request is support of the U.S. Department of Energy (DoCE) National Nuclear Security Administration (NNSA), Global Trace Reduction Initiative (GTRI). The GTRTs Off-Site Source Recovery Program (OSRP) recovers and disposes certain usused sealed sources from civilian sites. The GTRTs OSRP has requested that certain sealed sources be authorized for disposal at EnergySolutions' Clive, Ush facility.

The Executive Secretary's letter dated October 13, 2011 requested additional information from the licensee. EnergySolutions was asked to provide information demonstrating that the requested variance complies with all requirements stand in Utah Administrative Code (UAC) R313-25-8(1). The licensee's letter dated November 7, 2011 (CD11-0304) provided information to address each individual requirement in UAC R313-25-8(1).

DRC staff evaluated EnergySolutions response and the DRC has the following comments:

- UAC R313-25-8(I)(a): The DRC agrees that scaled sources were considered by the Nuclear Regulatory Commission (NRC) when developing radioactive waste classification criteria in 10 CFR 61 and therefore is not a unique waste stream. This variance request complies with this requirement;
- UAC R313-35-8(1)(b). The half-lives of the incorpor in the sources to be disposed is equal
 to the half-life of Cs-137 or less. Therefore the dose limits will not be reached. This
 variance request complies with this requirement;
- . UAC R313-25-8(1)(c)- To comply with this requirement the DRC will allow 1% of the

100 North 1900 West - Ball Labor Dez, UT Mailing Address: P.O. Ben 1986(5): Salt Labor Dez, UT 94004-9200 Tolophone (2011) 204-4229 - Par (2011) 201-4207 - T.O.D. (2011) 201-4408 services unture per Entertoin 1900 magnif

Variance Conditions:

- Variance limited to one year starting with the initial shipment
- Class A only based on the activity of the sealed source (activity cannot be averaged over the shipping container for waste classification determination)
- Domestic sources only CRCPD SCATR program
- Minimum of 1" of grout must encapsulate the sealed sources within the disposal container



- Variance Conditions (cont.):
 - Disposal restricted to the Clive Containerized Waste Facility (CWF)
 - Isotopes limited to those with half-lives of ≤ ~ 30 years (includes Cs-137)



- UDRC oversight of the Clive sealed source disposal will include:
 - DRC HP staff will be present for the first few shipments under the variance
 - Verification that sealed source or sources are encased in the disposal container with grout or concrete
 - Verification that the sources received are Class A, as a single source or in aggregate



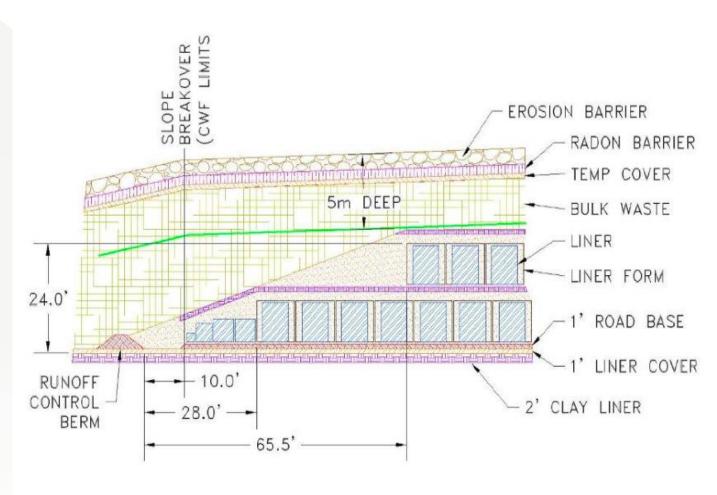
- UDRC oversight of the Clive sealed source disposal will include (cont.):
 - Verification that the isotopes in the sources are equal to or Jess than to the half-life of Cs-137 (30.7 years)
 - Verification that the sealed sources received are within the 1-year variance timeframe
 - > Review and evaluate project report



EnergySolutions – CWF

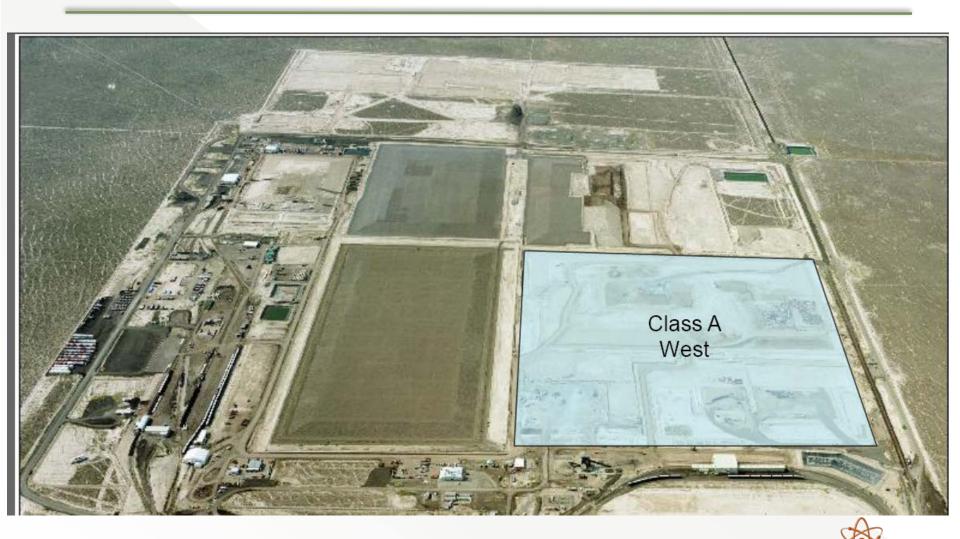
Design Criteria

- Package void space < 15%
- -- Pre-shipment review
- Packages not opened
- -- > 5m below top of cover









Changes to Permitted Volume

August 4, 2011

Embankment	Disposal Volume (cy)
Class A West	8,724,097
Class A North	1,722,509
Class A	3,778,704
Class A South	3,501,915

Volume added by CAW: 3,222,884 cy Volume retracted in Class A South: **3,501,915 cy**

Reduction in requested disposal space: *279,031 cy

*Volume correction based on July 27, 2011 letter.



- Approved November 2012
- Amended Radioactive Materials License and Ground Water Discharge Permit
- Limits combined Class A disposal capacity to 8.72 million yards³
- Limits total Class A & mixed waste disposal capacity to 10.08 million yards³



Utah – Other Activities

- 11e.(2) Byproduct license renewal
 - > Public participation
- Depleted Uranium Performance Assessment
- Other Performance Assessment
 - > SempraSafe
 - Revised cover design

UTAH DIVISION OF RADIATION CONTROL

ENERGYSOLUTIONS CLIVE
IIe.(2) DISPOSAL LICENSE
UT2300478 LICENSE RENEWAL
APPLICATION (LRA)

ROUND 1 INTERROGATORIES



John Hultquist Licensing Section Manager January 16, 2013

Utah – Other Activities

- Radioactive Materials License renewal
- Ground Water Discharge Permit renewal
- 11e.(2) Byproduct disposal embankment license amendment
 - > Open cell limit increased (753,000 to 840,000 ft.²)
 - > In-cell bulk storage stockpile limit reduced (75,000 to 40,000 yds.3)
 - > Approved February 5, 2013



Contact Information

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