



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

- ① **Assure that process of transporting and disposing of LLW at the EnergySolutions Clive facility is done with ultimate protection of public health and the environment**
- ② **Operate a regulatory framework that is transparent and predictable**
- ③ **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**

Additional Priorities

- ◉ **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

Additional Priorities

- ◎ **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
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

Additional Priorities

- 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:

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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

LONG TITLE
General Description:
This bill amends provisions related to the regulation of radioactive waste disposal.

Highlighted Provisions:
This bill:

- 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.

Money Appropriated in this Bill:
None

Other Special Clauses:
None

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



1st Sub. H.B. 124

Additional Priorities

○ **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

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:

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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

LONG TITLE
General Description:
This bill amends provisions related to the regulation of radioactive waste disposal.

Highlighted Provisions:
This bill:

- 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.

Money Appropriated in this Bill:
None

Other Special Clauses:
None

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



1st Sub. H.B. 124



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

EnergySolutions - Clive Facility



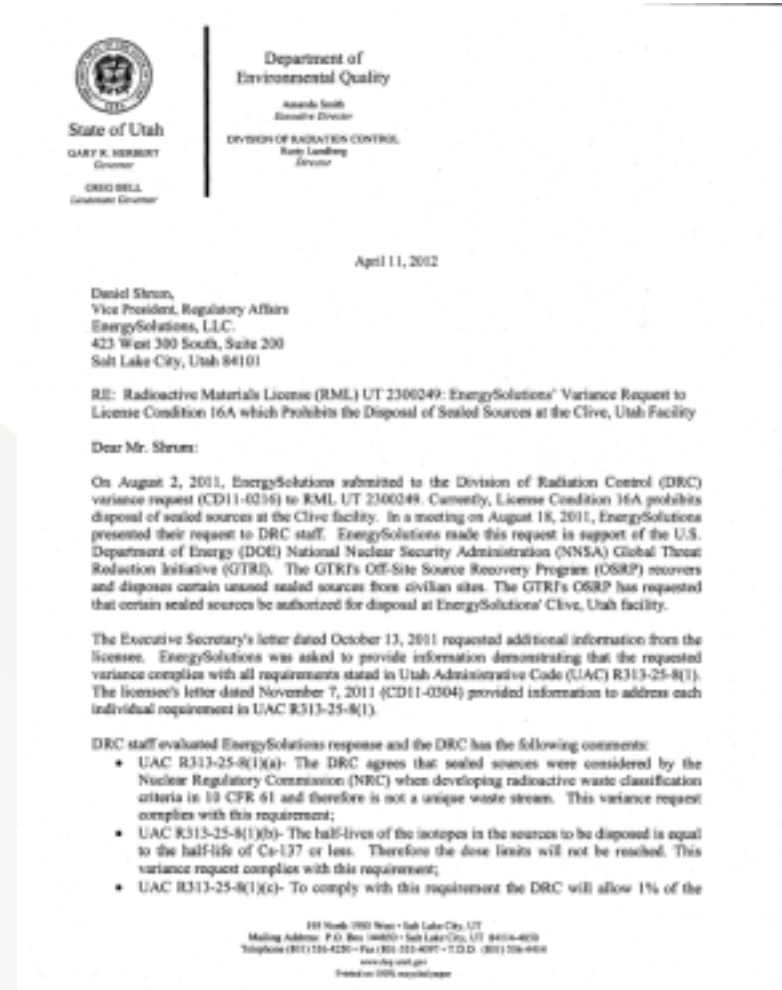
EnergySolutions – Clive Facility



Utah – Sealed Source Variance

- 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.gov/EnSolutions/docs/2012/Apr/Variance.PDF



Utah – Sealed Source Variance

◎ 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

Utah – Sealed Source Variance

- ◎ **Variance Conditions (cont.):**
 - > **Disposal restricted to the Clive Containerized Waste Facility (CWF)**
 - > **Isotopes limited to those with half-lives of $\leq \sim 30$ years (includes Cs-137)**

Utah – Sealed Source Variance

- ◎ **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**

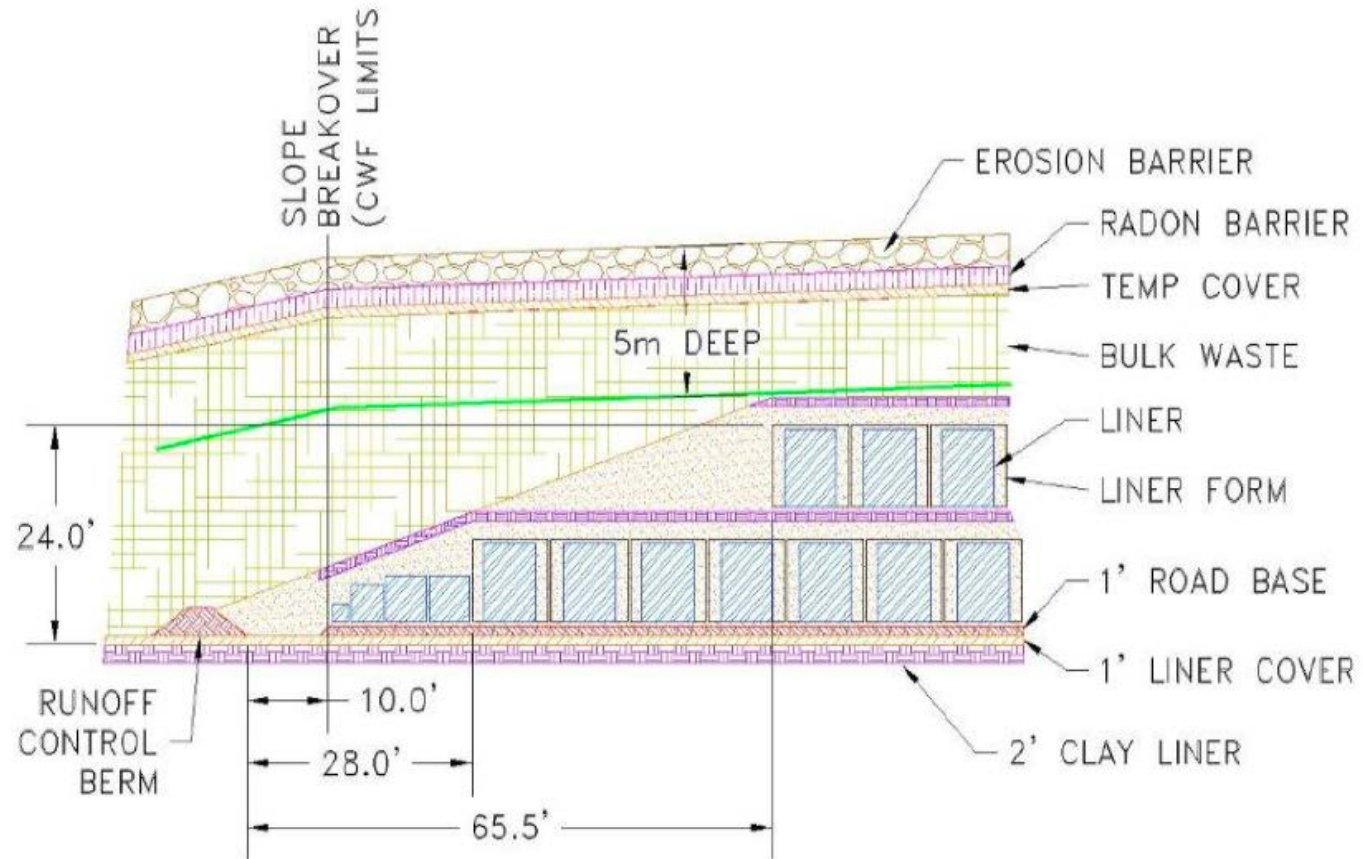
Utah – Sealed Source Variance

- ◎ **UDRC oversight of the Clive sealed source disposal will include (cont.):**
 - › **Verification that the isotopes in the sources are equal to or less 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



Utah – Class A West Combined Disposal Embankment



Utah – Class A West Combined Disposal Embankment



Utah – Class A West Combined Disposal Embankment

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**

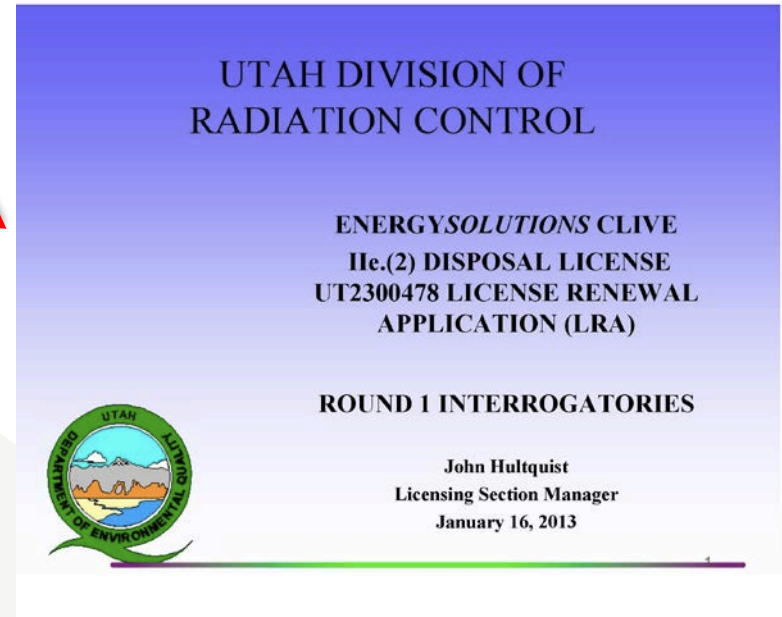
*Volume correction based on July 27, 2011 letter.

Utah – Class A West Combined Disposal Embankment

- ◎ **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 – 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

Rusty Lundberg

Utah Division of Radiation Control

Utah Department of Environmental Quality

(801) 536-4257

rlundberg@utah.gov

