



State of Utah

GARY R. HERBERT  
Governor

GREG BELL  
Lieutenant Governor

Department of  
Environmental Quality

Amanda Smith  
Executive Director

DIVISION OF RADIATION CONTROL  
Rusty Lundberg  
Director

Proposed Approval Letter

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

RE: 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 (CD11-0216) 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 in support of the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) Global Threat Reduction Initiative (GTRI). The GTRI's Off-Site Source Recovery Program (OSRP) recovers and disposes certain unused sealed sources from civilian sites. The GTRI's OSRP has requested that certain sealed sources be authorized for disposal at EnergySolutions' Clive, Utah 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 stated 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(1)(a)- The DRC agrees that sealed 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 R313-25-8(1)(b)- The half-lives of the isotopes in the sources to be disposed is 30 years 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

calculated total source term limit (which equals 708,678 curies) of the Class A North Embankment CWF Cell which will ensure compliance with this requirement; and

- UAC R313-25-8(1)(d)- Sealed sources were considered by the NRC in developing 10 CFR-61. Additionally, sealed sources have been evaluated in the NRC's Branch Technical Position paper on Concentration Averaging and Encapsulation (BTP). Therefore, the form of the waste (i.e. sealed sources versus bulk waste) does not constitute an unanalyzed condition. This variance request complies with this requirement.

In the variance request EnergySolutions proposed the commitments below. The DRC concurs with the following commitments as amended:

1. Each individual source and package disposed under the variance will not exceed Class A LLRW limits as defined in UAC R313-15-1009.
2. EnergySolutions will not seek NRC approval to import foreign sources and will only manage and dispose of domestic sources.
3. Shipments shall be certified in accordance with the EnergySolutions' Waste Characterization Plan Exhibit 2. Sources shall be packaged in accordance with the 1995 NRC Branch Technical Position paper on encapsulation (1995 BTP), and the August 2011 Draft Branch Technical Position Paper on Concentration Averaging and Encapsulation, Rev. 1 (2011 Draft BTP). If conflict exists between the 1995 BTP and the 2011 Draft BTP, the licensee must follow the statement which is most restrictive.
4. Sources will be disposed in the CWF in accordance with the most currently approved Construction Quality Assurance/Quality Control Manual requirements for CWF disposal and other applicable CWF criteria for disposal.
5. EnergySolutions will review and approve each shipment before it is transported from the generator's or processor's facility.
6. DRC will be notified at least 7 calendar days prior to scheduled receipt of the first shipment under this variance.
7. The variance will have a term of one year (365 days) from the date the first shipment is received under this variance.
8. EnergySolutions will track and report the total number, volume, and activity of sources received and the serial numbers or other unique identification number of each source disposed under this variance. This report will be due no later than 3 months after the variance expiration date.

The DRC has evaluated EnergySolutions request and has determined to grant the variance to License Condition 16A with the following additional conditions:

1. The sealed source or sources shall be encased within the disposal containers with grout or concrete; and
2. Only sealed sources from the GTRI's OSRP are authorized for disposal under this variance.

Based on the above commitments and conditions, the Executive Secretary grants a variance to License Condition 16A. This variance shall be for one year (365 days) starting from the receipt of the first shipment at the Clive facility, and as long as the commitments and additional conditions outlined above are followed. If any commitment or condition is not followed, this variance shall

be suspended or terminated. For disposal of sealed sources beyond this 12 month variance, EnergySolutions shall have to obtain approval through a license amendment of RML UT2300249. If you have any questions please contact John Hultquist or Ryan Johnson at (801) 536-4250.

UTAH RADIATION CONTROL BOARD

Rusty Lundberg, Executive Secretary

RL/RJ:rj

Cc. Sean McCandless

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