U.S. DEPARTMENT OF ENERGY

Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste Environmental Impact Statement (DOE/EIS-0375-D)

Sealed Sources

What are sealed sources?

- Sealed sources commonly consist of concentrated radioactive materials encapsulated in small metal containers. They are widely used in equipment to diagnose and treat illnesses (particularly cancer), sterilize medical devices, irradiate blood for transplant patients, nondestructively test structures and industrial equipment, and explore geologic formations for oil and gas.
- Sealed sources are commonly found in hospitals, universities, and industries throughout the United States. Sealed sources may be considered waste when they are no longer needed for their intended use or are no longer capable of performing their intended use. Sealed sources may or may not become GTCC LLRW, depending on their Nuclear Regulatory Commission (NRC) waste classification for disposal. Radionuclides commonly used in sealed sources include cesium-137, americium-241, and plutonium-238.

What security risk do these materials present?

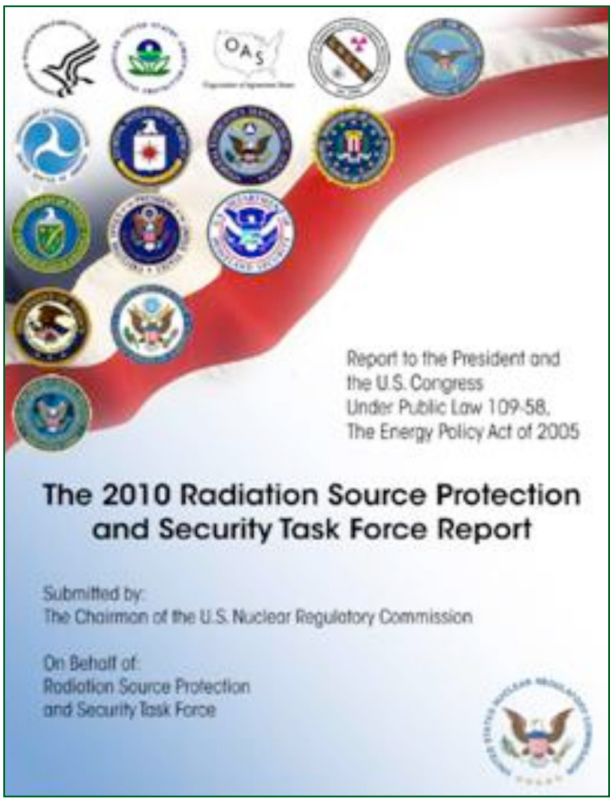
- Unsecured or abandoned sealed sources pose a national security concern. Due to their high activity and portability, some of these sources could be used either individually or in aggregate in radiological dispersal devices commonly referred to as “dirty bombs,” resulting in potential economic impacts in the billions of dollars and significant social disruption.
- Every year, thousands of sources become disused and unwanted in the United States. Currently most licensees have no commercial disposal option, with only 14 States currently having commercial LLRW sealed source disposal access. There are significant political, statutory, and regulatory challenges associated with the creation of commercial disposal access for the remaining 36 States. The DOE Global Threat Reduction Initiative/Offsite Source Recovery Project recovers, stores, and as appropriate, disposes of, many disused sealed sources in response to national security or public health and safety threats. However, many disused sealed sources remain in storage at commercial licensee sites. While secure storage is a temporary measure, the longer sources remain disused or unwanted, the chances increase that they will become unsecured or abandoned. Thus, permanent disposal is essential. While current Federal and State regulations and inspection programs provide assurance that these disused sources remain secure while in long-term storage, disposal is considered the most secure management approach.

Abandoned Am-241 and Cs-137 gauges and shipping shields

Disused well logging sources being loaded into a 55-gallon drum

What is being done to protect national security?

- The Interagency Task Force on Radiation Source Protection and Security established by the Energy Policy Act of 2005 representing 14 Federal agencies and two state organizations identified the need for a disposal capability for these sources as the most significant radiation source protection and security challenge facing the nation in its August 2010 report to the President and Congress, *The 2010 Radiation Source Protection and Security Task Force Report:* **http://www.nrc.gov/security/byproduct/2010-task-force-report.pdf**
- The Task Force recommends that national security efforts be taken to minimize the potential for disused sealed radioactive sources (a subset of GTCC waste found at hospitals, universities, and industries) to be used by terrorists in a dirty bomb and that the DOE continue its ongoing efforts to develop GTCC disposal capability.



GTCC Environmental Impact Statement

- The Department of Energy (DOE) Office of Environmental Management issued for public review and comment the Draft Environmental Impact Statement (EIS) for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste. The Draft EIS evaluates the potential environmental impacts associated with constructing and operating a new facility or facilities, or using an existing facility, for the disposal of GTCC LLRW and GTCC-like waste.
- The Draft EIS and related information are available at the GTCC EIS website at **http://www.gtcceis.anl.gov**
- The Draft EIS is also available at the DOE NEPA website at **http://www.nepa.energy.gov**
- Public comments are being solicited until June 27, 2011.

Public Meetings

- Public scoping meetings were held July – September 2007 at the candidate disposal locations.
- Public hearings will be held at these locations this spring:

North Augusta, South Carolina	4/19/2011
Carlsbad, New Mexico	4/26/2011
Albuquerque, New Mexico	4/27/2011
Santa Fe, New Mexico	4/28/2011
Las Vegas, Nevada	5/09/2011
Idaho Falls, Idaho	5/11/2011
Pasco, Washington	5/17/2011
Portland, Oregon	5/19/2011
Washington, DC	5/25/2011