

**2001 International Containment & Remediation Technology  
Conference and Exhibition  
Florida State University**

**U.S. ARMY  
DECOMMISSIONING  
AND  
MIXED WASTE REMEDIATION EXPERIENCES**

**PRESENTED BY:**

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**ABSTRACT**

The U.S. Army, Headquarters, Operations Support Command, Safety and Radioactive Waste Disposal Office, Rock Island, IL is the Department of Defense (DoD) executive agency for low-level radioactive waste (LLRW) disposal. Because of DoD downsizing and base closure actions, we are involved with several radiological remediation projects, Nuclear Regulatory Commission (NRC) license decommissioning efforts and mixed waste treatment/disposal problems. Ongoing DU decommissioning efforts include the research and application of treatment technologies for several hundred thousand cubic feet of mixed waste at the Lake City Army Ammunition Plant (AAP), Independence, MO and a unique joint characterization/decommissioning effort between the Army and the facility operating contractor, Alliant Techsystems, at Twin Cities AAP, Arden Hills, MN. Legal constraints on the Government procurement process, State and Federal regulatory requirements, limited disposal and treatment options and shrinking financial resources add to our challenge.

**EXTENDED ABSTRACT**

The Department of Defense is a substantial generator of low-level radioactive waste (LLRW) because of research and development installations, medical facilities, production and testing of depleted uranium (DU) munitions and armor and radio luminescent devices.

Prior to 1990 the Defense Department did not have a uniform program for dealing with LLRW. Each service and for the most part each individual DoD installation developed their own procedures and protocol for dealing with LLRW. In 1989 Congress tasked the Government Audit Organization (GAO) to investigate the LLRW problems within the DoD. The Congressional tasking was prompted by a growing concern over the numerous DoD violations, incidences and accidents. The DoD reputation with States, compacts and regulators was tarnished.

On March 23, 1990, the GAO published a report to Congress entitled "The Military Would Benefit from a Comprehensive Waste Disposal Program." The basic GAO recommendations involved the establishment of an Executive Agency for LLRW disposal. A central LLRW office would be responsible for:

- (1) establishing uniform policies and procedures,
- (2) ensuring compliance throughout DoD,
- (3) maintaining a central inventory database,
- (4) and acting as the single DoD voice for dealing with State, Compact and Federal regulators.

In addition, the GAO suggested that the LLRW agency would create a substantial DoD cost savings through volume reduction; quantity discounts and avoided duplication of efforts.

Because of our relative responsibility in terms of NRC licensed commodities and experience with the Department of Transportation and disposal site criteria, the DoD agreed that the U.S. Army, Headquarters, Operations Support Command (OSC), (formerly U.S. Army Industrial Operations Command, formerly U.S. Army, Armament, Materiel and Chemical Command, (AMCCOM)), Safety/Radioactive Waste Disposal Office would serve as the DoD Executive Agent for LLRW disposal.

The DoD LLRW program continues to expand in terms of its customer base and core mission. Currently the agency serves as the DoD Executive Agent for LLRW, manages two U.S. Army NRC licenses, is responsible for the worldwide retrograde and disposition of U.S. Army radiologically contaminated equipment and provides decontamination and decommissioning services as requested and funded. In fiscal year 1999 (FY99), (i.e., October 1, 1998 to September 30, 1999) the DoD Executive Agency served 187 installations, disposed of more than 113,000 cubic feet of LLRW and developed and published a new set of shipping procedures. The agency customer base has expanded beyond DoD to include, among others, the Environmental Protection Agency, the Food and Drug Administration, U.S. Customs, the U.S. Department of Agriculture and the Federal Emergency Management Agency.

The agency utilizes disposal site contracts with Barnwell, SC, Hanford, WA, Waste Control Specialists, TX and Envirocare of Utah. In addition, the agency has consolidation facility contracts with commercial contractors outside both the Barnwell, SC and the Hanford, WA disposal sites.

We have taken steps to streamline the Government procurement process by working closely with small disadvantaged (8A) contractors and by developing a "Qualified Bidders List" (QBL). Our ties with the 8A firms (we currently have contracts in place with six 8A firms) allow us to make sole source awards for smaller scale projects. This cuts the procurement lead-time from months to weeks or in some cases only days. For larger efforts and those projects that allow for a three to six month delay in the start up, we utilize our QBL process. We have set up four QBL categories; Characterization/Verification,

Decontamination/ Decommissioning, Transportation/Packaging and Processing/ Disposal. Prospective contractors, interested in one or more of the QBL categories, may request an application package. The OSC staff then reviews the completed QBL applications. Additional information is available at the OSC website; <http://www.osc.army.mil/dm/dmwweb/indexdmw.htm>. Once approved, contractors are considered for all QBL contractual efforts within their approved categories.

The Army Radioactive Waste Disposal Division is involved with several radiological remediation and decommissioning efforts. We are currently managing NRC decommissioning projects at Lake City Army Ammunition Plant, MO, Twin Cities Army Ammunition Plant, MN, Fort McClellan, AL, Picatinny Arsenal, NJ, Aberdeen Proving Grounds, MD, McGuire Air Force Base, NJ, and the National Naval Medical Center, MD.

One of our largest projects involve the decommissioning of NRC licensed facilities that the Army used for the production, testing and demilitarization of DU munitions. Lake City AAP in Independence, MO manufactured, tested and demilitarized more than 70,000 20mm DU spotter rounds in the early 1960's. The material on the Lake City firing range is now covered by the Army's (HQ, OSC) NRC license. The decommissioning process has been complicated due to regulatory overlap in many of the areas. Several of the DU contaminated sites are also EPA Superfund areas. In addition, many of the areas contain hazardous materials regulated by the Resource Conservation and Recovery Act (RCRA), which for this installation is regulated by the State of Missouri.