FIU PROJECT 4 - 2012 FACT SHEET

Waste and D&D Engineering & Technology Development

FIU's Applied Research Center (ARC) is supporting the U.S. Department of Energy Headquarters in its mission to deliver solutions under the deactivation and decommissioning (D&D) and waste areas.

This project focuses on delivering solutions under the deactivation and decommissioning (D&D) and waste areas in support of DOE HQ (EM-13). This work is also relevant to D&D activities being carried out at other DOE sites such as Oak Ridge, Savannah River, Hanford, Idaho and Portsmouth or international efforts being conducted by EM-2.1 with the Nuclear Decommissioning Authority (NDA) in England and the International Atomic Energy Agency (IAEA).

Project Objectives

The overall objective of this project is to provide support to DOE HQ (EM-13) Office of D&D & Facility Engineering in the areas of D&D and nuclear waste management. Objectives of the current tasks under this project include:

- Task 1 provides direct support to DOE EM for the management, development, and maintenance of a Waste Information Management System (WIMS). WIMS was developed to receive and organize the DOE waste forecast data from across the DOE complex and to automatically generate waste forecast data tables, disposition maps, GIS maps, transportation details, and other custom.
- Task 2 (D&D Support) focuses on meeting the D&D needs and technical challenges around the DOE complex. The objective is to identify and demonstrate new technologies & methodologies to support EM's collaborative domestic and international activities as well as support EFCOG in the development and dissemination of lessons learned and best practices.
- Task 3 provides a focused web-based tool, the D&D Knowledge Management Information Tool (D&D KM-IT) to assist the DOE D&D community in identifying potential solutions to their problem areas by using the vast resources and knowledge-base tools available through the web.

Project Benefits

- Task 1 (WIMS) organizes DOE waste forecast data and automatically generates waste forecast data tables, disposition maps, GIS maps, transportation details, and custom reports.
- Task 2 (D&D Support) promotes the evaluation, deployment and/or development of D&D technologies/methodologies and works in collaboration with EFCOG to develop and disseminate D&D lessons learned and best practices. These activities reduce technical risks, improve safety, and limit uncertainty within D&D operations.
- Task 3 (D&D KM-IT) is serving as a centralized knowledge management system to provide a common interface for all D&D related activities.

Project Accomplishments

- Task 1 (WIMS) is fully developed and deployed at http://www.emwims.org with the latest set of forecast data for Base and ARRA waste streams.
- Task 2 (D&D Support) completed the development and demonstration of a remote platform for applying fixatives and strippable coatings and performed an initial feasibility study for the remote removal of strippable coatings, supported SRS in research and experimental testing of over 270 remote sensors for in-situ decommissioning, and provided D&D support to DOE-EM international programs and EFCOG, including the development of six D&D lessons learned and best practices.
- Task 3 (D&D KM-IT) developed a D&D community-wide web-based system for capturing and sharing D&D knowledge in the U.S. and internationally (https://www.dndkm.org) including: Hotline, Vendor, Technology, Web Crawler, Specialist Directory, Collaboration Tools, Document Library, Lessons Learned, Best Practices, Video & Picture Library, and Training. D&D KM-IT Mobile at https://m.dndkm.org has Specialist Directory and Vendor active.

ARC Contact: Dr. Leonel Lagos, lagosl@fiu.edu, (305) 348-1810 FLORIDA INTERNATIONAL UNIVERSITY