Waste Information Management System (WIMS)

FIU's Applied Research Center (ARC) is supporting the U.S. Department of Energy Headquarters in its mission to gather, organize, and display waste forecast data from across the DOE complex. The WIMS website can be found at http://wims.arc.fiu.edu/wims/.

The implementation of the accelerated cleanup programs has created significant potential technical impediments that must be overcome. The schedule compression will require close coordination and a comprehensive review and prioritization of the barriers that may impede treatment and disposition of the waste streams at each site. Many issues related to site waste treatment and disposal have now become potential critical path issues under the accelerated schedules. To support each site in succeeding with the implementation of their respective accelerated programs, DOE expressed a need for a web-based system to gather, organize, and present waste forecast data to allow identification of volumes, material classes, disposition sites, choke points and barriers.

Project Objectives

The overall objective of this project is to provide DOE HQ and site waste managers with the tools necessary to easily visualize, understand, and manage the vast volumes, categories, and problems of forecasted waste streams. A comprehensive, web-enabled Waste Information Management System (WIMS) will support:

- Expediting site waste management decisions,
- Providing DOE complex-wide information,
- Identifying, understanding and resolving existing barriers and choke points, and
- Providing a mechanism for achieving the accelerated cleanup objectives.

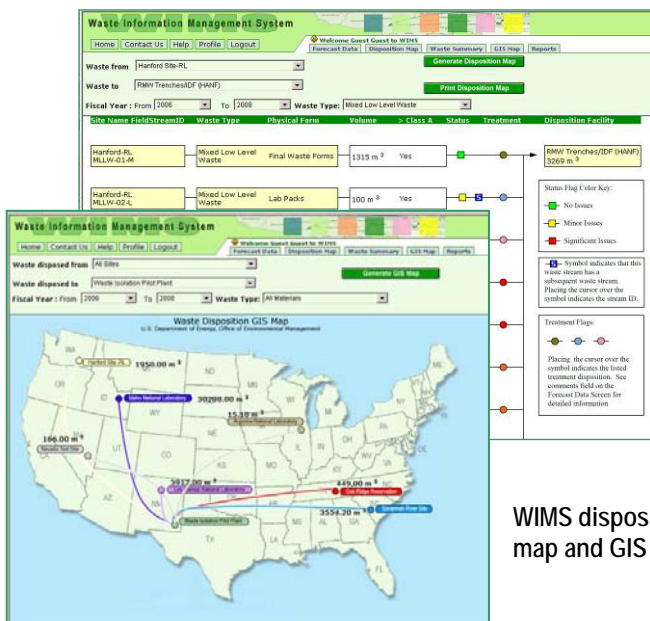WIMS disposition map and GIS map.

Project Benefits

Benefits of developing and implementing WIMS include:

- Meeting the need of DOE for the waste forecast information to be available to the public.
- Assisting DOE and local sites in meeting individual site goals and milestones.
- Achieving improved efficiencies of scale when outsourcing treatment and disposal services by providing information regarding complex-wide waste streams.
- Providing information to technology vendors regarding DOE waste needs to plan future technology capacity.
- Sharing site-to-site resources and treatment capabilities to allow the sites to leverage capacity and expertise.

Project Accomplishments

- Developed and deployed a DOE complex-wide, high performance, n-tier web-based system for generating waste forecast information, disposition maps, GIS maps, successor stream relationships, and custom reports.
- Developed and deployed a transportation module to display, export, and print transportation forecast information as number of truck, intermodal, and rail shipments.
- Updated with new functional modules and annual waste forecast data to ensure the long-term viability and value of the system.