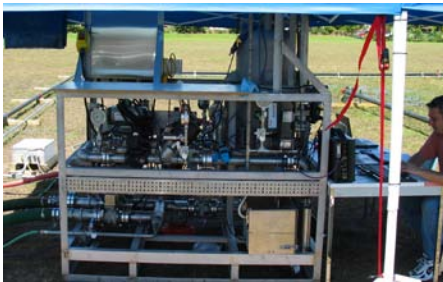


PROJECT FACT SHEET

Evaluation of Pipeline Unplugging Technologies for High-level Waste

FIU's Applied Research Center (ARC) is assisting the Department of Energy's Hanford site by qualifying pipeline unplugging technologies for deployment.

Availability of pipeline unplugging technology is critical to the effort of cross-site (more than 2 mile long in some cases) HLW transfers through pipelines. In the past, some of the pipelines have plugged resulting in schedule delays and increased costs. Currently, there are no unplugging technologies qualified to be deployed at the site should the plugging of a transfer line occur. In the past, a number of plug locating, and pipe unplugging technologies were demonstrated at FIU, which allowed down-selection of the most promising technologies that have potential for deployment at the site. Two types of unplugging technologies were identified: technologies for unplugging from the filled/fillable side of blocked pipeline and technologies for unplugging from the empty/drained side of blocked pipeline. Current project will build upon results of these demonstrations by qualifying the most promising technologies for the Hanford site's "toolbox."



Demonstration of NuVision fluidic wave action technology.



Demonstration of AIMM Technologies' Hydrokinetics System.

Project Objectives

The overall objectives of this project are to identify the functions and requirements of unplugging technologies for deployment at the Hanford Site, and to conduct technology qualification testing on the most promising technologies.

Project Benefits

Benefits of assessing the most promising candidate technologies for pipeline unplugging are:

- Place new technologies for pipeline unplugging into the Hanford "toolbox".
- Resolve design and safety issues hindering technologies from site deployment.

Project Accomplishments

- Completed testing and analysis of NuVision Engineering's Fluidic Wave Action technology.
- Developed computational model (CFD) of the fluidic wave action process as it relates to the pressure amplification seen at the plug.
- Released topical report on the NuVision technology assessment.
- Completed testing of AIMM technologies' Hydrokinetics (HK) system.