Low-Activity Waste Pretreatment System

Hanford Advisory Board Tank Waste Committee

Presented by: Steve Pfaff - Federal Project Director

November 13, 2014
2008 History
- Interim Pretreatment System (IPS) alternatives analysis resulted in selection of cross-flow filtration and ion exchange – validated by an expert panel

2011 History
- Critical Decision 1 Package, was submitted by Washington River Protection Solution in September 2011
- Conceptual design was developed for both an in-tank and near-tank pretreatment system
- U.S. Department of Energy, Office of River Protection (ORP) suspended the Supplemental Treatment Project in September 2011

2014 Present Effort
- Critical Decision 0, Approval of Mission Need, was granted March 17, 2014, and the project was named the Low-Activity Waste Pretreatment System (LAWPS)
- Conceptual design of LAWPS is in progress – delivery to ORP expected by December 2014
LAWPS Project Scope

LAWPS will remove suspended solids and cesium from double-shell tank (DST) liquids to provide low-activity waste (LAW) feed to the LAW Facility.
Simplified Direct Feed LAW Diagram

* AP-05A Pump Pit used as termination point for returns for cost estimating purposes (worst case, per TFP Eng.)
LAWPS Process Equipment in Vault Facility

- Filter Backpulse Tanks: TS-TK-102, TS-TK-101
- IX Lead Column: TS-C-200, TS-C-201
- Treated Waste Tank: TS-TK-300
- Cross Flow Filters: TS-F-100, TS-F-101
- PT-109, TE-111
- FE-136, FCV-13C
- Feed Tank: TS-TK-100
- CS Product Tank: TS-TK-200
LAWPS – Artist’s Rendition of Finished Facility
LAWPS Anticipated Siting Location – Site #2
DFLAW Proposed Transfer Lines
## DFLAW Program Elements

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