Hanford Advisory Board
Agency Update

Kevin Smith, Manager
Mission: Safely manage Hanford’s 56 million gallons of liquid radioactive tank waste, while designing, constructing, commissioning and operating the Waste Treatment Plant until the mission is complete.
Integrated Path to Mission Completion
Our Team

**Office of River Protection (ORP)**
ORP is responsible for planning, integrating, and managing the River Protection Program executed by contractors performing work under ORP overall management. ORP has 188 employees, both Federal and contractor.

**Washington River Protection Solutions (WRPS)**
WRPS is the prime contractor responsible for safely managing and operating the Tank Farms. WRPS has 1,557 employees*.

**Bechtel National, Inc. (BNI)**
BNI is responsible for the engineering and construction of the Waste Treatment Plant. BNI has 2,271 employees*.

**Advanced Technology and Laboratories International (ATL)**
ATL is the prime contractor responsible for managing the 222-S Laboratory. ATL has 73 employees*.

*As of Sept. 30, 2013*
ORP – We Are Part of the Community Too
ORP’s Community Impact

**Waste Treatment Plant Project**
- $2.21 billion spent on subcontracts and services
  - $705 million to local businesses
  - $1 billion to Washington and Oregon businesses
  - $938 million to small businesses

**Tank Farms Project**
- $93.2 million spent on subcontracts and services
  - $72.2 million to regional businesses

**Supporting advanced education programs**
- Welding program at CBC
- Donation of technology building to WSU
- College internships

**Support and leadership to local agencies including:**
- United Way
- Junior Achievement
- March of Dimes
- TRI DEC
- Boys and Girls Club
- Reading Foundation
- Chaplaincy
- Second Harvest Food Bank
- Habitat for Humanity
- Columbia Basin Community College
- Tri-Cities Visitor and Convention Bureau
ORP Demographics: Organization

- Tank Farms: 24%
- Waste Treatment Plant: 27%
- Technical and Regulatory Support: 26%
- Contracts and Property Management: 11%
- ORP Manager/Office of the Chief of Staff: 5%
- WTP Start-up Commissioning and Integration: 7%

Percentage of workforce by organization
ORP Demographics: Workforce by Education

- Bachelor’s Degree: 52%
- Master’s Degree: 34%
- Doctorate: 7%
- High School Diploma Plus Some Post-Secondary Education: 5%
- High School Diploma: 2%

Percentage of workforce by level of education
Tank Farms Update
Single-Shell Tank Waste Retrieval Status

- Consent Decree milestone requires DOE to retrieve final 10 C-Farm tanks by Fiscal Year (FY) 2014
- To date, 10 of the 16 tanks in C-Farm have been retrieved to regulatory standards
- Six tanks have been retrieved under the Tri-Party Agreement
- Four Consent Decree tanks have been retrieved to date
- One tank has been retrieved in S-Farm
Tank Farms Progress

- 10 tanks retrieved with C-110 the most recent
- C-101 is under review
- 3 tanks in retrieval, C-107, C-111 and C-112
- C-102 tank is in readiness
- C-105 tank is in construction
T-111 Liquid Level Trending

STRUCTURE T-111

Retrieval Date: 08/20/2013
Start Date: 01/01/2011
End Date: 08/20/2013
Data Types: Good Transcribed

Device Name: Riser 7 LOW Neutron
Date: 03/01/2013
Baseline: 166.1
Slope:
Increase: 1.2 Decrease: 1.2
AY-102 Update

Double-Shell Tank Detail
Double-Shell Tank AY-102 Update

Approximate liquid stopping point

Section 1
Section 2
Section 3
Section 4
Section 5
Section 6
Sections 7 & 8
Waste Treatment and Immobilization Plant Update

- High-Level Waste Facility
- Pretreatment Facility
- Analytical Laboratory
- Low-Activity Waste Facility
- Balance of Facilities (20 support buildings)

September 10, 2013
Pretreatment Facility

Exterior

Vessels and pipes in black cell

Hot cell
High-Level Waste Facility

Exterior

Truck Bay Walls

Melter Bay

Bridge Crane
Low-Activity Waste Facility

Exterior

Overhead pipe racks for steam and glass formers

Carbon bed adsorber

Transfer Tunnel

Melter
Analytical Laboratory

Exterior

Fume hoods

Air-handling systems
Balance of Facilities

20 support buildings for the Balance of Facilities

Glass former piping

Overhead pipe racks for steam and glass former materials

Glass former silos
Selected Topics Specifically for the Hanford Advisory Board
### Improved Waste Tank Summary Report

#### HNF-EP-0182 Summary Table

<table>
<thead>
<tr>
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<th>1 year ago</th>
<th>1 mo. ago</th>
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<tr>
<td><strong>Double Shell Tanks</strong></td>
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<td>Sound DSTs</td>
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<td><strong>Single-Shell Tanks</strong></td>
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<td>Total Waste Stored in SSTs (Mgal)</td>
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<td>Retrieval Operations Complete, Approved(1) and Not Approved(2)</td>
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<td>SSTs in Level Decrease Evaluation(5)</td>
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<td>SSTs in Formal Leak Assessment</td>
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<td>DST Storage Capacity (Mgal)</td>
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<td>Available DST Storage Space (Mgal)</td>
<td>3.6</td>
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Table 1-1. Waste Tank Summary
July 31, 2013

Added summary of changes listed in table at beginning of report
- Improve transparency
- Communicate effectively
- Progressing towards online system similar to the “Groundwater Annual Report”

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DOE’s Phased Approach to Mission Completion

The Secretary of Energy’s “Framework” calls for Hanford’s cleanup mission to be completed in three phases. Phase 1 key activities include:

- Completion, commissioning, and startup of Low-Activity Waste Facility, Balance of Facilities and the Lab (LBL), the ongoing C Farm retrievals, and the tank farm infrastructure and an interim pretreatment capability needed to directly feed the LAW Facility.

- Final permitting of the onsite Integrated Disposal Facility (IDF) for low-activity waste.

- Retrieval and shipment of any properly classified and permitted contact handled transuranic (CH-TRU) waste from the single-shell tanks to WIPP.

- Initiation of a tank waste characterization and staging capability in the tank farms to support HLW Technical Issue Resolution, and completion of full-scale vessel testing and resolution of technical issues in the PT and HLW Facilities.
## MAJOR MILESTONES BNI WORKING SCHEDULE - HLW PATH TO FULL PRODUCTION ENGINEERING, PROCUREMENT, AND CONSTRUCTION

**REVISION 7 - 3 DEC 2013**

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<tr>
<th>ITEM</th>
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<td>Update Design Procedures (F/C 12/19/13)</td>
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<td>Update E&amp;NS Procedures</td>
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<td>Implementation &amp; Training for Procedure Changes (F/C 1/31/14)</td>
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<td>Issue Control Strategy Documents</td>
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<td>Determine ISI / FMECA Evaluations Risk Assessment (F/C 12/13/13)</td>
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<td>Erosion and Corrosion Risk Assessment and recommendations (F/C 11/27/13)</td>
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<td>PJM Vessel Mixing Risk Assessment and recommendations</td>
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<td>Black Cell Vessels Structural Risk Assessment and recommendations</td>
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<td>Review of Existing MSOW's and DNSFB Correspondence</td>
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<td>Issue RVP Extent of Condition Plan</td>
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<td>Obtain DOE Approval Level 1 Corrective Action Plans</td>
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<td>Complete Outstanding PIER Evaluation &amp; Screening Review</td>
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<td>Develop FY14 EPC Resumption Plan</td>
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<td>Preparation of Transition Period Schedule</td>
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<td>Obtain DOE Concurrence on BNI recommended design changes</td>
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<td>Submit HLW Safety Design Strategy w/ Identified Design Changes (DHR F/C 12/20/13)</td>
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<td>Complete DOE HLW Design Review</td>
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<td>Obtain DOE Approval of Safety Design Strategy</td>
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<td>Obtain DOE release HLW Production Engineering Activities - FY14 Plan</td>
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### ACRONYMS

- **RVP** = RELIABILITY VALIDATION PROCESS
- **ISI** = IN-SERVICE INSPECTION
- **FMECA** = FAILURE MODE, EFFECTS, AND CRITICALITY ANALYSIS
- **PJM** = PULSE JET MIXER
- **PIER** = PROJECT ISSUE EVALUATION REPORTING

### LEGEND

- **COMPLETE**
- **90%+ CONFIDENCE**
- **75% - 90% CONFIDENCE**
- **UNDER 75% CONFIDENCE**
- ☻ = CONFIDENCE TRENDING DOWN
- ☻ = CONFIDENCE TRENDING UP

**MAJOR MILESTONES BNI WORKING SCHEDULE - HLW PATH TO FULL PRODUCTION ENGINEERING, PROCUREMENT, AND CONSTRUCTION**

- **Sept 2013**
- **Oct 2013**
- **Nov 2013**
- **Dec 2013**
- **Jan 2014**
- **Feb 2014**
# ORP Funding Impacts

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<tr>
<th>PBS</th>
<th>PBS Title</th>
<th>FY 2013 Full Year CR</th>
<th>FY 2014 President’s Budget</th>
<th>FY 2014 CR*</th>
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<td>ORP-0014</td>
<td>Radioactive Liquid Tank Waste Stabilization and Disposition</td>
<td>$409,223</td>
<td>$520,216</td>
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<td>ORP-0060</td>
<td>Major construction – Waste Treatment Plant</td>
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<td>Total - ORP</td>
<td>Office of River Protection Funding Summary</td>
<td>$1,089,729</td>
<td>$1,210,216</td>
<td>$1,084,000</td>
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*Continuing Resolution (CR) as of December 2013

Amounts in thousands
Workforce Restructure

- Washington River Protection Solutions notified their employees that they will be implementing a workforce restructuring in FY 2014.
- Restructuring activities are necessary to align workforce with work scope and funding.
- Up to 250 employees may be impacted.
- The reductions will affect both bargaining unit and non-bargaining unit workers.
- Voluntary Reduction of Force:
  - December 2, 2013 window opens
  - December 13, 2013 window closes
Update on a few of ORP’s Challenges . . .

<table>
<thead>
<tr>
<th>Budget</th>
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<td>Tank Farms Infrastructure</td>
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<td>Technical Issues Resolution</td>
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<td>Tri-Party Agreement/Consent Decree Milestones</td>
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<td>Decision to Proceed on HLW – Production Engineering</td>
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<tr>
<td>Implementing Phased Approach to WTP Start-up – ‘Framework’</td>
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<td>Transition to WTP Operations</td>
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<td>Resources</td>
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<td>Quality</td>
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<td>Nuclear Safety Basis</td>
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Protect the Public, the Environment and Our Workers

Safety Always Comes First!

White Bluffs overlooking the Columbia River on the Hanford Reach