



OFFICE OF  
**RIVER PROTECTION**  
United States Department of Energy

# ORP's Path to Reinvigorating Technology Development

DOE National Cleanup Workshop  
EM Technology Development Panel

Presented by: **Kevin Smith, Manager**

September 29, 2015





## Office of River Protection (ORP)

ORP is responsible for planning, integrating, and managing the River Protection Program executed by contractors performing work under ORP management. ORP has 225 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 2,054 employees\*.

## Bechtel National, Inc. (BNI)

BNI is responsible for the engineering, construction, startup and commissioning of the Waste Treatment and Immobilization Plant. BNI has 2,864 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 July 2015





## Mission

To safeguard the nuclear waste stored in Hanford's 177 underground tanks, and to manage the waste safely and responsibly until it can be treated in the Waste Treatment and Immobilization Plant (WTP) for final disposition.

## Vision

To be a high-performing, innovative organization that is safety-conscious and employee-focused, and committed to achieving our mission with environmental and fiscal responsibility.









*Chemical hazards*



*Aging infrastructure*



*Industrial hazards*

**Saltcake**  
23M gallons



**Supernate**  
21M gallons



**Sludge**  
12M gallons

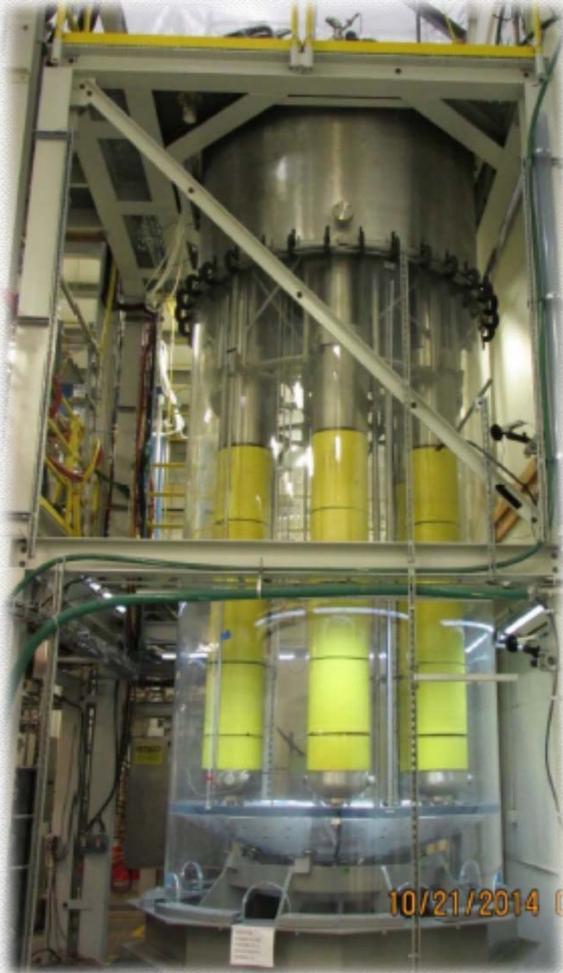


*Chemical, radioactive waste*



*Construction*





*Scientific Challenges*



*Real-time Workforce Monitoring & Protection*



*Technical Issues*







## Revitalizing Innovation & Seeking Technological Advancements



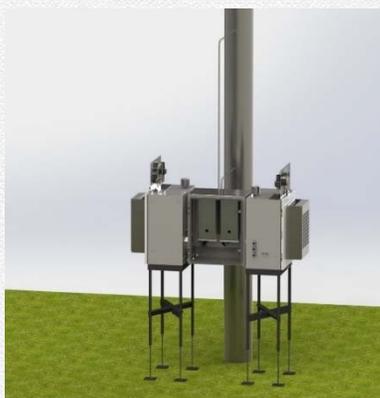
Portable air  
quality monitor



Portable infrared camera



Fixed FLIR Optical Gas Imager



Ultraviolet Differential Optical  
Absorption Spectroscopy  
FTIR Stack Monitor



Open-Path Fourier Transform  
Infrared (FTIR) Spectroscopy





## Collaboration and STEM



*STEM Programs*



*NQA-1 Testing Capabilities*



*Collaborative Studies*



*Internships*





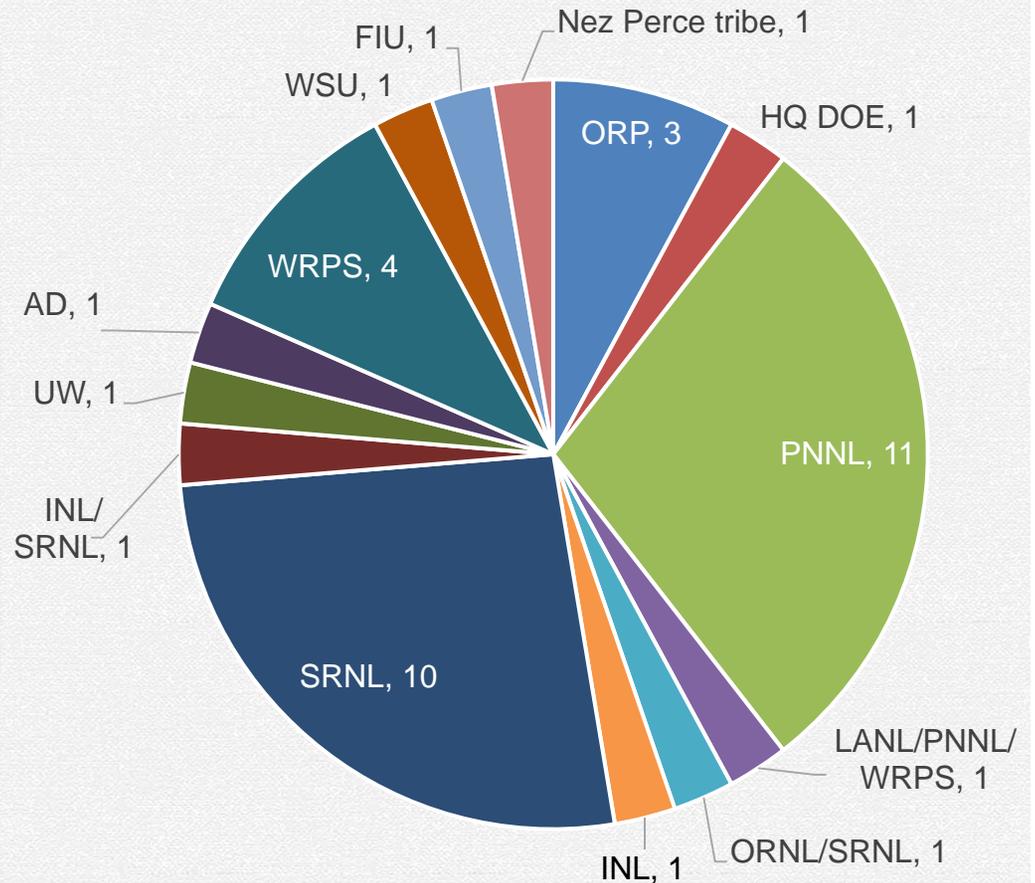
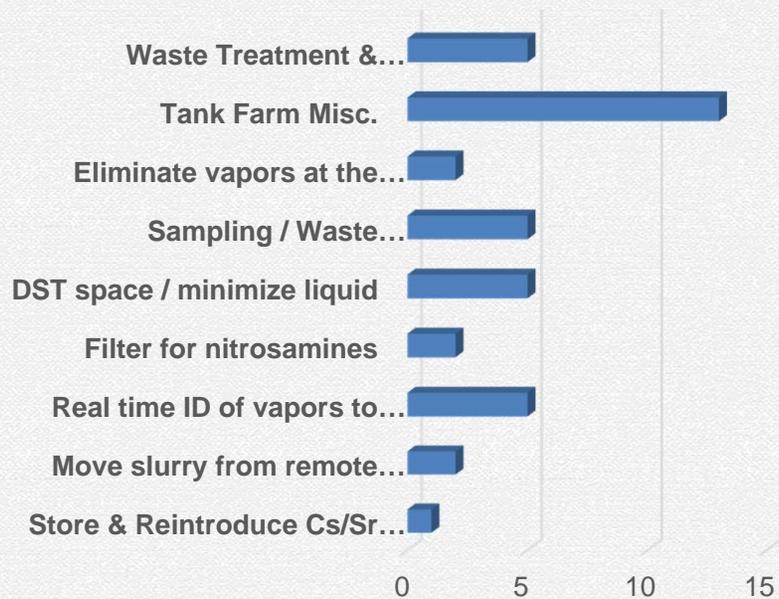
## Restoring National Laboratory Teamwork





## ORP's 2015 Grand Challenge Workshop

Submittals by Topical Area





***Better achieving the mission  
through innovation, creativity  
and the next generation.***

The Hanford Reach  
White Bluffs Overlooking the Columbia River

