



U.S. DEPARTMENT OF
ENERGY

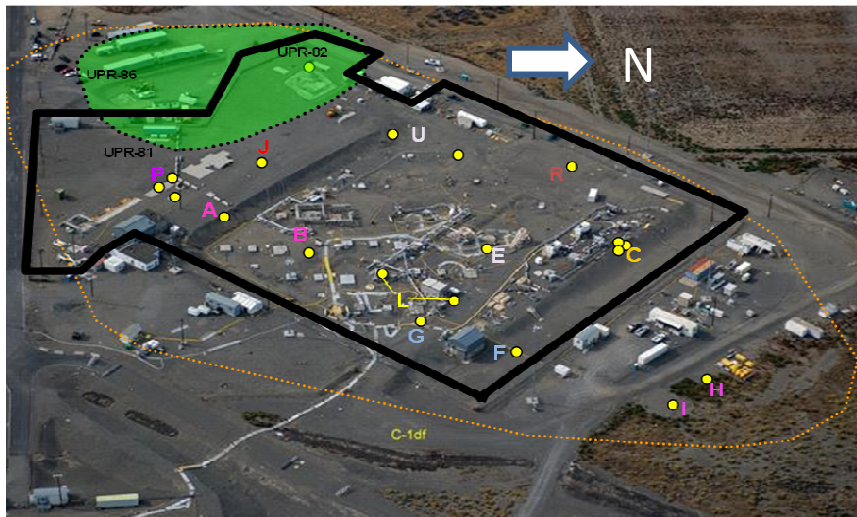
OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**





Hanford Site Waste Management Area C Performance Assessment Current Status and Schedule

Christopher Kemp, Federal Project Director
Hanford Site

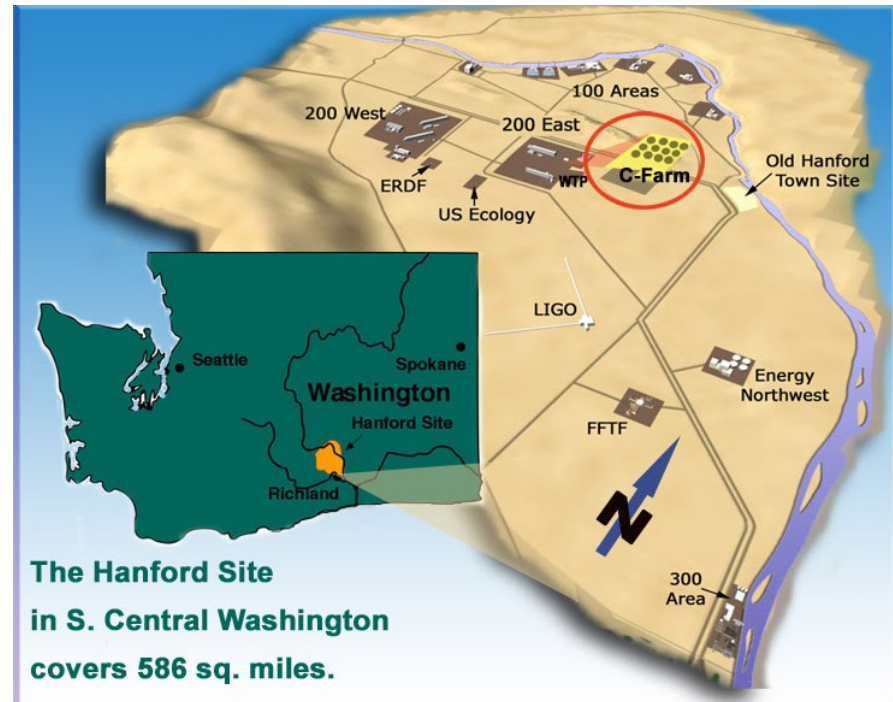
December 15-16, 2015
Performance & Risk Assessment Community of Practice Meeting
Richland, Washington

- Hanford Site Waste Management Area C
- Size: 37,975 m²



Study Boundary  Sample Locations 
 WMA C Fence Line  SGE Test Region 

Aerial Photo of Waste Management Area C (Tank Farm)



- **Major Accomplishments in last Fiscal Year**
 - **Completed Analysis Phase of the Waste Management Area (WMA) C Department of Energy (DOE) Order 435.1 Performance Assessment (PA) and Resource Conservation and Recovery Act (RCRA) Closure Analysis**
 - **Prepared two draft documents:**
 - ***WMA C DOE O 435.1 PA - Impacts of radiological constituents in tank residuals for WMA C closure authorization statement required by DOE O 435.1***
 - ***WMA C RCRA Closure Analysis - Impacts of hazardous/dangerous waste constituents in waste residuals to support WMA C closure under RCRA.***

Current Status (continued)

WMA C DOE O 435.1 PA Development Schedule:

- Address internal review comments from ORP and WRPS by end of December 2015
- Submit initial draft to Low Level Waste Disposal Facility Federal Review Group (LFRG) for their review by January 2016.
- Revision to incorporate LFRG comments by October 1, 2016

Current Status (continued)

- A broader PA (HFFACO Appendix I PA) will be developed based on HFFACO Appendix I, Section 2.5 which will be comprised of four individual documents:
 1. **WMA C DOE O 435.1 PA** - *Impacts of radiological constituents in tank residuals for WMA C closure authorization statement required by DOE O 435.1*
 2. **WMA C RCRA Closure Analysis** - *Impacts of hazardous/dangerous waste constituents in waste residuals to support WMA C closure under RCRA.*
 3. **WMA C Analysis of Past Leaks** - *Impacts of past leaks (support BRA and RFI/CMS)*
 4. **WMA C Baseline Risk Assessment (BRA)** – *Risk of both carcinogen (radiological and non-radiological) and non-carcinogen wastes from past leaks*

HFFACO Appendix I PA Development Schedule:

- Produce two draft documents to complete a Draft HFFACO Appendix I PA:
 - 1. *WMA C Analysis of Past Leaks* by October 1, 2016**
 - 2. *Updated WMA C Baseline Risk Assessment (BRA), Rev. 1* by October 1, 2016**
- Results from the DOE O 435.1 PA, the RCRA Closure Analysis, Analysis of Past Leaks, and the BRA will be used to support the RFI/CMS
- Combined RFI/CMS will be completed by December 2016 (per current schedule)

Current Status (continued)

- **Tank waste retrieval activities are ongoing; while field closure activities will commence in the future**
 - *Retrieval Complete for 14 of 16 Single-Shell Tanks*
- **RCRA Facility Investigation was prepared to evaluate site characterization data**
- **HFFACO Appendix I PA will support decisions for:**
 - *Landfill closure of tank residuals*
 - *Potential corrective measures of existing soil contamination from past releases*



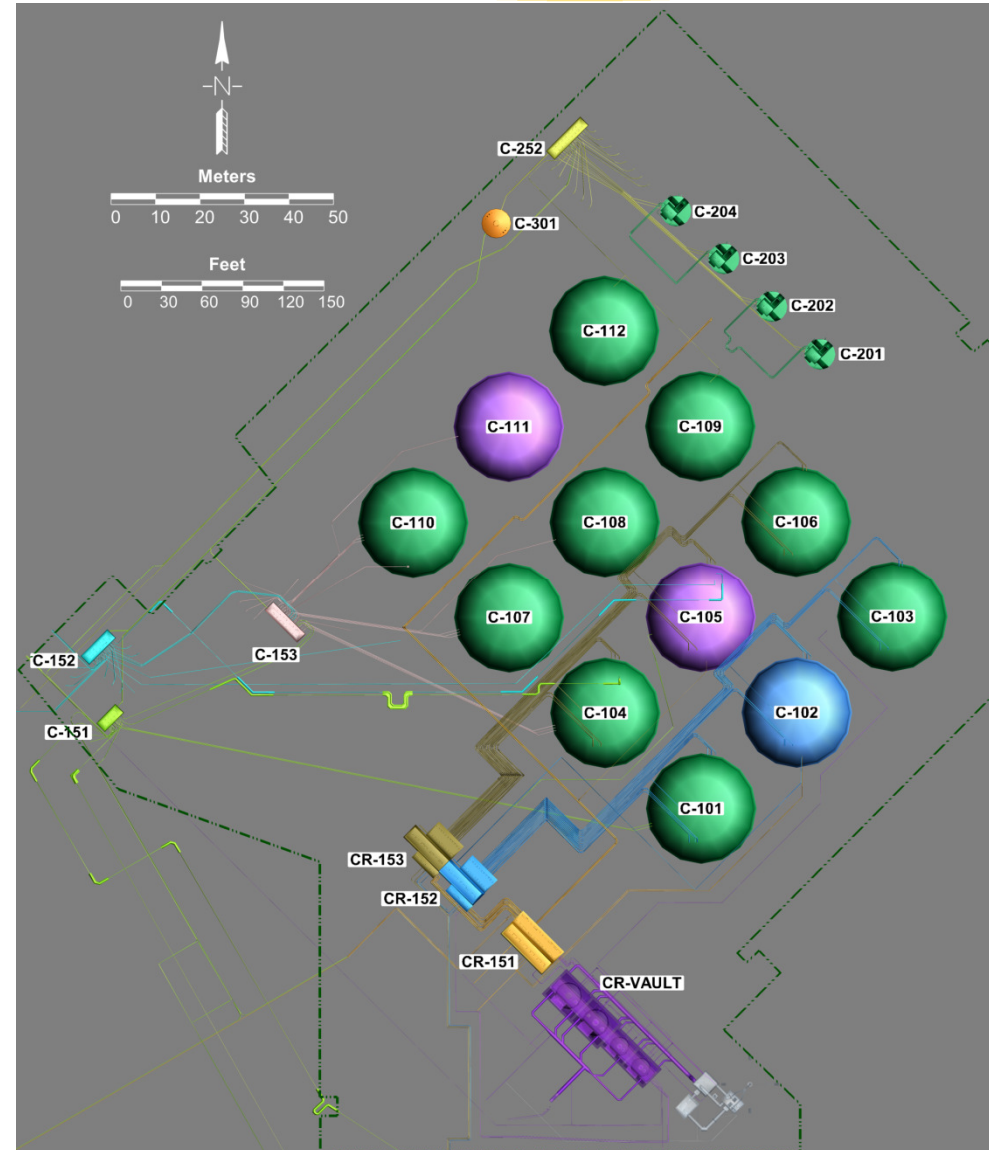
Sixteen Tanks in C Farm

Fourteen tanks have been retrieved

- Inventory based on sampled residuals
- Inventory based on process knowledge and final residual volumes
- Seven of the 14 retrieved tanks have release rate studies*

Two tanks undergoing retrieval

- Inventory based on estimated chemical process knowledge and estimated volume at closure



* PNNL has completed release rate studies on tank residuals for tanks C-103, C-104, C-106, C-108, C-202, C-203, and C-204