



200-WA-1 and BC-1 Operable Units RI/FS Work Plan Overview



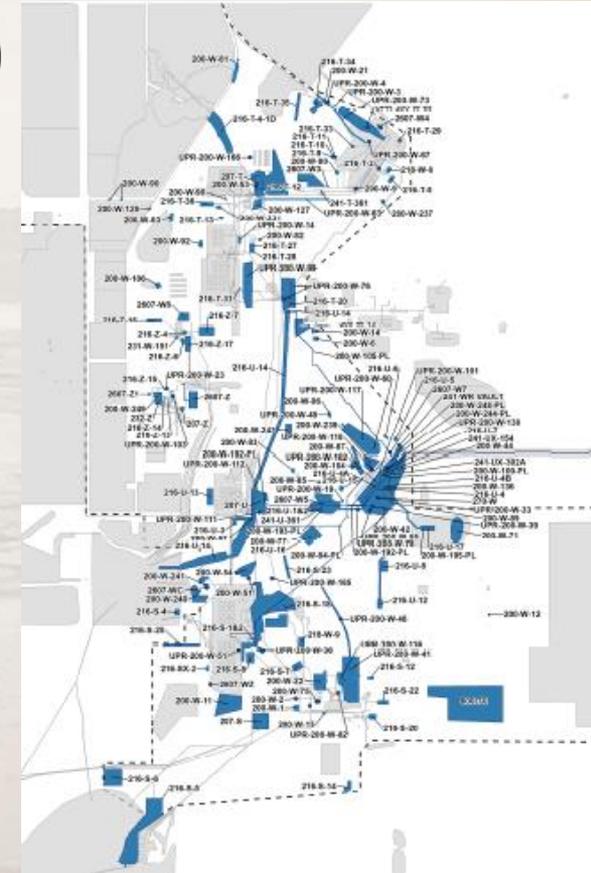
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200-WA-1 and BC-1 Operable Unit (OU) Agenda



- Overview of the Operable Unit (OU)
- Discussion of Remedial Investigation/Feasibility (RI/FS) Study Work Plan
- Path forward





200-WA-1 and BC-1 OU Overview

- 200-WA-1 and BC-1 are located in the central and western portions of the industrialized Inner Area on the Hanford Site
- In 2010, the Tri-Party Agreement Agencies realigned the Central Plateau OUs into 10 groups
- The 200 West Area was evaluated to confirm there were no additional waste sites that need an OU assignment
 - Approximately 900 sites were evaluated
- Groundwater under this OU is addressed by OUs 200-ZP-1, 200-UP-1, and 200-PO-1



Waste site 200-W-237 effluent pond south of T-Plant



200-WA-1 and BC-1 Waste Site Organization

By operable unit

200-WA-1 OU: 163 sites

200-BC-1 OU: 27 sites

By geographic area

U Plant: 61 sites

S Plant: 36 sites

Z Plant: 17 sites

T Plant: 49 sites

BC cribs and trenches: 27 sites

The waste sites are organized around the major processing plants and disposal facilities.

The change between Draft A and Rev. 0 work plan added 34 waste sites to the scope of work .



200-WA-1 and BC-1 Breakdown by Type of Waste Site

- Cribs: 31
- Trenches: 37
- Reverse wells: 5
- Foundations: 6
- French drains: 6
- Retention basins: 4
- Ponds and ditches: 3
- Railroad tracks: 12
- Unloading stations: 3
- Vaults: 3
- Storage tanks: 5
- Septic systems: 11
- Diversion box: 1
- Dumping/burial grounds: 7
- Pipelines: 10
- Sand filter: 1
- Soil contamination: 39
- Miscellaneous: 6

Total of 190 waste sites



200-WA-1 and BC-1 Waste Site Groupings

Sites grouped by depth of release:

1. Shallow sites (71 sites)
2. Intermediate sites (80 sites)
3. Deep sites (39 sites)



Waste site 600-70, east of REDOX

Purpose of depth groupings:

Establish consistent characterization approach for determining quantity/quality of data needed for Human Health/Ecological Risk Assessment, groundwater protection modeling and nature + extent evaluations in the RI/FS Study.



200-WA-1 and BC-1 Data Needs Evaluation

Each waste site was evaluated independently to:

- Determine whether sufficient data exists to understand contaminant nature and extent
- Evaluate Human Health and Environmental (HHE) risks and threat to groundwater
- Develop appropriate preliminary remedial alternatives

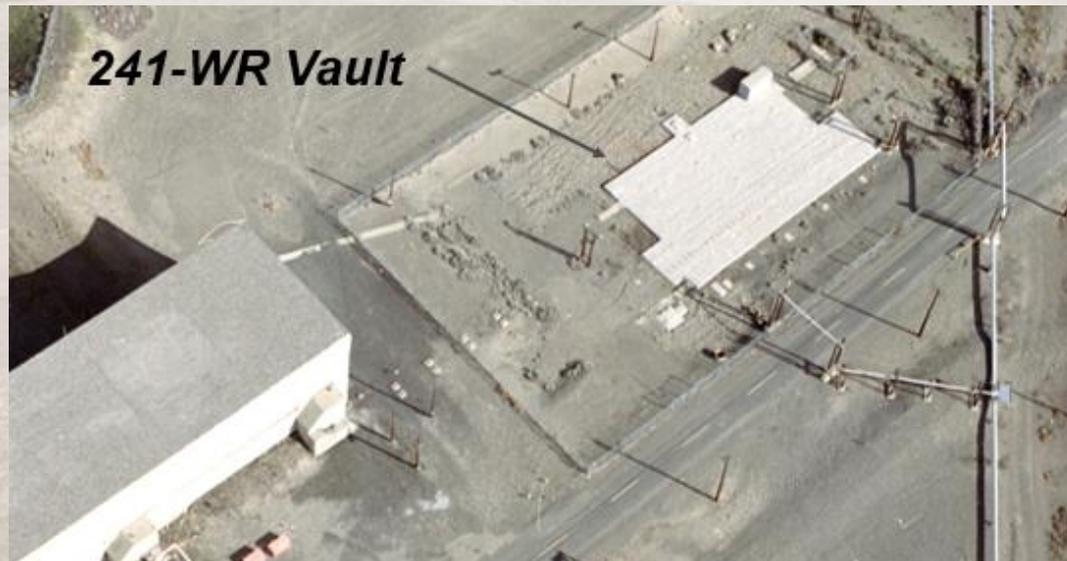
The evaluation resulted in, and the work plan presents:

- 11 waste sites that were adequately characterized
- 28 sites that were similar and could rely on a data collected from a comparable site
- 151 waste sites required characterization



200-WA-1 and BC-1 OU Characterization Objectives

- Is there a direct contact risk to HHE or ecological receptors?
- Verify and/or revise the Conceptual Site Model (CSM)
- Resolve whether residual vadose zone contamination poses a current and/or future threat to groundwater and develop preliminary action levels
- Collect data to support the evaluation of remedial alternatives





200-WA-1 and BC-1 OU Shallow Waste Site Investigations

- Contamination at shallow sites is expected to extend from the surface to a depth of 15 ft.
- Characterization approach:
 - **At well defined sites:**
 - Site reconnaissance
 - Surface field screening
 - Surface soil sampling (0-1 ft.)
 - Subsurface soil sampling (2-15 ft.)
 - The number of samples will be adjusted depending on the size, configuration and heterogeneity of the site
 - **At poorly defined sites:**
 - Area-wide grid or composite sampling may be conducted, pending results conduct more focused sampling
 - Confirmation soil samples will still be collected to confirm contamination does not exist



Waste Site 200-W-92.



200-WA-1 and BC-1 OU Intermediate and Deep Waste Site Investigations

- Contamination is expected to be greater than 15 ft.
- Characterization approach:
 - Sites will be assessed through boreholes and soil samples
 - Boreholes will be installed within the waste site footprint in the area of highest known or expected contamination
 - Samples will be collected at soil depths of interest, such as, geologic contacts, where grain size increases or decreases and silt and clay layers



Cores will be collected to determine maximum contaminant concentrations and lowest vertical extent of contamination.

200-WA-1 and BC-1 OU

Characterization of “Non-Soil” Waste Sites



- There are 30 “non-soil” waste sites, including concrete slabs, foundations, vaults, tanks, basins and sand filters
- Samples for these structures will be collected using several approaches
- For concrete slabs, foundations and vaults:
 - Characterization scoping survey to provide an overall assessment of contamination
 - Radiation surveys of accessible surfaces of the structure
 - Collect surface samples, if warranted
 - Where necessary, core-drill concrete and sample
 - If additional characterization is required, create a specific sampling plan
- For retention basins: sample concrete and vadose zone below
- For tanks: radiological screening, geophysical logging and vadose sampling

200-WA-1 and BC-1 RI/FS Work Plan



- The work plan describes the activities for conducting and developing the RI/FS for the 200-WA-1 and 200-BC-1 OUs.
- The WA-1 and BC-1 RI/FS Work Plan Rev. 0 was approved by EPA on January 31, 2017.
- The work plan presents the data evaluation process, how risk will be assessed, and the approach to remedial alternative development.
- Appendix D of this work plan provides a detailed summary of each waste site, including site history, construction information, discharge volume, and nature and extent of contamination.
- Appendix E of this work plan is a Sampling and Analysis Plan (SAP) detailing the process of fulfilling the additional data needs. It also provides site-specific Field Sampling Plans (FSPs) for each site where additional characterization is proposed to address data needs.

200-WA-1 and BC-1 Project Schedule



Please See Attached Handout of
Project Schedule



Questions?