



Hanford Site Fourth CERCLA Five-Year Review



RICHLAND
OPERATIONS OFFICE
United States Department of Energy

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Presentation to Hanford Advisory Board

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Purpose/Scope of Five-Year Review



Purpose:

- To evaluate the implementation and performance of a remedy to determine whether the remedy is, or will be, protective of human health and the environment.

Scope:

- Evaluation Period: October 2010 – December 2015 (now aligns with Hanford's annual reports).
- In-Scope: Operable Units (OU) with interim remedial action Record of Decisions (ROD) or RODs (~65% of all OUs).
 - Source OUs – 23
 - Groundwater OUs – 7
- Out-of-Scope: OUs without RODs (~35% of OUs).
 - Source OUs – 13
 - Groundwater OUs – 3



What's Different?

- Updated EPA Guidance/Multi-Federal Agency Training on writing Five-Year Review Reports
 - More concise reports
 - OUs without RODs (interim or final) not included
 - Greater use of tables, charts, maps
 - Use of hyperlinks for improved access to supporting documents
 - Consistency in protectiveness determinations
 - Consistency in writing protectiveness statements
- Early engagement/team (DOE/MSA/CHPRC/WCH) development, and interface with EPA
- Periodic status meetings during report development (DOE/EPA/ECY/MSA)

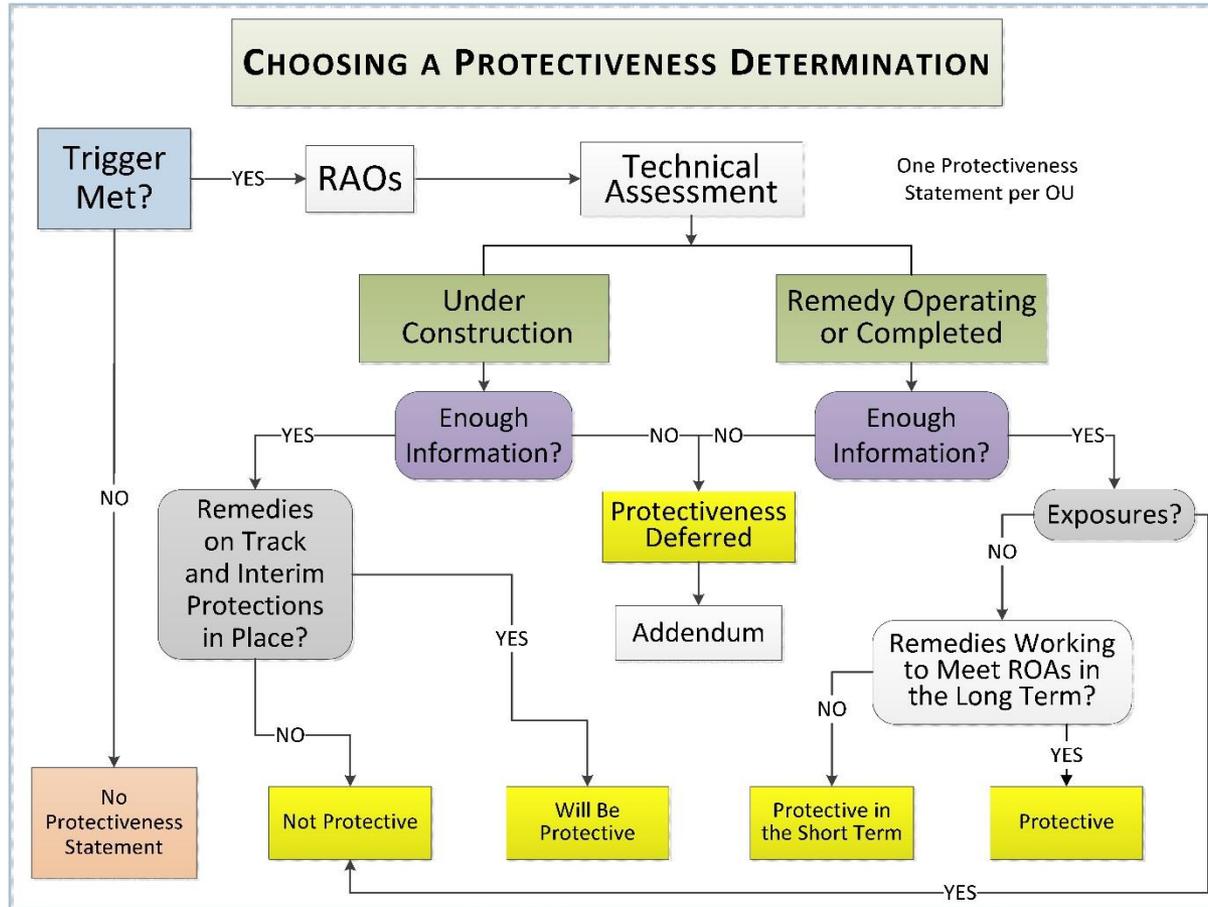


Report Timeline

- 2014 – Initiated Document Planning/Preparations
- 2015 – Prepared Preliminary Draft Report (2011-2014 data)
- September 2016 – Completed Draft A for EPA Review (2011 – 2015 data) and Transmitted to EPA
 - Comments from EPA
 - Feedback received from Ecology, ODOE, YIN
- March 2017 – Completed and transmitted Rev. 0 report to EPA
- May 2017—EPA agreement with evaluations and protectiveness statements



Protectiveness Determination





Protectiveness Summary

Protectiveness Determinations:

- No Protectiveness Statement: (16 OUs...no RODs yet)
- Not Protective: 100-NR-2
- Will Be Protective: (23 OUs)
- Protectiveness Deferred: none
- Protective in the Short Term: none
- Protective: (6 OUs -- 100-FR-1/2, 100-IU-2/6, 1100-EM-1 (Horn Rapids Landfill), and 200-ZP-1)



Issues & Recommendations

- **Issue:** HR3-1 - Hexavalent chromium exceeds the aquatic quality standard at several small segments along the Columbia River shoreline.
- **Recommendation:** HR3-1 – Install additional wells and/or convert existing wells to remove contaminant mass and impose hydraulic containment necessary to protect aquatic receptors in the Columbia River.

Issues & Recommendations (cont'd)



- **Issue:** KR2-1 and KR4-1 – Several 100-KR-2 waste sites near the 105-KE and 105-KW reactors likely serve as continuing sources of 100-KR-4 OU groundwater contamination.
- **Recommendation:** KR2-1 and KR4-1 – Incorporate supplemental characterization data and risk evaluation in a draft RI/FS report and transmit for regulator review.

Issues & Recommendations (cont'd)



- **Issue:** NR2-1 – Permeable reactive barrier test to reduce the strontium-90 flux to the Columbia River has not yet been expanded from 1,000 ft to 2,500 ft
- **Recommendation:** Complete implementation of the permeable reactive barrier.



Closing

- Report (DOE/RL–2016-01) is Publicly Accessible
 - Hanford.gov website – see “Documents” menu
 - Hanford Administrative Record
 - <http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0071636H>
- Next Review
 - Evaluation period (2016-2020)
 - Report due in 2022