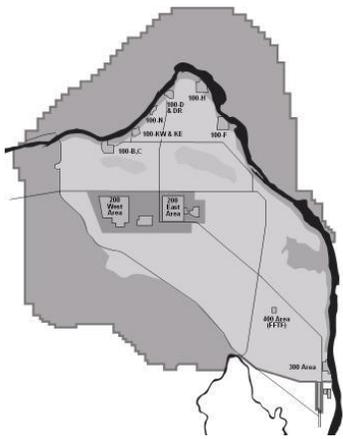


Engineering Evaluation/Cost Analysis for 200 East Tier 2 Buildings/Structures Decommissioning

U.S. Department of Energy • Washington State Department of Ecology • U.S. Environmental Protection Agency

Public comment period: November 22 through December 27, 2010



The Tri-Party Agreement (TPA) agencies -- U.S. Department of Energy (DOE), Washington State Department of Ecology, and the U.S. Environmental Protection Agency -- would like your feedback on an Engineering Evaluation/Cost Analysis (EE/CA) that evaluates alternatives for removal actions for excess buildings and structures in the 200 East Area of the Hanford Site. The EE/CA also proposes onsite disposal of waste generated from the removal activities.

BACKGROUND

This EE/CA encompasses 57 **Tier 2** buildings and structures in the 200 East Area on the Central Plateau of the Hanford Site. These buildings contain chemical and/or radiological contamination because of their previous missions or because of their proximity to Hanford Site contamination in the 200 East Area. The preferred cleanup alternative will place the identified buildings and structures in a condition that is most protective of human health and the environment.



Tier 2 buildings/structures (e.g., 209-East Criticality Mass Laboratory) are addressed in the TPA Action Plan and are defined as chemically and/or radiologically contaminated buildings/structures that require a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response action because of their potential for substantial threat of release of CERCLA hazardous substances. Tier 1 buildings/structures (e.g., PUREX or B Plant Canyon) are generally large heavily shielded metal and concrete structures that contain objects such as tanks, heavily shielded gloveboxes or hot cells, underground vaults, and/or piping that are integral to the building structure and pose a threat of release of hazardous substances to the environment during disposition. This 200 East Area Tier 2 Building/Structure Decommissioning EE/CA does not evaluate Tier 1 buildings or structures.

What is an Engineering Evaluation/Cost Analysis (EE/CA)?

An EE/CA identifies and evaluates removal action alternatives according to three criteria: effectiveness, cost, and ability to implement. An EE/CA also identifies a preferred alternative. A removal action is an action taken in the near term to address a release or threatened release of hazardous substances. After public review and comment, an Action Memorandum (interim decision document) is issued to identify the selected removal action.



Building 209 East - slated for decommissioning under this EE/CA

WHAT CLEANUP ACTIONS WERE EVALUATED?

This EE/CA evaluates three alternatives. Listed below are the three alternatives and their associated costs. The costs are shown as discounted and non-discounted. The discounted cost is the amount of money, which if invested in the current year, would be sufficient to cover all the costs over time associated with a project. The non-discounted cost represents the cost of performing the work today and does not consider the changing value of money over time.

Alternative 1. No action. CERCLA requires this alternative as a baseline against which to evaluate removal action alternatives. It assumes that all short-term and long-term maintenance is terminated, and the buildings, structures, and debris would be abandoned without any future actions. (The cost of this alternative was not evaluated.)

Alternative 2. Continued Surveillance and Maintenance with Future Decontamination, Deactivation, Decommissioning, and Demolition (D4) of Buildings and Structures. This alternative assumes a 10-year period of building and structure surveillance and maintenance, followed by decontamination, deactivation, decommissioning, and demolition of buildings and structures at a future date. (discounted cost¹: \$50.0 million, non-discounted cost²: \$64.0 million)

Alternative 3. Near-Term D4 of Buildings and Structures. This alternative consists of near-term D4 of the buildings and structures and associated waste disposal. (discounted cost¹: \$61.7 million, non-discounted cost²: \$62.3 million)

WHICH ALTERNATIVE IS PREFERRED?

Alternative 3. Near-term D4 of the Buildings and Structures is the preferred alternative because it provides both long-term protection of human health and the environment and near-term cost-effectiveness. This alternative would proceed with cleanup and environmental restoration, and render further surveillance and maintenance of these contaminated buildings and structures unnecessary. It reduces the time human health and the environment are exposed to the threats posed by the hazardous substances by eliminating the threat.

The following actions are included in this alternative:

- Deactivate, as appropriate, by removing all known CERCLA hazardous substances from within and around the buildings/structures.
- Plug or grout piping and/or drains entering or exiting buildings/structures below grade, as needed, to prevent potential pathways to the environment.

¹ Discounted costs represent the present value of a future investment or payment that is calculated using a particular discount or interest rate.

² Non-discounted costs do not reflect the changing value of money over time.

Fact Sheet

- Decontaminate, immobilize contamination, and isolate (physically render systems impossible to operate) systems, as needed.
- Remove equipment.
- Demolish each building/structure to grade or below, as appropriate.
- Deactivate remaining below-grade structures (basements, utilities) and remove and/or fill void spaces.
- Backfill below-grade structures with suitable fill material.
- Package and ship waste to the Environmental Restoration Disposal Facility onsite (or other approved onsite or offsite disposal facility) for treatment and disposal.
- Stabilize the area by backfilling, contouring and re-vegetating with native species as needed.
- Initiate the waste site evaluation process for components such as slabs or soil contamination areas that may require further work under a separate response action.

The evaluation shows that this alternative would be more protective of human health and the environment in the shortest period because the buildings/structures would not further deteriorate (increasing the potential for contaminant release) for 10 years as in Alternative 2. Alternative 3 is anticipated to be consistent with future long-term remedial actions.

HOW YOU CAN BECOME INVOLVED

A 30-day public comment period on the Engineering Evaluation/Cost Analysis for 200 East Buildings/Structures Decommissioning runs from **November 22 through December 27, 2010**. The Tri-Party Agencies would like your feedback and will consider all comments before issuing an Action Memorandum.

Please submit comments by December 27, 2010 to:

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To obtain a copy of the EE/CA call the Hanford Cleanup Line 1-800-321-2008.

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