

105-K East Reactor Decommissioning Engineering Evaluation/Cost Analysis Public Comment Period

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

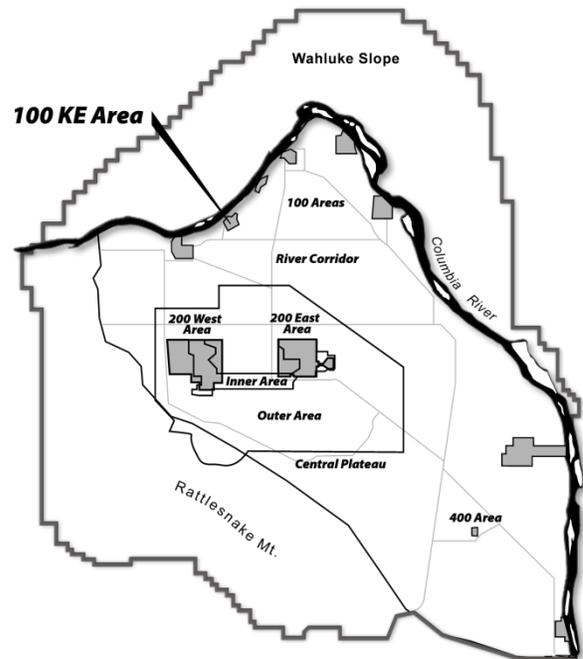
The Tri-Party Agreement (TPA) Agencies – the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency, and the Washington State Department of Ecology – are seeking public comment on an Engineering Evaluation/Cost Analysis (EE/CA) that evaluates alternatives for demolishing the 105-K East Reactor at the Hanford Site. A 30-day public comment period runs from **October 18 – November 17, 2010**. The TPA agencies would like to hear your input on the alternatives and the recommended approach.

Background

The 105-K East Reactor is located in Hanford’s 100 Area. The reactor was built in 1952 and operations stopped in 1971. A decision was made in the 1993 *Record of Decision for Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland, WA* to place Hanford’s eight reactors in interim safe storage for up to 75 years. Following interim storage, each of the reactors would be removed in one piece. On July 27, 2010, DOE issued an amendment to this decision (see http://www.hanford.gov/files.cfm/EIS-0119F-SA_01.pdf) to broaden the possible decommissioning approach and include the option for immediate dismantlement.

What is being proposed? With this EE/CA, the agencies want to broaden a previously selected decommissioning approach to include dismantling the reactor on an accelerated schedule. This would reduce the potential threat to the Columbia River (located 400 yards away) and groundwater by allowing workers access to clean up radioactive and hazardous contaminants in the soils adjacent to and possibly underneath the reactor building.

The TPA agencies are evaluating 105-K East Reactor decommissioning through the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)* process. Under CERCLA, an EE/CA evaluates alternatives for non-time-critical removal actions.



This EE/CA evaluated alternatives for removing the reactor, based on effectiveness, implementability, and cost:

- Alternative 1:** No Action
- Alternative 2:** Safe Storage Followed by One-Piece Removal
- Alternative 3:** Safe Storage Followed by Dismantlement
- Alternative 4:** Accelerated Dismantlement

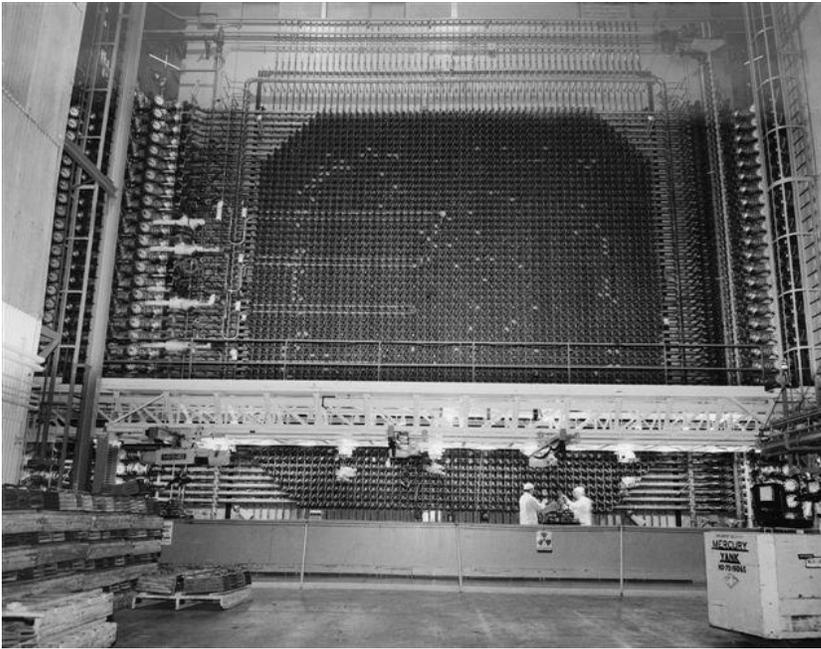


Public Comment Period

The Public Comment Period for 105-K East Reactor Decommissioning Engineering Evaluation/Cost Analysis will run from **October 18 – November 17, 2010**



Tri-Party Agreement
U.S. Department of Energy
Washington State Department of Ecology
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Inside the reactor during the days of operation. This shows the core which is the subject of this proposed removal action.



Artist's rendering -- robotic removal of the reactor core.

Technological advances

The current technology in nuclear reactor dismantlement includes engineering approaches such as development and deployment of advanced robotics, the availability of new approaches for reactor core sampling, worker safety advancements, and real-time lessons learned from reactor demolition activities at Brookhaven National Laboratory. Based on the Brookhaven experience, DOE is evaluating a decommissioning approach for piece-by-piece dismantlement of the reactor core.

Alternative 4 is preferred because it minimizes short and long term risk for workers, the public, and the environment. It is protective of human health and the environment and can be implemented through use of new, proven technology. This alternative allows cleanup actions to take place at nearby soil remediation sites that would not otherwise be possible while the reactor structure remains due to structural stability issues. Alternative 4 allows for accelerated, section-by-section dismantlement of the 105-K East Reactor and transport of radioactive debris to the Hanford Site Environmental Restoration Disposal Facility for burial.

Accelerated Dismantlement incorporates technological advances and additional information developed since issuance of the 1993 ROD (*Record of Decision: Decommissioning of Eight Surplus Production Reactors*

at the Hanford Site, Richland, WA). The technological advances include new engineering approaches (such as development and deployment of robotics in an array of field applications), worker safety advancements, and lessons learned from reactor demolition activities performed elsewhere. Accelerated Dismantlement also takes advantage of the available skilled work force and provides the most expeditious environmental risk reduction. The previous approach established by the 1993 ROD was to place the reactors in interim safe storage for a period of approximately 75 years, followed by one-piece removal.

Benefits of Removing Reactor Core Now

- Accelerates removal of identified environmental contamination

- Reduces long-term risk to the Columbia River
- Assists with completing Tri-Party Agreement regulatory milestone
- Uses currently available, trained and qualified workers to expedite removal
- Avoids cost of permitting, constructing, commissioning, operating, and closing another waste disposal facility in anticipation of the Environmental Restoration Disposal Facility being closed prior to the implementation of the safe storage and dismantlement alternative

How Can You Become Involved?

A 30-day public comment period on the Engineering Evaluation/Cost Analysis for 105-KE Reactor Decommissioning run from October 18 through November 17, 2010. The TPA agencies would like your feedback and will consider all comments before issuing an Action Memorandum.

*Please submit comments by
November 17, 2010 to:*

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Richland Operations Office
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***This EE/CA can be viewed on line at
<http://www.hanford.gov> under Hanford Events Calendar.
To access the document, click on More Event Calendar.
Select any date during the October 18 – November 17, 2010 timeframe.
Click on: Public Comment Period for the 105 KE EE/CA***

**The documents are also available for review at the
Public Information Repositories listed below.**

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Administrative Record and Public Information Repository:
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Phone: 509-376-2530
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On the 105-K East Reactor Decommissioning EE/CA

Public Comment Period October 18 – November 17, 2010

TELL US WHAT YOU THINK!



TPA Fact Sheet
U. S. Department of Energy
P.O. 550 MSIN A7-75
Richland, WA, 99352