Proposed Capsule Storage Area

Class 3 Permit Modification Request to the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion

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Overview

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Introduction and Meeting Purpose

- Presented by the U.S. Department of Energy Richland Operations Office (DOE-RL):
  - **Julie Reddick -** Waste Management and Decontamination and Decommissioning Division
- Purpose:
  - Meet *Washington Administrative Code* (WAC) regulatory requirements for public involvement (WAC 173-303-830(4)(c)(iv))
    - Provide information on a Class 3 Permit Modification Request
      - *Hanford Facility Dangerous Waste Part B Permit Application for the Capsule Interim Storage Operating Unit Group (Capsule Storage Area)*
    - Answer questions

NOTE: This presentation is one of two related to the public comment periods running concurrently

History and Regulatory Background

- Hanford Site was established in 1943 to produce plutonium for national defense
  - Production ended by 1989
  - Significant amounts of waste were created
- Hanford's mission then shifted to environmental cleanup and waste management operations; Hanford Site cleanup is one of the largest, most complex environmental projects in the U.S.
- The Resource Conservation and Recovery Act of 1976 (RCRA) is a key regulatory statute related to WESF and the Capsule Storage Area

History and Regulatory Background (cont.)

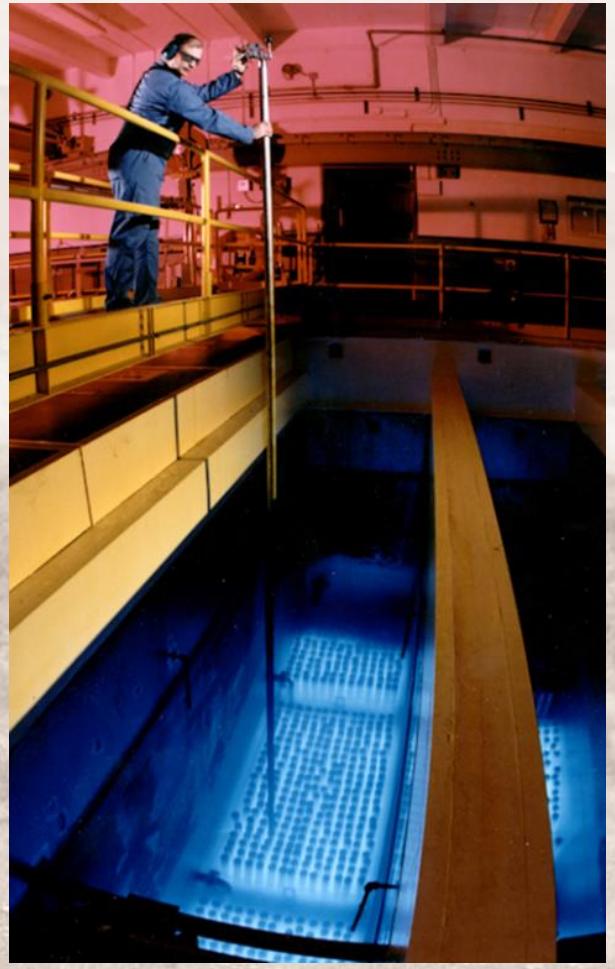
- Washington State has been authorized to implement a state variation of the RCRA program, known as the Dangerous Waste Regulations (WAC 173-303), under RCW 70.105.130 to:
  - Ensure dangerous waste is handled in a manner that protects human health and the environment
  - Regulate facilities that manage (e.g., store, treat, and/or dispose) waste

Permitting Background

- Ecology issued the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion for the Treatment Storage, and Disposal of Dangerous Waste, Permit Number WA7890008967 in 1994
  - Current Permit Revision is known as “Rev. 8C”
- The Permit provides standard and general facility conditions, as well as, unit-specific conditions for the operation, closure, and post-closure of operating unit groups
  - Standard Conditions (Part I)
  - General Facility Conditions (Part II)
  - Unit-Specific Conditions for the Final Status Operations (Part III)
  - Unit-Specific Conditions Corrective Action (Part IV)
  - Unit-Specific Conditions for Units Undergoing Closure (Part V)
  - Unit-Specific Conditions for Units in Post-Closure (Part VI)

Capsule History

- From 1974 to 1985, WESF encapsulated radioactive cesium and strontium and stored these capsules in concrete pool cells
- Impurities in the isotopes classify them as mixed waste, requiring management under RCRA
- 1,936 capsules are currently stored in pool cells filled with water to protect workers from high levels of radioactivity and help keep the capsules cool
- While the capsules are currently in a safe and compliant configuration, WESF is an aging facility
- DOE-RL is proposing to move the capsules out of WESF and store them in concrete casks on the Capsule Storage Area concrete pad



Proposed Permit Modification Request

- The permit modification request is required per WAC 173-303-806 and 830
- The Class 3 permit modification request proposes to incorporate the Capsule Storage Area into the Unit-Specific Conditions for Final Status Operations (Part III) portion of the permit

Proposed Changes – Final Status Operations

Permit modification request includes the following information:

- Addendum A, Part A Form
- Addendum B, Waste Analysis Plan
- Addendum C, Process Information
- Addendum E, Security
- Addendum F, Preparedness and Prevention
- Addendum G, Personnel Training
- Addendum H, Closure Plan
- Addendum I, Inspection Plan
- Addendum J, Contingency Plan

Proposed Changes – Final Status Operations (cont.)

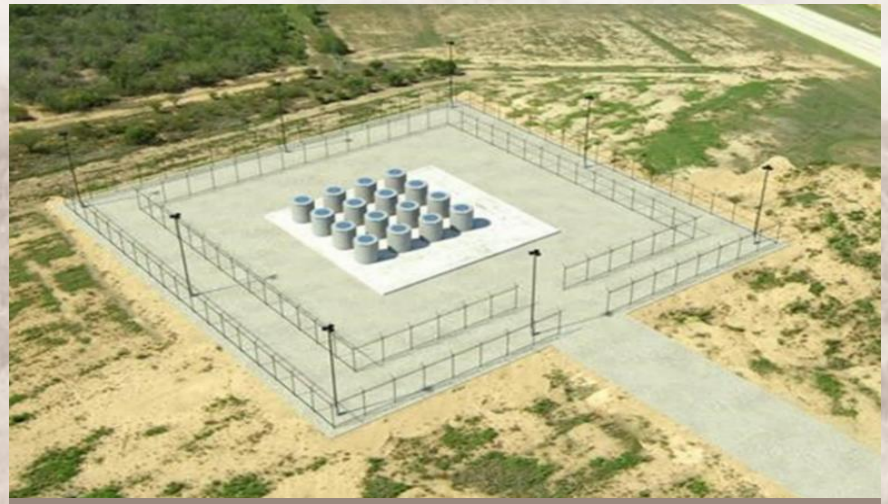
- At WESF, capsules will be sealed into universal capsule sleeves, loaded into transportable storage canisters and contained within concrete casks
- Storage casks are designed with radiation shielding to protect workers and to limit release of contamination
- This cask storage system in designed for passive cooling by air flow within the cask
  - Cool air is drawn into the cask and warm air goes out
  - There is no need for fans or mechanical equipment
- Capsules are sealed. The waste inside does not come into contact with the air

Transportable storage canisters will hold rows of capsules contained in universal capsule sleeves

Proposed Changes – Final Status Operations (cont.)

- Once the capsules have been loaded into the Cask Storage System at WESF, the casks will be transported to the proposed Capsule Interim Storage Operating Unit Group (Capsule Storage Area) using a vertical cask transporter
- The proposed Capsule Interim Storage Operating Unit Group would consist of one miscellaneous Dangerous Waste Management Unit (DWMU) – the Capsule Storage Area

Representation of a vertical cask transporter



Conceptual Capsule Storage Area illustration

Proposed Changes – Final Status Operations (cont.)

- The proposed location for the Capsule Storage Area is in the 200 East Area
  - –Consists of a reinforced concrete pad with two chain-link fences
  - –Provides dry, interim storage of the capsules within the Cask Storage System
  - –Interim storage will continue until final capsule disposition
- Operation of the Capsule Storage Area will include surveillance and maintenance

Location


Wahluke Slope
Arid Lands Ecology
WESF
B Plant
Proposed Capsule Storage Area
200 East Area


N
G
G
G
G
G
G
LEGEND
Capsule Interim Storage Operating Unit Group
Capsule Storage Area Dangerous Waste Management Unit
Fence
Gate

Class 3 Permit Modification Process

- DOE-RL Responsibilities
  - Submit permit modification request to Ecology (the permitting agency)
  - Notify public
    - Public mailing list
    - Local newspaper
  - Hosts public meeting

60-Day Public Comment Period

- Written comments due to Ecology
- Following 60-day public comment period, Ecology responds with either denial or approval of permit modification request
  - Ecology will perform a completeness review and notify the permittees if the application is complete
  - Once application is complete
    - Ecology prepares draft permit and draft permit conditions
    - Hosts public hearing (if requested)

45-Day Public Comment Period

  - After 45-day public comment period, Ecology will perform the steps detailed in WAC 173-303-840 (7) or (8) dependent on the public comments during the comment period

Conclusion

- The 60-day public comment period for this permit modification request ends on **January 31, 2018**
- The permit modification request may be accessed through the:
  - Hanford Event Calendar at http://www.hanford.gov/pageAction.cfm/calendar?&IndEventID=8722
  - Hanford Facility Administrative Record at 2440 Stevens Center Place in Richland or online at http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0067756H
  - Hanford Public Information Repositories (addresses located on fact sheet)
- Comments may be submitted to the Washington State Department of Ecology, Richland Nuclear Waste Office via eComments (preferred) to: http://wt.ecology.commentinput.com/?id=ibkWY

Contact Information

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Questions