



# Proposed Capsule Storage Area Resource Conservation and Recovery Act Notice of Intent Public Meeting

Julie Reddick – Department of Energy  
September 21, 2017

**RICHLAND**  
**OPERATIONS OFFICE**  
United States Department of Energy



# Overview

- The U.S. Department of Energy (DOE) is proposing to build a Capsule Storage Area (CSA) to house cesium and strontium mixed waste capsules currently stored in the Waste Encapsulation and Storage Facility (WESF)
- The facility will support DOE cleanup goals by relocating the capsules, currently in water, into a dry storage configuration
- Building the CSA will require a permit from the Washington Department of Ecology (Ecology) as a dangerous waste management unit subject to state regulations— Washington Administrative Code (WAC) 173-303
- Building the CSA will require a formal document supporting a DOE decision to construct the CSA (a Record of Decision or amendment to an existing DOE decision document)

This photo faces south. At the closest point, the CSA will be about 300 meters to the southwest of WESF.



Proposed CSA Location



# Proposed CSA Location

Proposed location is in the 200 East Area and will provide dry storage





# Public Meeting Purpose

- Before submitting a permit application to Ecology, DOE is required to provide notification to Ecology, local communities and the public that the siting of a dangerous waste management unit is being considered (WAC 173-303-281)
- In April 2017, DOE submitted a Notice of Intent letter to Ecology
- The CSA is the Capsule Interim Storage Operating Unit Group



**Department of Energy**  
 Richland Operations Office  
 P.O. Box 550  
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17-AMRP-0147

APR 26 2017

Ms. Alexandra K. Smith, Program Manager  
 Nuclear Waste Program  
 Washington State Department of Ecology  
 3100 Port of Benton Boulevard  
 Richland, Washington 99354

Dear Ms. Smith:

NOTICE OF INTENT FOR THE CAPSULE INTERIM STORAGE, CHPRC-03258,  
 REVISION 1, OPERATING UNIT GROUP

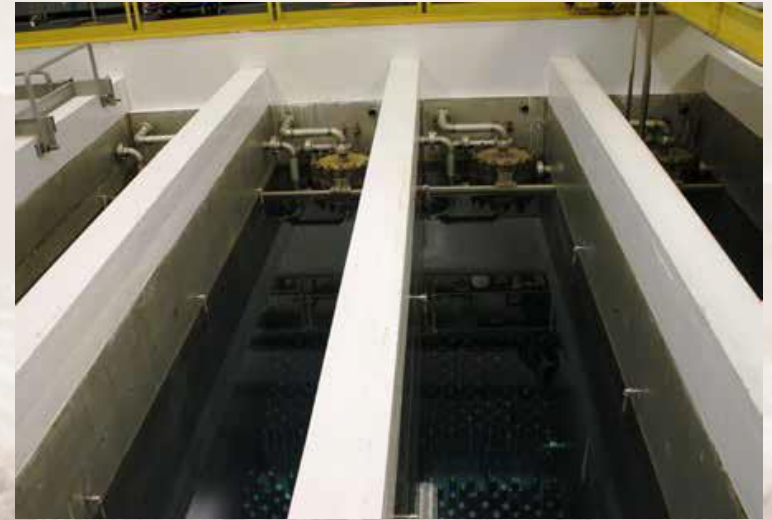
This letter transmits the Notice of Intent for the Capsule Interim Storage, CHPRC-03258, Revision 1. The purpose of this Notice of Intent is to provide notification to the Washington State Department of Ecology (Ecology), local communities, and public that the siting of a new dangerous waste facility is being considered. This Notice of Intent precedes the Class 3 Permit Modification Request needed to install the Capsule Interim Storage Operating Unit Group. The Cesium and Strontium Capsules currently stored in the Waste Encapsulation Storage Facility will be transferred to the Capsule Interim Storage Operating Unit Group once it is installed. The attached Notice of Intent includes demonstration of the need for the Capsule Interim Storage Operating Unit Group and compliance with siting criteria.

**DOE submitted NOI letter to Ecology  
 April 26, 2017**



# Background

- From 1974 to 1985, cesium and strontium were recovered and removed from high-level waste tanks to reduce the temperature of the tanks and placed in stainless steel capsules at WESF
- 1,335 cesium chloride capsules and 601 strontium fluoride capsules are currently stored in WESF

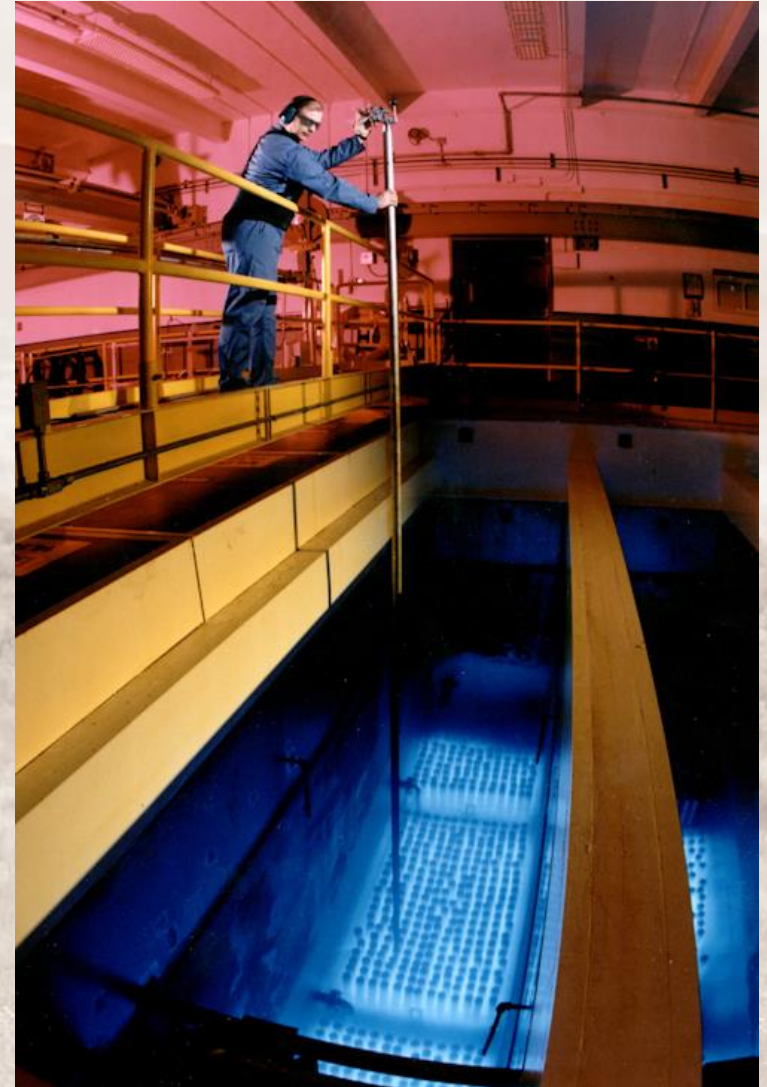


The capsules are currently stored in concrete cells underwater



# Background

- Capsules are stored in pools filled with water to:
  - Protect workers from high levels of radioactivity
  - Help keep the capsules cool
- While the capsules are currently in a safe, compliant configuration, WESF is an aging facility
- Dry storage provides a safe and compliant method for long-term interim storage





# Capsule Storage Area

- In dry storage configuration, the capsules will be in sleeves, housed in storage canisters and packed in concrete casks
- Casks will be stored on a concrete pad southwest of WESF
- The CSA will not produce any secondary waste products or accept any additional waste
- In addition to management as dangerous waste subject to state regulations, the facility will be designed and operated in compliance with DOE Order 435.1, Radioactive Waste Management and other applicable DOE directives



Transportable storage canisters will hold rows of capsules contained in sleeves

# Conceptual Design



Conceptual CSA Illustration



# Notice of Intent

- The Notice of Intent describes:
  - Location and description of the proposed CSA
  - Compliance with siting standards
    - Measures that will be in place to provide protection of the natural environment
    - Location factors for the protection of man-made and designated areas
  - Description of need for the CSA
  - Impact on the overall capacity of Hanford
  - 10-year compliance history



# CSA Notice of Intent

## WAC 173-303-281(3)(ii)-(v)

The proposed location of the CSA is:

- Not considered an area subject to soil instability or coastal flooding
- Not within active fault area or area designated as a watershed
- Not intended to be used as a landfill or to incinerate waste
- Located over 6.5 miles from Columbia River, 9.5 miles from nearest surface water intake, and 5 miles from Hanford property line
- More than 500 feet from wetland, designated habitat or refuge and natural area preserves, or bald eagle protection area



Proposed Site for CSA

# CSA Notice of Intent

## WAC 173-303-281(3)(vii)-(viii)



- The CSA will provide an improved management method
- Overall mixed waste storage capacity of Hanford will not be affected
- The waste to be stored at the CSA will consist of the cesium and strontium capsules currently stored in WESF



Similar representation of casks at West Valley,  
DOE Site

# Next Steps for Public Involvement



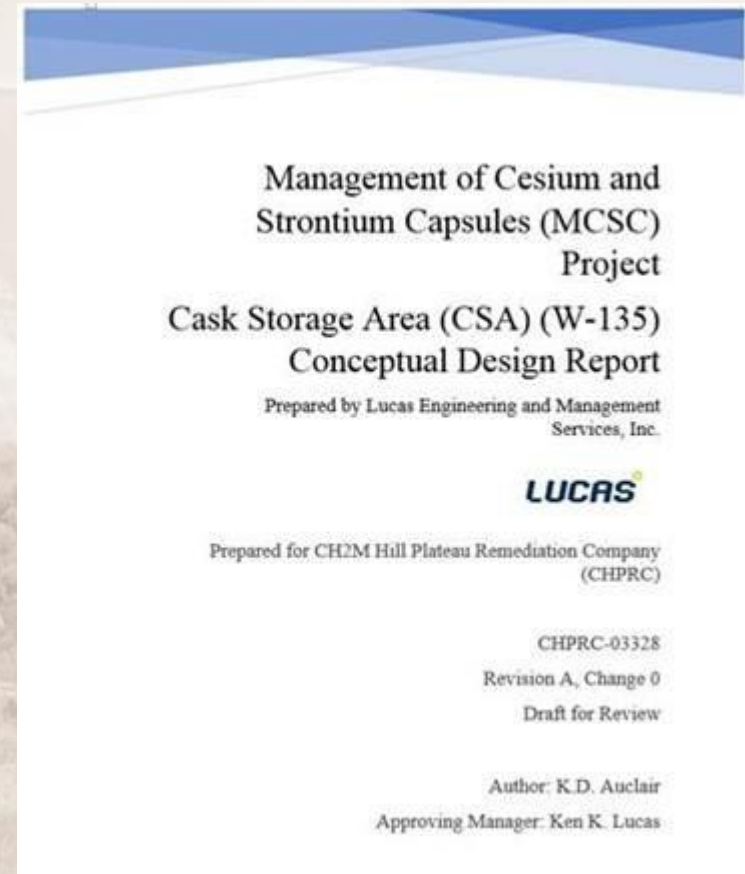
- There is no formal comment period associated with this meeting
- The public will have an opportunity to provide comments during the permit modification process, which will include two formal comment periods and a public meeting
- Those dates have not been set yet





# Tentative Schedule

- Conceptual design completed
- Permit application to be submitted October/November 2017
- Final designs expected to be completed by end of 2018
- Construction activities expected to start in 2019 and finish by end of 2020
- Capsule transfer is expected to start in 2022



Conceptual Design Report



# Contact Information

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