Solid Waste Operating Complex (SWOC)

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

RICHLAND OPERATIONS OFFICE
United States Department of Energy

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Introduction and Meeting Purpose

- Presented by the U.S. Department of Energy (DOE):
  - **Duane Carter**
    Environmental Safety and Quality Division
  - **Mike Collins**
    Waste Management and D&D Division
- Purpose:
  - Provide information to the public on Class 3 Permit Modification Request (PMR), *Hanford Facility Dangerous Waste Part B Permit Application; Low-Level Burial Grounds Trenches 31-34-94, T Plant Complex, and Central Waste Complex-Waste Receiving and Processing Facility*.
  - Answer questions.
  - Meet *Washington Administrative Code* (WAC) regulatory requirements for public involvement (WAC 173-303-830(4)(c)(iv)).

History and Regulatory Background

- Hanford Site was established in 1943 to produce plutonium for national defense.
  - Production ended in 1988.
  - Significant amounts of waste were created.
- In 1989, Hanford's mission shifted to environmental cleanup and waste management operations.
  - Hanford Site cleanup is one of the largest, most complex environmental projects in the U.S.
- A major regulatory statute related to the Solid Waste Operating Complex (SWOC).
  - Resource Conservation and Recovery Act (RCRA).

History and Regulatory Background (cont'd)

- The U.S. Environmental Protection Agency (EPA) has granted Washington state the authority to implement its own hazardous waste management program in lieu of the federal RCRA program
- The Washington State Department of Ecology (Ecology) is authorized under state law (RCW 70.105.130) to implement the state program:
  - Ensures dangerous waste is handled in a manner that protects human health and the environment
  - Regulates facilities that manage waste (e.g., store, treat, and/or dispose).

Permitting Background

- Ecology issued the Hanford Facility RCRA Permit, Dangerous Waste Portion, Permit Number WA7890008967 (Permit) 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 Final Status Operations (Part III)
  - Corrective Action for Past Practices (Part IV)
  - Unit-Specific Conditions for Units Undergoing Closure (Part V)
  - Unit-Specific Conditions for Units in Post-Closure (Part VI)

Proposed Permit Modification Request

- The permit modification request is required by Agreed Order and Stipulated Penalty Number DE 10156 (Agreed Order), Exhibit A Section 1.12.1:
  - "Within fourteen months after Ecology's transmittal of the Conceptual Agreement Packages to USDOE, USDOE agrees to submit to Ecology a Class 3 permit modification request to incorporate the SWOC Unit Groups into the Hanford Dangerous Waste Permit"
- Proposed changes will allow for final status waste management operations and closure activities

Proposed Permit Modification Request (cont'd)

- Permit modification request proposes to incorporate the following:
  - Three interim status SWOC Unit Groups into the Unit-Specific Conditions for Final Status Operations (Part III) portion of the Permit.
    - Operating Unit Group 6 Central Waste Complex (CWC) - Waste Receiving and Processing Facility (WRAP)
    - Currently two separate unit groups
    - Operating Unit Group 9 T Plant Complex
    - Operating Unit Group 17 Low-Level Burial Grounds (LLBG) Trenches 31-34-94
  - Two dangerous waste management units (DWMU) into the Unit-Specific Conditions for Closure (Part V) portion of the Permit.
    - Dangerous Waste Management Unit - CWC East Outside Storage Area
    - Dangerous Waste Management Unit - CWC D-10 Outside Storage Area

Proposed Changes – Final Status Operations

- Permit modification request includes the following information for each operating unit group (OUG) being added to Part III of the Permit:
  - Addendum A, Part A Form
  - Addendum B, Waste Analysis Plan
  - Addendum C, Process Information
  - Addendum D, Groundwater Monitoring Plan (OUG 17 only)
  - 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'd)

Operating Unit Group 6, CWC-WRAP, is located in the 200 West Area and consists of 13 DWMUs

Dangerous Waste Management Unit	Operation
Low Flashpoint Storage Modules	Storage
2402-W, WB, WC, and WE through WL Waste Storage Buildings	
2403-WA through WC Waste Storage Buildings	
CWC Shipping and Receiving Area	
2336-W Building NDA/NDE Area	
2336-W Building Shipping and Receiving Area	
2336-W Building Room 152	
2404-WA and WB Waste Storage Buildings	
HERTR and Super HENC Waste Outdoor Storage Area	
2402-WD Waste Storage Building	Storage and Treatment
2403-WD Waste Storage Building	
2336-W Building Process Area	
2404-WC Waste Storage Building	

Proposed Changes – Final Status Operations (cont'd)

- DWMUs used for storage only at CWC-WRAP
  - Series of buildings, modules and outdoor areas.
  - Engineered and/or portable secondary containment.
  - Outdoor storage areas provide a place to stage containers prior to placement inside specified buildings for storage/treatment, or in preparation for transport to/from another facility.
- DWMUs used for storage and treatment at CWC-WRAP
  - Total of four buildings equipped with fire suppression systems, detectors (i.e., fire, heat and smoke), and engineered secondary containment.
  - Treatment of waste is conducted using a variety of technologies to meet the requirements of Federal and State land disposal restrictions (LDR), and/or acceptance criteria for another approved facility.

Proposed Changes – Final Status Operations (cont'd)

Operating Unit Group 9, T Plant Complex, is located in the 200 West Area and consists of 15 DWMUs

Dangerous Waste Management Unit	Operation
221-T Head End	Storage
221-T Operations Gallery Storage	
221-T BY Storage Area	
2706-T Yard (Including HS-030 and HS-032 Storage Modules)	
2706-T Outdoor Storage Area	
2706-TA Outdoor Storage Area	
2706-T Asphalt Pad	
243-T Covered Storage Pad	
211-T Cage	
221-T Canyon Deck	Storage and Treatment
221-T Cells (7L, 13R, 16R, and 17R)	
221-T Railroad Tunnel	
2706-T Building	
2706-TA Building	
214-T Building	

Proposed Changes – Final Status Operations (cont'd)

- DWMUs used for storage only at T Plant
  - Series of buildings, cabinets, modules and outdoor areas
  - Engineered and/or portable secondary containment
  - Outdoor storage areas provide:
    - A place to stage containers prior to placement inside specified buildings for storage/treatment, or in preparation for transport to/from another facility, or
    - Long-term permitted storage
- DWMUs used for storage and treatment at T Plant:
  - Three buildings equipped with fire suppression systems, detectors (i.e., fire, heat and smoke), and engineered secondary containment.
  - One containment building (221-T Building) for treatment of uncontainerized waste
  - Treatment of waste is conducted using a variety of technologies to meet the requirements of Federal and State LDRs, and/or acceptance criteria for another approved facility

Proposed Changes – Final Status Operations (cont'd)

Operating Unit Group 17, LLBG Trenches 31-34-94, is located in the 200 West and East Areas, and consists of 5 DWMUs

Dangerous Waste Management Unit	Operation
LLBG Trench 31 Waste Storage and Treatment Pad	Storage and Treatment
LLBG Trench 34 Waste Storage and Treatment Pad	
LLBG Trench 31	Disposal
LLBG Trench 34	
LLBG Trench 94	

Proposed Changes – Final Status Operations (cont'd)

- LLBG Trenches 31 and 34 Waste Storage and Treatment Pad DWMUs
  - Located adjacent to and partially positioned on the apron liner of each corresponding landfill.
  - Provide container storage and treatment for mixed waste, as well as LDR compliant containerized waste prior to disposal in the landfills.
  - Treatment of waste is conducted using immobilization technologies to meet the requirements of Federal and State LDRs.

Proposed Changes – Final Status Operations (cont'd)

- LLBG Trenches 31 and 34 DWMUs
  - Two landfills located in the 200 West Area that operate in accordance with disposal requirements for LDR compliant waste
  - Constructed with soil and synthetic liners, as well as leachate collection and removal systems
- LLBG Trench 94 DWMU
  - One landfill located in the 200 East Area that operates under an exemption request from applicable liner system requirements
  - Final disposal facility for decommissioned, defueled reactor compartments (RCs) from the U.S. Department of the Navy
    - RCs are prepared for disposal by the Puget Sound Naval Shipyard in Bremerton, WA and transported by barge to the Port of Benton

Proposed Changes – Closure

- Permit modification request includes the following information for DWMUs being added to Part V of the Permit:
  - Addendum H, Closure Plans
    - Appendix H3.D: CWC East Outside Storage Area
    - Appendix H3.E: CWC D-10 Outside Storage Area
- Both DWMUs are located in the 200 West Area and collectively provided storage for waste. These units are not accepting new waste and will begin closing in accordance with applicable closure regulations.

Class 3 Permit Modification Process

- Hanford Facility
  - Submits permit modification request to Ecology (permitting agency)
  - Notifies public
    - Public mailing list
    - Local newspaper
  - Hosts public meeting
- Written comments due to Ecology
- Ecology
  - Denies permit modification request (issues notice of deficiency)
  - Approves permit modification request
    - Prepares draft permit
    - Notifies public of draft permit conditions
    - Hosts public hearing (if requested)
  - Denies permit modification request
    - Prepares new draft permit or extends public comment period
  - Approves permit modification request
    - Issues revised Permit

60-Day Public Comment Period

45-Day Public Comment Period

Conclusion

- The 60-day public comment period for this permit modification request ends at the close of business on April 8, 2016
- The permit modification request may be accessed through the:
  - Hanford Event Calendar at www.hanford.gov
  - **Hanford Facility Administrative Record**
    2440 Stevens Drive
    Richland, WA 99354
- Comments may be submitted to the Washington State Department of Ecology, Richland Nuclear Waste Office via U.S. mail or email:

Stuart Luttrell
3100 Port of Benton Blvd.
Richland, WA 99354
Hanford@ecy.wa.gov

U.S. DEPARTMENT OF ENERGY

Questions