



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

19-AMRP-0060

**APR 12 2019**

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:

CLOSURE EXTENSION REQUEST FOR T PLANT COMPLEX (T PLANT) 221-T CELLS (7L, 13R, 16R, AND 17R) AND CENTRAL WASTE COMPLEX (CWC) AND WASTE RECEIVING AND PROCESSING (WRAP) UNITS 2404-WC BUILDING AND CWC SHIPPING AND RECEIVING AREA DANGEROUS WASTE MANAGEMENT UNITS (DWMU)

This letter requests an extension in the date of expected closure for the subject DWMUs, in accordance with the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8c, for the Treatment, Storage, and Disposal of Dangerous Waste (the Site-wide Permit), Permit Condition I.A. As these DWMUs are not yet incorporated into the Site-wide Permit, they are subject to the interim status requirements of Washington Administrative Code (WAC) 173-303-400. In accordance with WAC 173-303-400(3)(a), which incorporates by reference 40 Code of Federal Regulations (CFR) 265.112(d)(2)(i), the date when closure is expected to begin must be either:

“Within 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes, or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one-year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste management unit can demonstrate to the Regional Administrator (Department) that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all interim status requirements, the Department may approve an extension to this one-year limit;”

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The U.S. Department of Energy Richland Operations Office (RL) has determined that the 221-T Cells (7L, 13R, 16R, and 17R), 2404-WC Building, and CWC Shipping and Receiving Area DWMUs have the capacity to receive additional dangerous and/or mixed waste, and are needed to manage wastes from activities documented in RL's Project Management Baseline as well as RL's Ten Year Plan.

In accordance with 40 CFR 265.112(d)(2)(i) – Closure and Post-Closure, as referenced by WAC 173-303-400(3)(a), RL has included a demonstration (attachment), and is requesting that the expected date to begin closure of the 221-T Cells (7L, 13R, 16R, and 17R), 2404-WC Building, and CWC Shipping and Receiving Area, be extended for five years to support future waste management activities identified for the DWMUs.

The Attachment describes the DWMUs capacity to receive additional dangerous and/or mixed waste, compliance with interim status requirements, and steps RL has taken and will continue to take to prevent threats to human health and the environment.

If you have any questions, please contact me, or your staff may contact Bill Hamel, Assistant Manager for the River and Plateau, on (509) 373-9971.

Sincerely,



Brian T. Vance  
Manager

AMRP:DBC

Attachment:  
Dangerous Waste Management Units  
Needing a Delay in the Start of Closure

cc: See page 3

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cc w/attach:

D. J. Alexander, Ecology  
J. Atwood, YN  
D. B. Bartus, EPA  
J. Bell, NPT  
J. L. Boller, EPA  
J. E. Bramson, CHPRC  
R. Buck, Wanapum  
L. C. Buelow, EPA  
J. W. Cammann, MSA  
L. Contreras, YN  
S. L. Dahl-Crumpler, Ecology  
D. R. Einan, EPA  
K. A. Elsethagen, Ecology  
M. N. Jaraysi, CHPRC  
S. K. Johansen, CHPRC  
M. Johnson, CTUIR  
J. A. Lerch, CHPRC  
S. N. Schleif, Ecology  
J. H. Temple, Ecology  
Administrative Record, TSD: T-2-4 and TS-2-7  
Ecology NWP Library  
Environmental Portal  
HF Operating Record (J. K. Perry, MSA)

## Attachment

### Dangerous Waste Management Units Needing a Delay in the Start of Closure

Operating Unit Group (OUG)	DWMUs
T Plant Complex	221-T Cells (7L, 13R, 16R, and 17R)
CWC-WRAP	2404-WC Building CWC Shipping and Receiving Area

#### **T Plant Complex Dangerous Waste Management Unit (DWMU)**

Anticipated Receipt of Additional Dangerous or Mixed Waste: Present plans are for the T Plant DWMU included in this request to be used in the future for dangerous waste and/or mixed waste management activities in support of Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Action Plan Milestone M-091 and other Hanford Site cleanup actions. These waste management activities are dynamic in nature and schedules are driven by federal budget allocations. Future waste management campaigns include venting and repackaging of transuranic mixed waste stored in drums to meet offsite disposal requirements, such as the Waste Isolation Pilot Plant. Wastes to be managed include mixed low-level waste, transuranic mixed waste, and hazardous/dangerous waste. Closure of this unit would be incompatible with the necessary continued operation of the T Plant Operating Unit Group (OUG).

Capacity to Receive Additional Waste: The T Plant OUG DWMU is operating in accordance with Permit Condition I.A and is subject to interim status technical standards and has capacity to receive additional waste for storage. The storage design capacity and the date of the last dangerous waste received into the DWMU is shown in the following table. The maximum treatment and storage capacity is from the 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 (DOE/RL-2015-74) submitted in January 2016. Further description of measures to prevent threats to human health and the environment are shown below.

Dangerous/mixed waste is being stored in the 221-T Cells (7L, 13R, 16R, and 17R) DWMU, but sufficient capacity remains for future management of dangerous and/or mixed waste.

#### **Treatment and Storage Capacity and Date of Last Dangerous Waste Receipt for T Plant Complex Dangerous Waste Management Unit**

DWMU	Maximum Treatment Capacity (mt/day) <sup>a</sup> (DOE/RL-2015-74)	Maximum Storage Capacity (Liters) (DOE/RL-2015-74)	Date of Last Dangerous Waste Receipt	Current Volume of Waste (liters)
221-T Cells (7L, 13R, 16R, and 17R)	296	494,000	9/26/2005	8,665
<sup>a</sup> Individual treatment unit is permitted to process at the daily maximum treatment rate; however, the maximum treatment rate for all associated treatment units combined within T Plant cannot exceed 296 metric tons/day				

## Attachment

### Central Waste Complex-Waste Receiving and Processing Facility (CWC-WRAP) DWMUs

Anticipated Receipt of Additional Dangerous or Mixed Waste: As described in the current RCRA Part A Permit for this unit, the CWC-WRAP DWMUs included in this request are expected to be needed in the future for dangerous and mixed waste activities. These activities are in support of Tri-Party Agreement Action Plan Milestone M-091 and other Hanford Site cleanup actions, including retrieval activities at the 618-11 Burial Ground. These waste management activities are dynamic in nature and schedules are driven by federal budget allocations. Future campaigns for these DWMUs will include storage and treatment of mixed low-level waste and transuranic mixed waste. Closure of these units would be incompatible with the necessary continued operation of the CWC-WRAP OUG.

Capacity to Receive Additional Waste: The CWC-WRAP OUG DWMUs are operating in accordance with Permit Condition I.A and are subject to interim status technical standards, and have capacity to receive additional waste for storage. The storage design capacities and the date of the last dangerous waste received into these DWMUs are shown in the following table. The maximum treatment and storage capacities are from the 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 (DOE/RL-2015-74) submitted in January 2016. Further description of measures to prevent threats to human health and the environment are shown below.

Dangerous/mixed waste is being stored in the 2404-WC Building DWMU, but sufficient capacity remains for future management of dangerous and/or mixed waste. Dangerous and mixed waste is not currently being stored in the CWC Shipping and Receiving Area DWMU, thus has sufficient capacity for future management of dangerous or mixed waste.

#### Treatment and Storage Capacity and Date of Last Dangerous Waste Receipt for CWC-WRAP Dangerous Waste Management Unit

DWMU	Maximum Treatment Capacity (mt/day) <sup>a</sup> (DOE/RL-2015-74)	Maximum Storage Capacity (Liters) (DOE/RL-2015-74)	Date of Last Dangerous Waste Receipt	Current Volume of Waste (liters)
2404-WC Building	382	1,879,000	6/4/2018	106,366
CWC Shipping and Receiving Area	0	1,977,000	7/17/2018	0

<sup>a</sup> Individual treatment units are permitted to process at the daily maximum treatment rate; however, the maximum treatment rate for all associated treatment units combined within CWC cannot exceed 382 metric tons/day.

## Attachment

The following documentation is maintained in the facility operating record, demonstrating compliance with interim status requirements in accordance with Site-wide Permit Condition I.A. Facility personnel operate the 221-T Cells (7L, 13R, 16R, and 17R), 2404-WC Building, and CWC Shipping and Receiving Area according to the waste analysis plan, security requirements, inspection requirements, training requirements, preparedness and prevention requirements, and contingency and emergency requirements maintained in the operating record, as outlined below. This information demonstrates steps RL has taken and will continue to take to prevent threats to human health and the environment.

### **WAC 173-303-300 General Waste Analysis**

The T Plant Complex Waste Analysis Plan (WAP) and CWC-WRAP WAP demonstrate compliance with the requirements of WAC 173-303-300(1) through (5), as well as applicable federal and state land disposal requirements. The WAP is applicable to waste management activities including the following: Waste receipt, storage, non-destructive examination, physical/chemical screening, sampling, treatment, sorting and repackaging, waste notification and certification, shipment of waste offsite, and transfer of waste to another SWOC treatment, storage, and disposal (TSD) location. Wastes managed at T Plant and CWC-WRAP may include the following:

- Newly generated waste from onsite and offsite generators
- Waste previously accepted at other SWOC TSDs and then transferred
- Retrieved waste, including but not limited to contaminated debris, contaminated soil, absorbed oils, PCB-contaminated waste, and labpacks
- OUG generated waste from operations and maintenance activities, including debris, discarded personal protective equipment, and maintenance waste
- Wastes treated at T Plant and CWC-WRAP

### **WAC 173-303-310 Security**

Warning signs are posted stating “Danger-Unauthorized Personnel Keep Out” (or an equivalent legend) at each OUG. The signs have a font type and size written in English that ensures that it can be read from a distance of at least 25 feet. Requirements for a 24-hr surveillance (WAC 173-303-310(2)(b)) and an artificial or natural barrier system (WAC 173-303-310(2)(c)) are met at the Hanford Facility level as identified in Attachment 3, “Security” to the WA7890008967, Hanford Facility Resource Conservation and Recovery Act Permit. At all OUGs, visitors are required to sign in and are subject to escorting protocols.

### **WAC 173-303-320 General inspection**

General inspections in accordance with WAC 173-303-320 are conducted for each OUG according to the following table:

## Attachment

<b>Inspection Requirements for T Plant</b>		
<b>Requirement</b>	<b>Frequency</b>	<b>Inspection Description</b>
Posted warning signs	Weekly	Signs are present, legible, and visible.
Fire suppression systems	Monthly	Water, air, and temperatures are within range; systems are operational and pressurized.
		Valves are open, seal/lock is intact, water and air pressures are within range, and system is calibrated.
Spill response kits	Monthly	Equipment is present, and seal is intact.
Fire extinguishers	Monthly	Equipment is present, and seal is intact and not past the expiration date.
First aid equipment/CPR kit	Monthly	Equipment is present, and seal is intact.
Particulate eye wash bottles and Portable eyewash stations	Portable: Weekly while in use	Equipment is present and functional, and seal is intact and not past the expiration date.
Emergency response	Monthly	Equipment is present, and seal is intact.
Emergency telephones	Monthly	Equipment is present and operating.
Containers/container storage areas	Weekly	Container integrity is not compromised by punctures, dents, penetrating scratches, loose lids, bulging, excessive corrosion, damage, or deterioration. Containers are closed and stored in a manner that will not rupture the containers or cause them to leak. Aisle spacing between rows of containers is at least 76 cubic meters (30 inches). For any portable secondary containment used to meet the requirements of WAC 173-303-630(7), verify that there is no deterioration of secondary containment system caused by corrosion or other factors and no evidence of spills or leaks.
Container labels	Weekly	Container marking/labeling is intact, unobscured, legible, and in good condition. Labels are visible, readable, and adequately identify risks.
Curbing, floor, and sumps	Weekly	Containment used meets the requirements of WAC 173-303-630(7). Verify no deterioration of containment curbing, flooring, and sumps caused by corrosion or other factors; no evidence of spills or leaks.
Ignitable or reactive waste	Annually	Storage is in compliance with WAC 173-303-630(8).

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<b>Inspection Requirements for Central Waste Complex</b>		
<b>Requirement</b>	<b>Frequency</b>	<b>Inspection Description</b>
Posted warning signs	Weekly	Signs are present, legible, and visible.
Fire suppression systems	Weekly	Water, air, and temperatures are within range; systems are operational and pressurized.
		Valves are open, seal/lock is intact, water and air pressures are within range, and system is calibrated.
Spill response kits	Monthly/ Quarterly	Equipment is present, and seal is intact.
Fire extinguishers	Monthly	Equipment is present, and seal is intact and not past the expiration date.
First aid equipment/CPR kit	Monthly/ Quarterly	Equipment is present, and seal is intact. Equipment not past expiration date.
Particulate eye wash bottles and Portable eyewash stations	Monthly	Equipment is present and functional, and seal is intact and not past the expiration date.
Emergency response	Weekly/ Quarterly	Equipment is present, and seal is intact.
Emergency telephones	Monthly	Equipment is present and operating.
Windsocks	Monthly	Equipment is present and operating.
Containers/container storage areas	Weekly	Container integrity is not compromised by punctures, dents, penetrating scratches, loose lids, bulging, excessive corrosion, damage, or deterioration. Containers are closed and stored in a manner that will not rupture the containers or cause them to leak. Aisle spacing between rows of containers is at least 76 cubic meters (30 inches). For any portable secondary containment used to meet the requirements of WAC 173-303-630(7), verify that there is no deterioration of secondary containment system caused by corrosion or other factors and no evidence of spills or leaks.
Container labels	Weekly	Container marking/labeling is intact, unobscured, legible, and in good condition. Labels are visible, readable, and adequately identify risks.
Curbing, floor, and sumps	Weekly	Containment used meets the requirements of WAC 173-303-630(7). Verify no deterioration of containment curbing, flooring, and sumps caused by corrosion or other factors; no evidence of spills or leaks.
Ignitable or reactive waste	Annually	Storage is in compliance with WAC 173-303-630(8).

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### Inspection Requirements for Waste Receiving and Processing

Requirement	Frequency	Inspection Description
Posted warning signs	Weekly	Signs are present, legible, and visible.
Fire suppression systems	Weekly/ Monthly	Water, air, and temperatures are within range; systems are operational and pressurized.
		Valves are open, seal/lock is intact, water and air pressures are within range, and system is calibrated.
Fire extinguishers	Monthly	Equipment is present, and seal is intact and not past the expiration date.
First aid equipment/CPR kit	Quarterly	Equipment is present, and seal is intact.
Portable eyewash stations	Monthly	Equipment is present and functional, and seal is intact and not past the expiration date.
Emergency telephones	Monthly	Equipment is present and operating.
Windsocks	Monthly	Equipment is present and operating.
Containers/container storage areas	Weekly	Container integrity is not compromised by punctures, dents, penetrating scratches, loose lids, bulging, excessive corrosion, damage, or deterioration. Containers are closed and stored in a manner that will not rupture the containers or cause them to leak. Aisle spacing between rows of containers is at least 76 cubic meters (30 inches). For any portable secondary containment used to meet the requirements of WAC 173-303-630(7), verify that there is no deterioration of secondary containment system caused by corrosion or other factors and no evidence of spills or leaks.
Container labels	Weekly	Container marking/labeling is intact, unobscured, legible, and in good condition. Labels are visible, readable, and adequately identify risks.
Curbing, floor, and sumps	Weekly	Containment used meets the requirements of WAC 173-303-630(7). Verify no deterioration of containment curbing, flooring, and sumps caused by corrosion or other factors; no evidence of spills or leaks.
Ignitable or reactive waste	Annually	Storage is in compliance with WAC 173-303-630(8).

## Attachment

### **WAC 173-303-330 Personnel Training**

The Dangerous Waste Training Plan for each OUG meets the requirements of WAC 173-303-330 and contains the following:

- For each position related to the dangerous waste management of the facility, the job title, job description, and the name of the employee filling each job.
- A written description of the type and amount of both introductory and continuing training required for each position.
- Records documenting facility personnel have received and completed the training required by this section.

Introductory and continuing training programs are designed to prepare personnel to manage and maintain the facilities in a safe, effective, and environmentally sound manner. In addition to preparing personnel to manage and maintain the facilities under normal conditions, the training programs ensure that personnel are prepared to respond in a prompt and effective manner should abnormal or emergency conditions occur.

### **WAC 173-303-340 Preparedness and Prevention**

The purposes of preparedness and prevention are to minimize the damage caused by a fire or explosion, and help avoid or mitigate any unplanned sudden or non-sudden release of dangerous waste constituents to air, soil, surface water, or groundwater. The requirements of WAC 173-303-340 can be found throughout various procedures and include:

- Internal/External communications
- Emergency equipment
- Fire control
- Aisle Space Requirements
- Arrangements with local authorities

### **WAC 173-303-350 Contingency Plan and Emergency Procedures**

#### **WAC 173-303-360 Emergencies**

The Building Emergency Plan for each OUG describes both the facility hazards and the basic responses to upset and emergency conditions within the facilities. These events may include spills or releases caused by processing, fires, explosions, transportation activities, movement of materials, packaging, storage of hazardous materials, or natural and security contingencies. When used in conjunction with Permit Attachment 4, Hanford Emergency Management Plan, the plans meet the requirements for contingency planning as required by WAC 173-303.

The Building Emergency Plans cover the following:

- Building emergency response organization
- Plan implementation

## Attachment

- Facility hazards (hazardous waste, dangerous waste, industrial hazards, radioactive materials, criticality)
- Potential emergency conditions (facility operations emergencies, natural phenomena, security contingencies, unexpected/unidentified odors)
- Incident response (protective action, emergencies, prevention of recurrence, natural phenomena, security)
- Termination of event, incident recovery and restart of operations
- Emergency equipment
- Coordination agreements
- Required reports
- Plan location and amendments
- Facility/building emergency response organization

### **40 CFR 265 Subpart G as Referenced by WAC 173-303-400; WAC 173-303-610 Closure and Post-Closure**

A closure plan specific to each DWMU above was developed to comply with the requirements of 40 CFR 265 Subpart G, Closure and Post-Closure, WAC 173-303-610(2) through (6) and use the U.S. Environmental Protection Agency (EPA) guidance document EPA/240/R-02/005, Guidance on Choosing a Sampling Design for Environmental Data Collection (QA/G-5S), and Ecology Publication #94-111, Guidance for Clean Closure of Dangerous Waste Units and Facilities. A closure plan for each DWMU above was submitted to the Washington State Department of Ecology in the SWOC Part B permit application (DOE/RL-2015-74).