



## U.S. Department of Energy Hanford Site

December 7, 2020

21-ESQ-0033

Ms. Stephanie N. Schleif  
Acting Program Manager  
Nuclear Waste Program  
Washington State Department of Ecology  
3100 Port of Benton Boulevard  
Richland, Washington 99354

Dear Ms. Schleif:

### REQUEST FOR WAIVER OF PREPAREDNESS AND PREVENTION ADDENDA REQUIREMENTS FOR THE 216-A-29 DITCH, 216-A-36B CRIB, 216-A-37-1 CRIB, 216-B-3 MAIN POND, 216-B-63 TRENCH AND 216-S-10 POND AND DITCH, HEXONE STORAGE AND TREATMENT FACILITY, B PLANT COMPLEX, PUREX FACILITY AND 241-CX TANK SYSTEM

This letter provides a request from the U.S. Department of Energy, Richland Operations Office (RL) to the Washington State Department of Ecology to grant a waiver for the 216-A-36B Crib, 216-A-37-1 Crib, 216-B-3 Main Pond, 216-B-63 Trench, 216-S-10 Pond and Ditch, 241-CX Tank System, Hexone Storage and Treatment Facility, B Plant and the Plutonium Uranium Extraction Plant (PUREX) Facility from the Preparedness and Prevention requirements as identified in Washington Administrative Code (WAC) 173-303-340 in accordance with WAC 173-303-806.

The attachments listed below provide justification for the waivers. Pictures and maps of the Treatment, Storage and Disposal (TSD) Unit Groups are included in the attachments:

- Attachment 2: Information and Justification of the Preparedness and Prevention Waiver for the 216-A-29 Ditch in the 200 East Area,
- Attachment 3: Information and Justification of the Preparedness and Prevention Waiver for the 216-A-36B Crib in the 200 East Area,
- Attachment 4: Information and Justification of the Preparedness and Prevention Waiver for the 216-A-37-1 Crib in the 200 East Area,
- Attachment 5: Information and Justification of the Preparedness and Prevention Waiver for the 216-B-3 Main Pond in the 200 East Area,
- Attachment 6: Information and Justification of the Preparedness and Prevention Waiver for the 216-B-63 Trench in the 200 East Area,
- Attachment 7: Information and Justification of the Preparedness and Prevention Waiver for the 216-S-10 Pond and Ditch in the 200 West Area,

- Attachment 8: Information and Justification of the Preparedness and Prevention Waiver for the Hexone Storage and Treatment Facility in the 200 West Area,
- Attachment 9: Information and Justification of the Preparedness and Prevention Waiver for the B Plant Complex in the 200 East Area,
- Attachment 10: Information and Justification of the Preparedness and Prevention Waiver for the PUREX Facility in the 200 East Area, and
- Attachment 11: Information and Justification of the Preparedness and Prevention Waiver for the 241-CX Tank System in the 200 East Area.

RL has worked closely with your staff during the development of these documents.

If you have any questions, please contact me, or your staff may contact Glyn D. Trenchard, Acting Assistant Manager for Safety and Environment, RL, on (509) 373-4016.

Sincerely

**Brian T. Vance**

Digitally signed by Brian T.  
Vance  
Date: 2020.12.07 17:36:56 -08'00'

Brian T. Vance  
Manager

ESQ:DBC

Attachments:

1. RL and CHPRC Certification Pages
2. Waiver for the 216-A-29 Ditch in the 200 East Area
3. Waiver for the 216-A-36B Crib in the 200 East Area
4. Waiver for the 216-A-37-1 Crib in the 200 East Area
5. Waiver for the 216-B-3 Main Pond in the 200 East Area
6. Waiver for the 216-B-63 Trench in the 200 East Area
7. Waiver for the 216-S-10 Pond and Ditch in the 200 West Area
8. Waiver for the Hexone Storage and Treatment Facility in the 200 West Area
9. Waiver for the B Plant Complex in the 200 East Area
10. Waiver for the PUREX Facility in the 200 East Area
11. Waiver for the 241-CX Tank System in the 200 East Area

Ms. Stephanie N. Schleif  
21-ESQ-0033

-3-

December 7, 2020

cc w/attachs:

J. L. Cantu, Ecology  
B. Johnson, Ecology  
T. Liebrecht, Ecology  
J. Lippold, Ecology  
N. Menard, Ecology  
J. Temple, Ecology  
K. R. Welsch, Ecology  
C. Wend, Ecology  
Administrative Record, TSDs: D-2-3, D-2-4,  
D-2-5, D-2-6, D-2-7, D-2-10, TS-2-2, TS-2-3,  
TS-2-6, and S-2-9 (Hardcopy)  
Ecology NWP Library (Hardcopy)  
Environmental Portal, G3-35  
HF Operating Record (J. K. Perry, MSA A3-01)

cc w/o attachs:

J. Bell, NPT  
R. Buck, Wanapum  
L. Contreras, YN  
D. R. Einan, EPA  
M. Murphy, CTUIR  
K. Schanilec, EPA

Attachment 1  
Letter Number 21-ESQ-0033

RL and CHPRC Certifications Pages

3 pages including cover sheet

## U.S. Department of Energy Richland Operations Office Certification

In accordance with WAC 173-303-810(13), the following certification statement is provided for the submittal of the following documents:

- REG-1172; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-29 Ditch in the 200 East Area
- REG-1173; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-36B Crib in the 200 East Area
- REG-1174; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-37-1 Crib in the 200 East Area
- REG-1175; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-3 Main Pond in the 200 East Area
- REG-1176; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-63 Trench in the 200 East Area
- REG-1177; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-S-10 Pond and Ditch in the 200 West Area
- REG-1134; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the 241-CX Tank System in the 200 East Area
- REG-1135; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for Hexone Storage and Treatment Facility in the 200 West Area
- REG-1138; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for B Plant Complex in the 200 East Area
- REG-1139; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the PUREX facility in the 200 East Area

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

**Brian T. Vance** Digitally signed by Brian T. Vance  
Date: 2020.12.07 17:38:50 -08'00'

---

Brian T. Vance, Manager  
Owner/Operator  
U.S. Department of Energy  
Richland Operations Office

---

Signature

---

Date

## CH2M HILL Plateau Remediation Company Certification

In accordance with WAC 173-303-810(13), the following certification statement is provided for the submittal of the following documents:

- REG-1172; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-29 Ditch in the 200 East Area
- REG-1173; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-36B Crib in the 200 East Area (REG-1173)
- REG-1174; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-37-1 Crib in the 200 East Area
- REG-1175; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-3 Main Pond in the 200 East Area
- REG-1176; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-63 Trench in the 200 East Area
- REG-1177; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-S-10 Pond and Ditch in the 200 West Area
- REG-1134; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the 241-CX Tank System in the 200 East Area
- REG-1135; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for Hexone Storage and Treatment Facility in the 200 West Area
- REG-1138; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for B Plant Complex in the 200 East Area
- REG-1139; Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the PUREX facility in the 200 East Area

I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

L. Ty Blackford

L. Ty Blackford, President and CEO  
Co-Operator  
CHPRC  
Richland, Washington



Signature

12/2/2020

Date

Attachment 2  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for 216-A-29 Ditch in the 200 East

12 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-29 Ditch in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-29 Ditch in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
November 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**  
*By Julia Raymer at 12:51 pm, Nov 30, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-29 Ditch in the 200 East Area

The Washington State Department of Ecology regulation at, [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in their Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 216-A-29 Ditch. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-650](#) are not applicable for the 216-A-29 Ditch.

In 1955, the 216-A-29 Ditch in the 200 East Area began to receive nonregulated process and cooling water from the Plutonium-Uranium Extraction (PUREX) Facility. This attachment identifies the 200-E-187-PL pipeline and associated control structures as the primary conveyance system associated with the discharge to the 216-A-29 Ditch. A more detailed description of the conveyance system can be found in the *216-A-29 Ditch Closure Plan*.

The 216-A-29 Ditch is a dangerous waste management unit (DWMU) because it also received regulated mixed waste discharges of corrosive (acid and caustic) (D002) backwashes from regeneration of demineralizer columns in the PUREX Plant. The ditch also received off-specification make-ups of essential chemicals used in the process and spills from the PUREX Plant. The spilled mixed waste consisted of toxicity characteristic waste (cadmium, D006) and state only toxic waste (WT02).

The 216-A-29 Ditch is an inactive surface impoundment disposal and treatment unit (process code D83). The ditch was backfilled and surface stabilized in 1991 and cannot receive any additional waste. Part of the area has been revegetated. Therefore, physical contact and disturbance of the contaminated media is not possible for personnel that may enter the ditch area.

At this time, the unit is only accessed for the purpose of annual surveillances.

### 1. Justification for the waiver from the [WAC 173-303-340](#) requirements.

*[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

*(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*

*(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*

*(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

#### **Waiver information and justification:**

This Treatment, Storage, and Disposal (TSD) Unit Group has no permanent personnel located at the site and is only accessed for surveillance purposes. The surveillance activities include performing TSD Unit Group quarterly inspections. The 216-A-29 Ditch inspection includes inspecting signage, barrier, animal intrusion, vegetation, and ground subsidence. No permanent buildings, container storage area, tank system, or other permanent facilities are part of this unit group. Thus, an alarm system, fire extinguishers, and fire control equipment are not necessary.

During surveillance activities, personnel carry communications devices such as cell phones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the surveillance personnel. If a fire is noticed, the Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment, and water.

All contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

*WAC 173-303-340(2) Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

*(a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

*(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during surveillance activities and carry communication devices such as cell phones and two-way radios.

*WAC 173-303-340(3) Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

*WAC 173-303-340(4) Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:*

*(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;*

*(b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;*

*(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and*

*(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.*

*(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.*

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**2. Justification that other Preparedness and Prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-650](#) for a surface impoundment do not apply to 216-A-29 Ditch.**

[WAC 173-303-806\(4\)\(a\)\(viii\)](#) *A description of procedures, structures, or equipment used at the facility to:*

- (A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);*
- (B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);*
- (C) Prevent contamination of water supplies;*
- (D) Mitigate effects of equipment failure and power outages;*
- (E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and*
- (F) Prevent releases to the atmosphere.*

**Information and justification:**

The 216-A-29 Ditch is an inactive surface impoundment disposal and treatment unit. The ditch was backfilled and surface stabilized in 1991 and cannot receive any additional waste. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during surveillance activities. Thus, these requirements are not applicable.

[WAC 173-303-806\(4\)\(a\)\(ix\)](#) *A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with [WAC 173-303-395](#) including documentation demonstrating compliance with [WAC 173-303-395\(1\)\(c\)](#), and*

[WAC 173-303-395\(1\)](#) **Precautions for ignitable, reactive, or incompatible wastes.**

*(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

*(b) Where specifically required by other sections of this chapter [173-303](#) WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

- (i) Generate extreme heat or pressure, fire or explosion, or violent reaction;*
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*
- (iv) Damage the structural integrity of the facility or device containing the waste; or*
- (v) Through other like means, threaten human health or the environment.*

*(c) When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under [WAC 173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

**Information and justification:**

The 216-A-29 Ditch is an inactive surface impoundment disposal and treatment unit. The ditch was backfilled and surface stabilized in 1991. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

**WAC 173-303-650 Surface impoundments**

*WAC 173-303-650(5)(c)(ii) A containment system evaluation and repair plan describing: Testing and monitoring techniques; procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure; description of a schedule of actions to be taken in the event of a possible failure; and the repair techniques and materials (and their availability) to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.*

*WAC 173-303-650(8) Special requirements for incompatible wastes. Incompatible wastes and materials must not be placed in the same surface impoundment, unless WAC 173-303-395(1)(b) is complied with.*

**Information and justification:**

The 216-A-29 Ditch is an inactive surface impoundment disposal and treatment unit. The ditch was backfilled and surface stabilized in 1991 and cannot receive any additional waste. The 216-A-29 Ditch was constructed before modern containment systems were required. No incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.



November 2017. Head end of the 216-A-29 Ditch. Photo was taken facing east.



November 2017. Upper part of the 216-A-29 Ditch, east of 4<sup>th</sup> Street and south of WTP Loop Road.



Lower part of the 216-A-29 Ditch. Photo taken from WTP Loop Road that crosses the 216-A-29 Ditch. Photo was taken facing north.



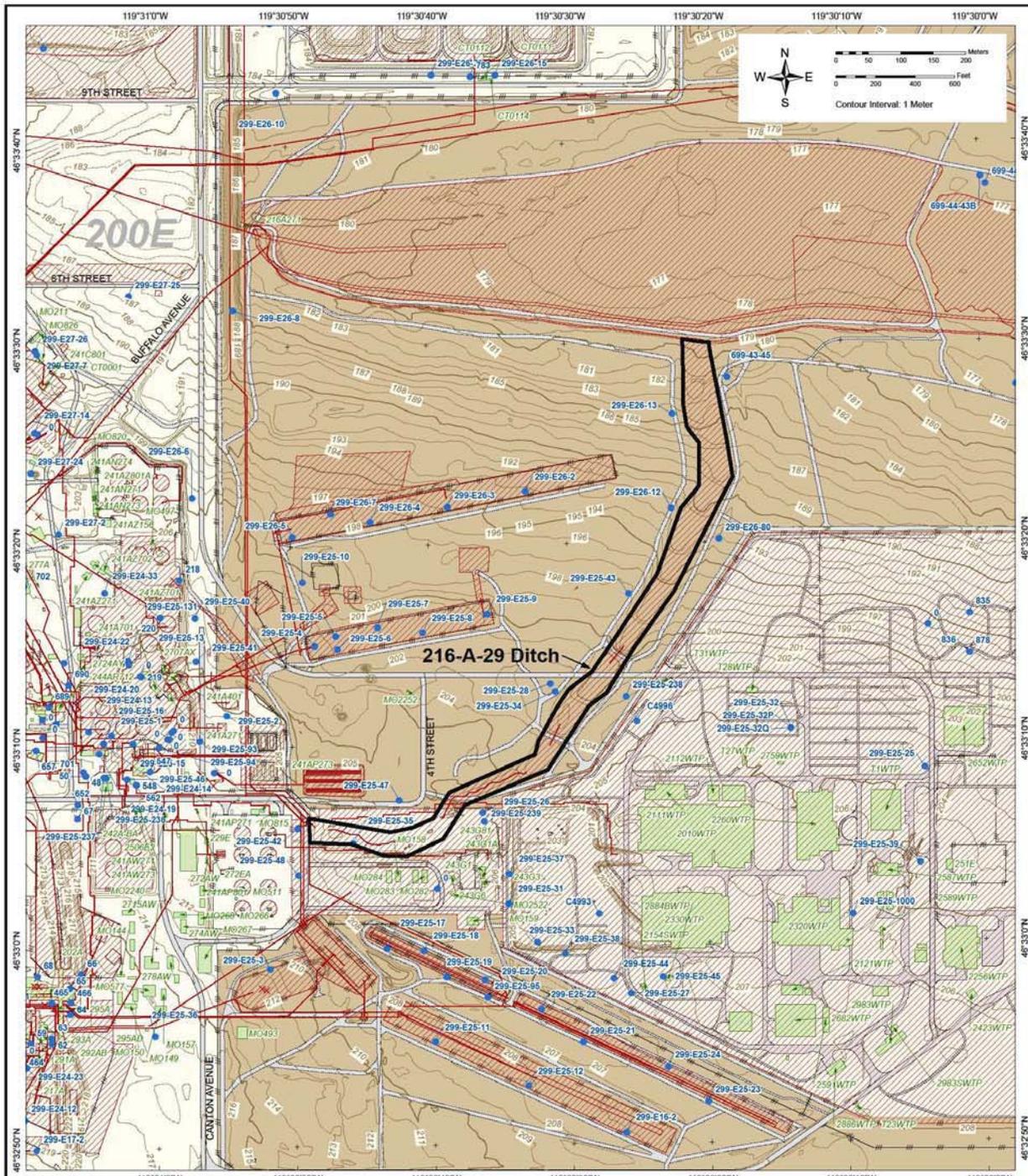
Lower part of 216-A-29 Ditch. Photo taken from WTP Loop Road that crosses the 216-A-29 Ditch. Photo was taken facing north.



Lower part of the 216-A-29 Ditch where the 216-A-29 Ditch meets the 216-B-3-3 Ditch. Photo was taken facing north.



Lower part of the 216-A-29 Ditch where the 216-A-29 Ditch meets the 216-B-3-3 Ditch. Photo was taken facing south.



**The Hanford Site**

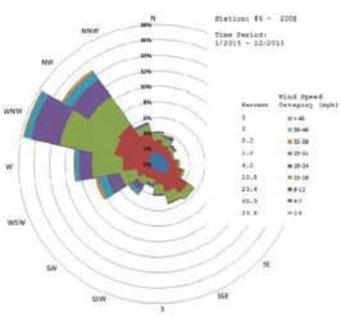


Area Shown on Map

**216-A-29 Ditch in the 200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings & Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Prepared for:  
**US DEPARTMENT OF ENERGY**  
 RICHLAND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
 Mission Support Alliance, Richland, WA (509) 373-9076

**INTENDED USE: REFERENCE ONLY**  
 Projection: Lambert Conformal Conic  
 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD88  
 Topographic Data  
 1996, Bechtel Hanford, Inc.

Attachment 3  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for 216-A-36B Crib in the 200 East  
Area

11 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-36B Crib in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-36B Crib in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
November 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**

*By Janis D. Aardal at 9:10 am, Nov 23, 2020*

---

Release Approval

Date

Approved for Public Release;  
Further Dissemination Unlimited

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-36B Crib in the 200 East Area

The Washington State Department of Ecology regulation at, [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in their Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 216-A-36B Crib. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-680](#) are not applicable for the 216-A-36B Crib.

The 216-A-36B Crib was an underground miscellaneous unit (X99) that was used for the percolation of Ammonia Scrubber Distillate waste from the Plutonium-Uranium Extraction (PUREX) facility. This attachment identifies the 200-E-253-PL pipeline as the conveyance system associated with the discharge to the 216-A-36B Crib. Operations began in March 1966 and ended in November 1987. The crib is located south of PUREX.

Ammonium hydroxide was released to the 216-A-36B Crib. Ammonia in its pure form is a toxic Category B (for fish toxicity) under the toxicity criteria of [WAC 173-303-100\(5\)](#). This waste was determined to be toxic state-only waste (WT02).

The waste percolation area in the crib was located between 22 and 24 ft underground. The crib has been backfilled and surface stabilized with gravel before operations started in 1966. The crib was physically isolated in 1987; therefore, physical contact with the contaminated media is not possible. At this time, the unit is only accessed for surveillance purposes.

### 1. Justification for the waiver from the [WAC 173-303-340](#) requirements.

*[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

- (a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*
- (b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*
- (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*
- (d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

#### **Waiver information and justification:**

This Treatment, Storage, and Disposal (TSD) Unit Group has no permanent personnel located at the site and is only accessed for surveillance purposes. The surveillance activities include performing TSD Unit Group quarterly inspections. The 216-A-36B Crib inspection includes inspecting signage, barrier, animal intrusion, vegetation, and ground subsidence. No permanent buildings, container storage area, tank system, or other permanent facilities are part of this unit group. Thus, an alarm system, fire extinguishers, and fire control equipment are not necessary. During surveillance activities, personnel carry communications devices such as cell phones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the surveillance personnel. If a fire is noticed,

the Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment, and water.

All contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

(a) *Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

(b) *If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during surveillance activities and carry communication devices such as cell phones and two-way radios.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

WAC 173-303-340(4) *Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:*

(a) *Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;*

(b) *Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;*

(c) *Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and*

(d) *Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.*

WAC 173-303-340(5) *Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.*

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

WAC 173-303-806(4)(a)(viii) A description of procedures, structures, or equipment used at the facility to:

- (A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);
- (B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);
- (C) Prevent contamination of water supplies;
- (D) Mitigate effects of equipment failure and power outages;
- (E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and
- (F) Prevent releases to the atmosphere.

**Information and justification:**

The 216-A-36B Crib is an inactive miscellaneous unit. The crib was backfilled and surface stabilized before operations started in 1966. The crib was physically isolated in 1987 and cannot receive any additional waste. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during surveillance activities. Thus, these requirements are not applicable.

**2. Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), and WAC 173-303-680 for a miscellaneous unit do not apply to 216-A-36B Crib.**

WAC 173-303-806(4)(a)(ix) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with WAC 173-303-395 including documentation demonstrating compliance with WAC 173-303-395(1)(c).

WAC 173-303-395(1) **Precautions for ignitable, reactive, or incompatible wastes.**

(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(b) Where specifically required by other sections of this chapter 173-303 WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:

- (i) Generate extreme heat or pressure, fire or explosion, or violent reaction;
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

(iv) Damage the structural integrity of the facility or device containing the waste; or

(v) Through other like means, threaten human health or the environment.

(c) When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under WAC 173-303-380(1). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

**Information and justification:**

The 216-A-36B Crib is an inactive miscellaneous unit. The crib was backfilled and surface stabilized before operations started in 1966. The crib was physically isolated in 1987 and cannot receive any additional waste. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

WAC 173-303-680 *Miscellaneous units*

WAC 173-303-680(2)(a) *Prevention of any releases that may have adverse effects on human health or the environment due to migration of wastes constituents in the groundwater or subsurface environment, considering:*

- (i) The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;*
- (ii) The hydrologic and geologic characteristics of the unit and the surrounding area;*
- (iii) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater;*
- (iv) The quantity and direction of groundwater flow;*
- (v) The proximity to and withdrawal rates of current and potential groundwater users;*
- (vi) The patterns of land use in the region;*
- (vii) The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;*
- (viii) The potential for health risks caused by human exposure to waste constituents; and*
- (ix) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.*

**Information and justification:**

The 216-A-36B Crib is an inactive miscellaneous unit. The crib was backfilled and surface stabilized before operations started in 1966. The crib was physically isolated in 1987 and cannot receive any additional waste. The crib was used for percolation of waste into the soil column. No additional releases can be expected as no additional waste will be percolated. Past releases are addressed through a groundwater monitoring program. Groundwater in the area is not used for beneficial use. The contaminated media is located underground and humans and animals cannot be directly exposed. Thus, these requirements are not applicable.



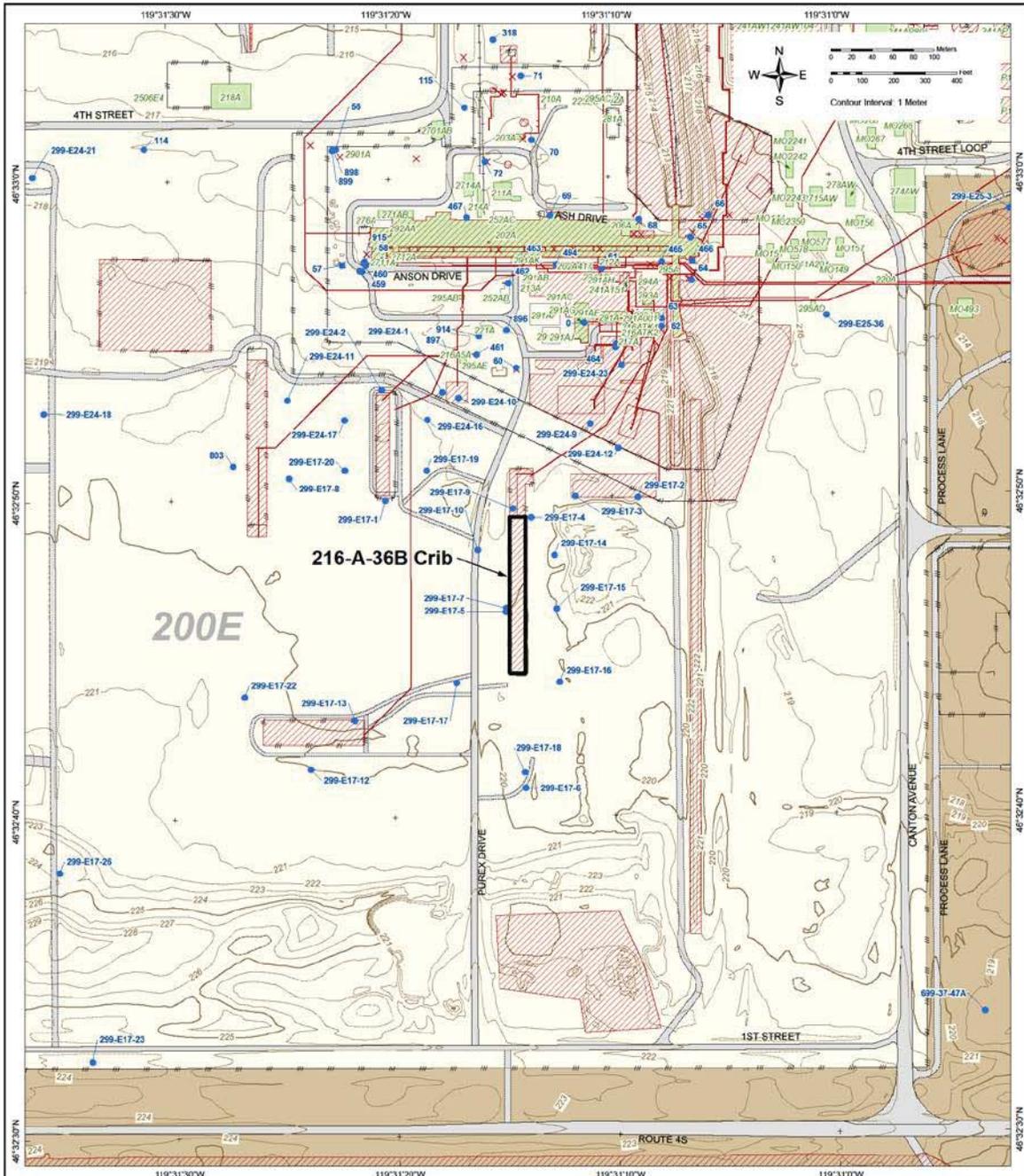
November 2017. Photo of the 216-A-36B Crib. Photo was taken facing southwest.



November 2017. Head end of the 216-A-36B Crib. The crib area starts at the sign beyond groundwater monitoring well 299-E17-9.



November 2017. Head end of the 216-A-36B Crib. The crib area starts at the sign at the right side of the photo.



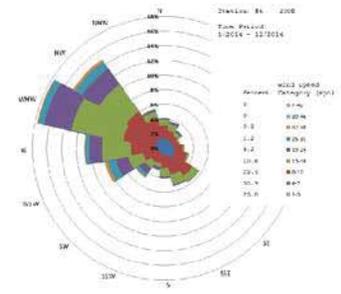
**The Hanford Site**



Area Shown on Map

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Walls
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



**216-A-36B Crib  
in the  
200 East Area**

Prepared for:  
US DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
Mission Support Alliance, Richland, WA (209) 373-9076

**INTENDED USE: REFERENCE ONLY**  
Projection: Lambert Conformal Conic  
Coordinate System: Washington State Plane, South Zone, Meters  
Horizontal Datum: NAD83  
Vertical Datum: NAVD88  
Topographic Date:  
1996, Bechtel Hanford, Inc.

Attachment 4  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for 216-A-37-1 Crib in the 200 East  
Area

10 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-37-1 Crib in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-37-1 Crib in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
November 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**  
*By Julia Raymer at 2:20 pm, Nov 30, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-A-37-1 Crib in the 200 East Area

The Washington State Department of Ecology regulation at, [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in their Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 216-A-37-1 Crib. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-680](#) are not applicable for the 216-A-37-1 Crib.

The 216-A-37-1 Crib was an underground miscellaneous unit (X99) that was used for the percolation of the 242-A Evaporator process condensate. This attachment identifies the 200-E-232-PL pipeline as the conveyance system associated with discharge to the 216-A-37-1 Crib. Operations began in March 1977 and ended in April 1989.

The 242-A Evaporator process condensate was regulated as mixed waste because the waste was derived from a waste containing acetone, methyl isobutyl ketone (hexone), and 2-butanone. These spent nonhalogenated solvents make the waste designate as F003, and F005 dangerous waste.

The waste percolation area in the crib was located between 7 and 11 ft underground. The crib has been backfilled and surface stabilized with gravel and began to receive discharges in March 1977. The diversion box was filled with grout in 1994, thus preventing additions discharges to the crib. The vent risers were sealed in 2000. Therefore, physical contact with the waste is not possible. At this time, the unit is only accessed for the purpose of inspection and surveillances.

### 1. Justification for the waiver from the [WAC 173-303-340](#) requirements.

*[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

*(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*

*(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*

*(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

#### **Waiver information and justification:**

This Treatment, Storage, and Disposal (TSD) Unit Group has no permanent personnel located at the site and is only accessed for surveillance purposes. The surveillance activities include performing TSD Unit Group quarterly inspections. The 216-A-37-1 Crib inspection includes inspecting signage, barrier, animal intrusion, vegetation, and ground subsidence. No permanent buildings, container storage area, tank system, or other permanent facilities are part of this unit group. Thus, an alarm system, fire extinguishers, and fire control equipment are not necessary. During surveillance activities, personnel carry communications devices such as cell phones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for personal protection of the surveillance personnel. If a fire is noticed, the

Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment, and water.

All dangerous waste is located underground and is inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

*WAC 173-303-340(2) Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

*(a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

*(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during surveillance activities and carry communication devices such as cell phones and two-way radios.

*WAC 173-303-340(3) Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

*WAC 173-303-340(4) Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:*

*(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;*

*(b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;*

*(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and*

*(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.*

*WAC 173-303-340(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.*

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**2. Justification that other Preparedness and Prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-680](#) for a miscellaneous unit do not apply to 216-A-37-1 Crib.**

[WAC 173-303-806\(4\)\(a\)\(viii\)](#) *A description of procedures, structures, or equipment used at the facility to:*

- (A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);
- (B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);
- (C) Prevent contamination of water supplies;
- (D) Mitigate effects of equipment failure and power outages;
- (E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and
- (F) Prevent releases to the atmosphere.

**Information and justification:**

The 216-A-37-1 Crib is an inactive miscellaneous unit. The crib was backfilled and surface stabilized and began to receive discharges in March 1977. The diversion box was filled with grout in 1994, thus preventing additions waste discharges to the crib. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during surveillance activities. Thus, these requirements are not applicable.

[WAC 173-303-806\(4\)\(a\)\(ix\)](#) *A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with [WAC 173-303-395](#) including documentation demonstrating compliance with [WAC 173-303-395\(1\)\(c\)](#).*

[WAC 173-303-395\(1\)](#) **Precautions for ignitable, reactive, or incompatible wastes.**

(a) *The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

(b) *Where specifically required by other sections of this chapter [173-303](#) WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

- (i) *Generate extreme heat or pressure, fire or explosion, or violent reaction;*
- (ii) *Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*
- (iii) *Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*

(iv) *Damage the structural integrity of the facility or device containing the waste; or*

(v) *Through other like means, threaten human health or the environment.*

(c) *When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under [WAC 173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from*

*trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

**Information and justification:**

The 216-A-37-1 Crib is an inactive miscellaneous unit. The crib was backfilled and surface stabilized and began to receive discharges in March 1977. The diversion box was filled with grout in 1994, thus preventing additions waste discharges to the crib. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

WAC 173-303-680 **Miscellaneous units**

WAC 173-303-680(2)(a) *Prevention of any releases that may have adverse effects on human health or the environment due to migration of wastes constituents in the groundwater or subsurface environment, considering:*

- (i) The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;*
- (ii) The hydrologic and geologic characteristics of the unit and the surrounding area;*
- (iii) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater;*
- (iv) The quantity and direction of groundwater flow;*
- (v) The proximity to and withdrawal rates of current and potential groundwater users;*
- (vi) The patterns of land use in the region;*
- (vii) The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;*
- (viii) The potential for health risks caused by human exposure to waste constituents; and*
- (ix) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.*

**Information and justification:**

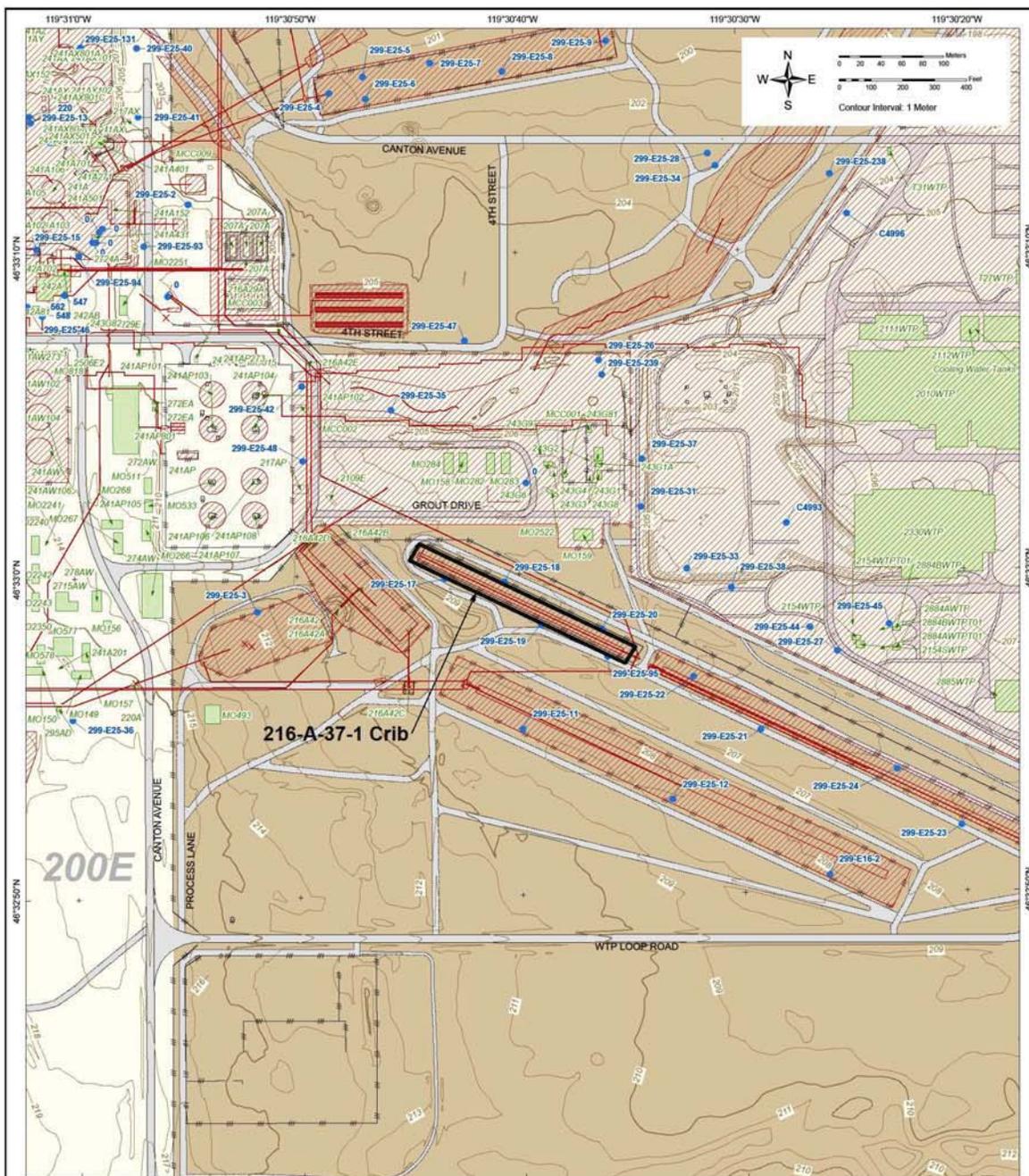
The 216-A-37-1 Crib is an inactive miscellaneous unit. The crib was backfilled and surface stabilized and began to receive discharges in March 1977. The diversion box was filled with grout in 1994, thus preventing additions waste discharges to the crib. The crib was used for percolation of waste into the soil column. No additional releases can be expected as no additional waste will be percolated. Past releases are addressed through a groundwater monitoring program. Groundwater in the area is not used for beneficial use. The waste is located underground and humans and animals cannot be directly exposed. Thus, these requirements are not applicable.



November 2017. Southeastern end of the 216-A-37-1 Crib.



November 2017. Northwestern end of the 216-A-37-1 Crib.



**The Hanford Site**

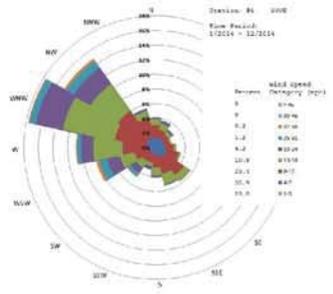


Area Shown on Map

**216-A-37-1 Crib in the 200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Prepared for:  
 US DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
 Mission Support Alliance, Richland, WA (509) 373-9076

**CMS**  
 Central Mapping Services

**INTENDED USE: REFERENCE ONLY**  
 Projection: Lambert Conformal Conic  
 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD89  
 Topographic Data  
 1996, Bechtel Hanford, Inc.

Attachment 5  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for 216-B-3 Main Pond in the 200

11 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-3 Main Pond in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-3 Main Pond in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
November 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**  
*By Janis D. Aardal at 8:48 am, Dec 01, 2020*

---

Release Approval

Date

Approved for Public Release;  
Further Dissemination Unlimited

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-3 Main Pond in the 200 East Area

The Washington State Department of Ecology regulation at, [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in their Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 216-B-3 Main Pond. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-650](#) are not applicable for the 216-B-3 Main Pond.

The 216-B-3 Main Pond was an unlined man-made surface impoundment that was used from April 1945 to May 1994. The 216-B-3-3 Ditch was excavated in 1970 to replace the 216-B-3-2 Ditch.

The 216-B-3-3 Ditch and the 216-B-3 Main Pond received wastewater (primarily process and cooling water) from the Plutonium-Uranium Extraction (PUREX) Facility, the B Plant Complex, the 242-A Evaporator, and other 200 East Area units. Primary effluent streams included the B Plant chemical sewer and cooling water, and PUREX chemical sewer and cooling water, albeit, for shorter periods.

B Plant cooling water was conveyed to the 216-B-3 Main Pond via the 200-E-112-PL pipeline to the 207B Retention Basin. From the 207B Retention Basin the cooling water was routed to the 216-B-3 Main Pond via the 200-E-205-PL and 200-E-126-PL pipelines. Prior to 1970, the B Plant chemical sewer was conveyed to the 216-B-3 Main Pond via the 200-E-188-PL pipeline, the 207B valve pit, the 200-E-204-PL pipeline, and the 216-B-2 and 216-B-3 series ditches. From February 1992 through May 1994 the combined cooling water and chemical sewer effluent stream were conveyed via the 207B Retention Basin to the 216-B-3 Main Pond via 200-E-205-PL and 200-E-126-PL pipelines, and the 216-B-3-3 Ditch.

PUREX cooling water was conveyed to the 216-B-3 Main Pond via the 200-E-271-PL and 200-E-127-PL pipelines, and the 216-B-3-3 Ditch from January 1987 to May 1994. Beginning February 1992 through May 1994 the combined PUREX chemical sewer and cooling waste effluent streams were conveyed to the 216-B-3 Main Pond via the 200-E-127-PL pipelines and associated structures connecting the 200-E-187-PL to 200-E-127-PL pipelines.

A more detailed description of the conveyance systems can be found in the *216-B-3 Main Pond Closure Plan*.

The Part A Form for the 216-B-3 Main Pond lists that the ditch received characteristic corrosive waste (D002), toxicity characteristic waste (cadmium, D006), and state-only toxic waste (WT01, WT02).

The 216-B-3 Main Pond and the 216-B-3-3 Ditch were decommissioned, backfilled, and interim stabilized in 1994. The area has been revegetated. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock that may enter the pond and ditch areas. The pond and ditch have no structures or equipment.

The Treatment, Storage, and Disposal (TSD) Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly inspections and surveillances.

### 1. Justification for the waiver from the [WAC 173-303-340](#) requirements.

[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;

(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;

*(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

**Waiver information and justification:**

This TSD Unit Group has no permanent personnel located at the site and is only accessed for the purposes of surveillances. The surveillance activities include performing TSD Unit Group quarterly inspections. The 216-B-3 Main Pond inspection includes inspecting signage, barrier, animal intrusion, vegetation, and ground subsidence. No permanent buildings, container storage area, tank system, or other permanent facilities are part of this unit group. Thus, an alarm system, fire extinguishers, and fire control equipment are not necessary. During surveillance activities, personnel carry communications devices such as cell phones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the surveillance personnel. If a fire is noticed, the Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment, and water.

All contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

*(a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

*(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during surveillance activities and carry communication devices such as cell phones and two-way radios.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

WAC 173-303-340(4) Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:

(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;

(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.

(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**2. Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), and WAC 173-303-650 for a surface impoundment do not apply to 216-B-3 Main Pond.**

WAC 173-303-806(4)(a)(viii) A description of procedures, structures, or equipment used at the facility to:

(A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);

(B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(C) Prevent contamination of water supplies;

(D) Mitigate effects of equipment failure and power outages;

(E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and

(F) Prevent releases to the atmosphere.

**Information and justification:**

The 216-B-3 Main Pond is an inactive surface impoundment disposal and treatment unit. The pond and ditch were backfilled and surface stabilized in 1994 and cannot receive any additional waste. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during surveillance activities. Thus, these requirements are not applicable.

WAC 173-303-806(4)(a)(ix) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with

WAC 173-303-395 including documentation demonstrating compliance with WAC 173-303-395(1)(c), and

WAC 173-303-395(1) Precautions for ignitable, reactive, or incompatible wastes.

(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional

heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(b) Where specifically required by other sections of this chapter [173-303](#) WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:

- (i) Generate extreme heat or pressure, fire or explosion, or violent reaction;
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- (iv) Damage the structural integrity of the facility or device containing the waste; or
- (v) Through other like means, threaten human health or the environment.

(c) When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under WAC [173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

#### **Information and justification:**

The 216-B-3 Main Pond is an inactive surface impoundment disposal and treatment unit. The pond and ditch were backfilled and surface stabilized in 1994. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

#### **WAC 173-303-650 Surface impoundments**

WAC 173-303-650(5)(c)(ii) A containment system evaluation and repair plan describing: Testing and monitoring techniques; procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure; description of a schedule of actions to be taken in the event of a possible failure; and the repair techniques and materials (and their availability) to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.

WAC 173-303-650(8) Special requirements for incompatible wastes. Incompatible wastes and materials must not be placed in the same surface impoundment, unless WAC [173-303-395\(1\)\(b\)](#) is complied with.

#### **Information and justification:**

The 216-B-3 Main Pond is an inactive surface impoundment disposal and treatment unit. The pond and ditch were backfilled and surface stabilized in 1994 and cannot receive any additional waste. The 216-B-3 Main Pond was constructed before modern containment systems were required. No incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.



November 2017. West part of the 216-B-3 Main Pond. Photo was taken facing east.



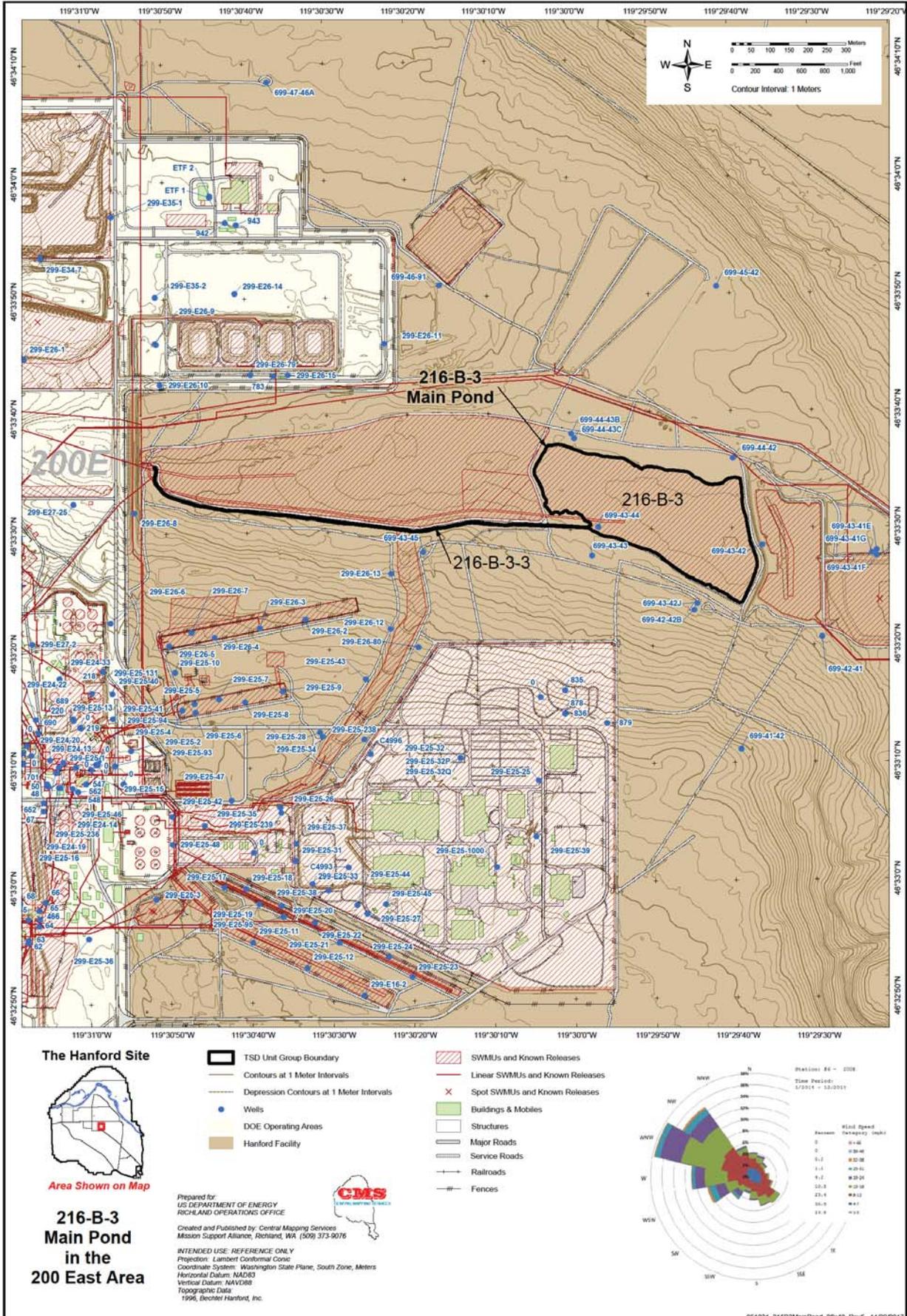
November 2017. East part of the 216-B-3 Main Pond. Photo was taken facing west.



November 2017. 216-B-3-3 Ditch was located between the roads. Photo was taken facing west.



November 2017. West end of 216-B-3-3 Ditch. Photo was taken facing southeast.



Attachment 6  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for 216-B-63 Trench in the 200 East  
Area

10 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-63 Trench in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-63 Trench in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
November 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**

*By Sarah Harrison at 1:06 pm, Nov 30, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-B-63 Trench in the 200 East Area

The Washington State Department of Ecology regulation at, [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in their Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 216-B-63 Trench. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-650](#) are not applicable for the 216-B-63 Trench.

The 216-B-63 Trench was an open, unlined man-made surface impoundment that was closed at one end. The trench received B Plant chemical sewer waste and cooling water from several sources. This attachment identifies the 200-E-188-PL pipeline, the 207-B valve pit, and the 200-E-191-PL pipeline as the conveyance system associated with the discharge to the 216-B-63 Trench. The trench began waste management operation in March 1970. All liquid flows to the trench ceased in 1992.

The 216-B-63 Trench is a dangerous waste management unit because it received corrosive mixed waste (D002) from the regeneration of demineralizer columns in B Plant.

The trench was backfilled with clean soil in November 1994. The weir box at the end of the pipeline was filled with cement in December 1994. The area has been revegetated. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock that may enter the trench area.

This Treatment, Storage, and Disposal (TSD) Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly inspections and surveillances.

### 1. Justification for the waiver from the [WAC 173-303-340](#) requirements.

[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;

(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

#### Waiver information and justification:

This TSD Unit Group has no permanent personnel located at the site and is only accessed for surveillance purposes. The surveillance activities include performing TSD Unit Group quarterly inspections. The 216-B-63 Trench inspection includes inspecting signage, barrier, animal intrusion, vegetation, and ground subsidence. No permanent buildings, container storage area, tank system, or other permanent facilities are part of this unit group. Thus, an alarm system, fire extinguishers, and fire control equipment are not necessary. During surveillance activities, personnel carry communications devices such as cell phones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels)

for the personal protection of the surveillance personnel. If a fire is noticed, the Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment, and water.

All contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

(a) *Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

(b) *If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during surveillance activities and carry communication devices such as cell phones and two-way radios.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

WAC 173-303-340(4) *Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:*

(a) *Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;*

(b) *Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;*

(c) *Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and*

(d) *Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.*

(5) *Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.*

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**2. Justification that other Preparedness and Prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-650](#) for a surface impoundment do not apply to 216-B-63 Trench.**

[WAC 173-303-806\(4\)\(a\)\(viii\)](#) *A description of procedures, structures, or equipment used at the facility to:*

- (A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);
- (B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);
- (C) Prevent contamination of water supplies;
- (D) Mitigate effects of equipment failure and power outages;
- (E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and
- (F) Prevent releases to the atmosphere.

**Information and justification:**

The 216-B-63 Trench is an inactive surface impoundment disposal and treatment unit. The ditch was backfilled and surface stabilized in 1994 and cannot receive any additional waste. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during surveillance activities. Thus, these requirements are not applicable.

[WAC 173-303-806\(4\)\(a\)\(ix\)](#) *A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with [WAC 173-303-395](#) including documentation demonstrating compliance with [WAC 173-303-395\(1\)\(c\)](#), and*

[WAC 173-303-395\(1\)](#) **Precautions for ignitable, reactive, or incompatible wastes.**

(a) *The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

(b) *Where specifically required by other sections of this chapter [173-303](#) WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

- (i) *Generate extreme heat or pressure, fire or explosion, or violent reaction;*
- (ii) *Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*
- (iii) *Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*

(iv) *Damage the structural integrity of the facility or device containing the waste; or*

(v) *Through other like means, threaten human health or the environment.*

(c) *When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under [WAC 173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

**Information and justification:**

The 216-B-63 Trench is an inactive surface impoundment disposal and treatment unit. The ditch was backfilled and surface stabilized in 1994. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

**WAC 173-303-650 Surface impoundments**

*WAC 173-303-650(5)(c)(ii) A containment system evaluation and repair plan describing: Testing and monitoring techniques; procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure; description of a schedule of actions to be taken in the event of a possible failure; and the repair techniques and materials (and their availability) to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.*

*WAC 173-303-650(8) Special requirements for incompatible wastes. Incompatible wastes and materials must not be placed in the same surface impoundment, unless WAC 173-303-395(1)(b) is complied with.*

**Information and justification:**

The 216-B-63 Trench is an inactive surface impoundment disposal and treatment unit. The ditch was backfilled and surface stabilized in 1994 and cannot receive any additional waste. The 216-B-63 Trench was constructed before modern containment systems were required. No incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.



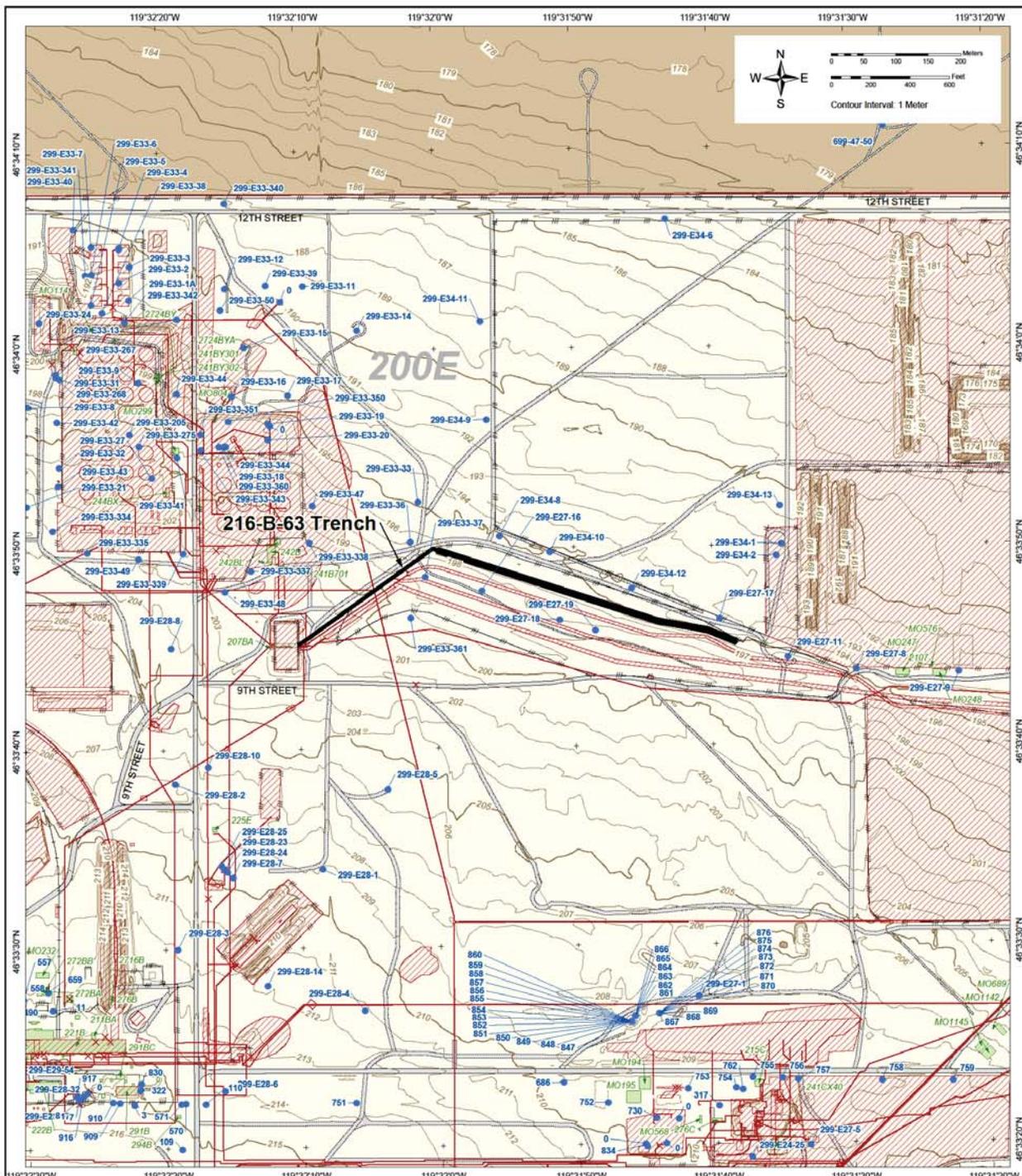
November 2017. Head end of the 216-B-63 Trench. Photo was taken facing east.



November 2017. East end of the 216-B-63 Trench. Photo was taken facing west.



November 2017. 200-E-191-PL pipeline is located under the row of posts along the road. Photo was taken facing northeast.



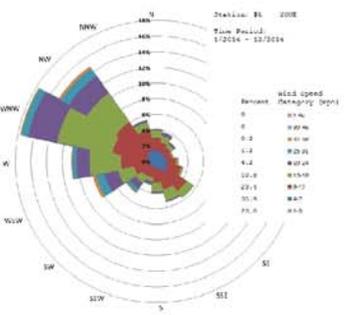
**The Hanford Site**



Area Shown on Map

**216-B-63 Trench in the 200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility
- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings & Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Prepared for:  
**US DEPARTMENT OF ENERGY**  
 RECLAIM AND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
 Mission Support Alliance, Richland, WA (509) 373-9076

**CMS**  
 Central Mapping Services

INTENDED USE: REFERENCE ONLY  
 Projection: Lambert Conformal Conic  
 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD83  
 Topographic Data:  
 1996, Bechtel Hanford, Inc.

7

Attachment 7  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for 216-S-10 Pond and Ditch in the  
200 East Area

11 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-S-10 Pond and Ditch in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-S-10 Pond and Ditch in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
November 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**  
*By Lynn M. Ayers at 3:43 pm, Nov 30, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## **Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for 216-S-10 Pond and Ditch in the 200 West Area**

The Washington State Department of Ecology regulation at, [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in their Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 216-S-10 Pond and Ditch. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-650](#) are not applicable for the 216-S-10 Pond and Ditch.

The 216-S-10 Pond and Ditch is an inactive surface impoundment disposal and treatment unit (process code D83). The site started receiving waste in 1951. This attachment identifies the 200-W-157-PL pipeline as the conveyance system associated with the discharge to the 216-S-10 Pond and Ditch.

The 216-S-10 Pond and Ditch received one documented discharge that consisted of simulated double-shell tank slurry, which exhibited the dangerous waste characteristics of ignitability (D001), corrosivity (D002), toxicity characteristic waste (chromium, D007), and toxic state-only waste (WT02). Approximately 1,000 lb (450 kg) of dangerous waste were discharged to the unit.

The pond and the southwestern part of the ditch were backfilled and stabilized in 1984. These areas have been revegetated. The remaining portion of the ditch remained active and received the last nonregulated wastewater discharge in October 1991. The manhole at the outfall of the supply pipeline was filled with concrete in 1994. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock that may enter the pond and ditch area. The grouted manhole is the only physical structure.

This Treatment, Storage, and Disposal (TSD) Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly inspections and surveillances.

### **1. Justification for the waiver from the [WAC 173-303-340](#) requirements.**

*[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

*(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*

*(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*

*(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

#### **Waiver information and justification:**

This TSD Unit Group has no permanent personnel located at the site and is only accessed for surveillance purposes. The surveillance activities include performing TSD Unit Group quarterly inspections. The 216-S-10 Pond and Ditch inspection includes inspecting signage, barrier, animal intrusion, vegetation, and ground subsidence. No permanent buildings, container storage area,

tank system, or other permanent facilities are part of this unit group. Thus, an alarm system, fire extinguishers, and fire control equipment are not necessary. During surveillance activities, personnel carry communications devices such as cell phones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the surveillance personnel. If a fire is noticed, the Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment, and water.

All contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

(a) *Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

(b) *If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during surveillance activities and carry communication devices such as cell phones and two-way radios.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

WAC 173-303-340(4) *Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:*

(a) *Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;*

(b) *Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;*

(c) *Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and*

(d) *Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.*

(5) *Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.*

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**2. Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), and WAC 173-303-650 for a surface impoundment do not apply to 216-S-10 Pond and Ditch.**

WAC 173-303-806(4)(a)(viii) *A description of procedures, structures, or equipment used at the facility to:*

- (A) *Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);*
- (B) *Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);*
- (C) *Prevent contamination of water supplies;*
- (D) *Mitigate effects of equipment failure and power outages;*
- (E) *Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and*
- (F) *Prevent releases to the atmosphere.*

**Information and justification:**

The 216-S-10 Pond and Ditch is an inactive surface impoundment disposal and treatment unit. The pond and the south end of the ditch were backfilled and surface stabilized in 1984. The manhole at the end of the 200-W-157-PL pipeline was filled in 1994 and no additional waste can be received. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during surveillance activities. Thus, these requirements are not applicable.

WAC 173-303-806(4)(a)(ix) *A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with WAC 173-303-395 including documentation demonstrating compliance with WAC 173-303-395(1)(c), and*

WAC 173-303-395(1) ***Precautions for ignitable, reactive, or incompatible wastes.***

(a) *The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

(b) *Where specifically required by other sections of this chapter 173-303 WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

- (i) *Generate extreme heat or pressure, fire or explosion, or violent reaction;*
- (ii) *Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*
- (iii) *Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*
- (iv) *Damage the structural integrity of the facility or device containing the waste; or*
- (v) *Through other like means, threaten human health or the environment.*

(c) *When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under WAC 173-303-380(1). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste*

*analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

**Information and justification:**

The 216-S-10 Pond and Ditch is an inactive surface impoundment disposal and treatment unit. The pond and the south end of the ditch were backfilled and surface stabilized in 1984. The manhole at the end of 200-W-157-PL pipeline was filled in 1994 and no additional waste can be received. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

**WAC 173-303-650 Surface impoundments**

*WAC 173-303-650(5)(c)(ii) A containment system evaluation and repair plan describing: Testing and monitoring techniques; procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure; description of a schedule of actions to be taken in the event of a possible failure; and the repair techniques and materials (and their availability) to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.*

*WAC 173-303-650(8) Special requirements for incompatible wastes. Incompatible wastes and materials must not be placed in the same surface impoundment, unless WAC 173-303-395(1)(b) is complied with.*

**Information and justification:**

The 216-S-10 Pond and Ditch is an inactive surface impoundment disposal and treatment unit. The pond and the south end of the ditch were backfilled and surface stabilized in 1984. The manhole at the end of 200-W-157-PL pipeline was filled in 1994 and no additional waste can be received. The 216-S-10 Pond and Ditch were constructed before modern containment systems were required. No incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.



November 2017. Northeast end of the 216-S-10 Pond. Photo was taken facing southwest.



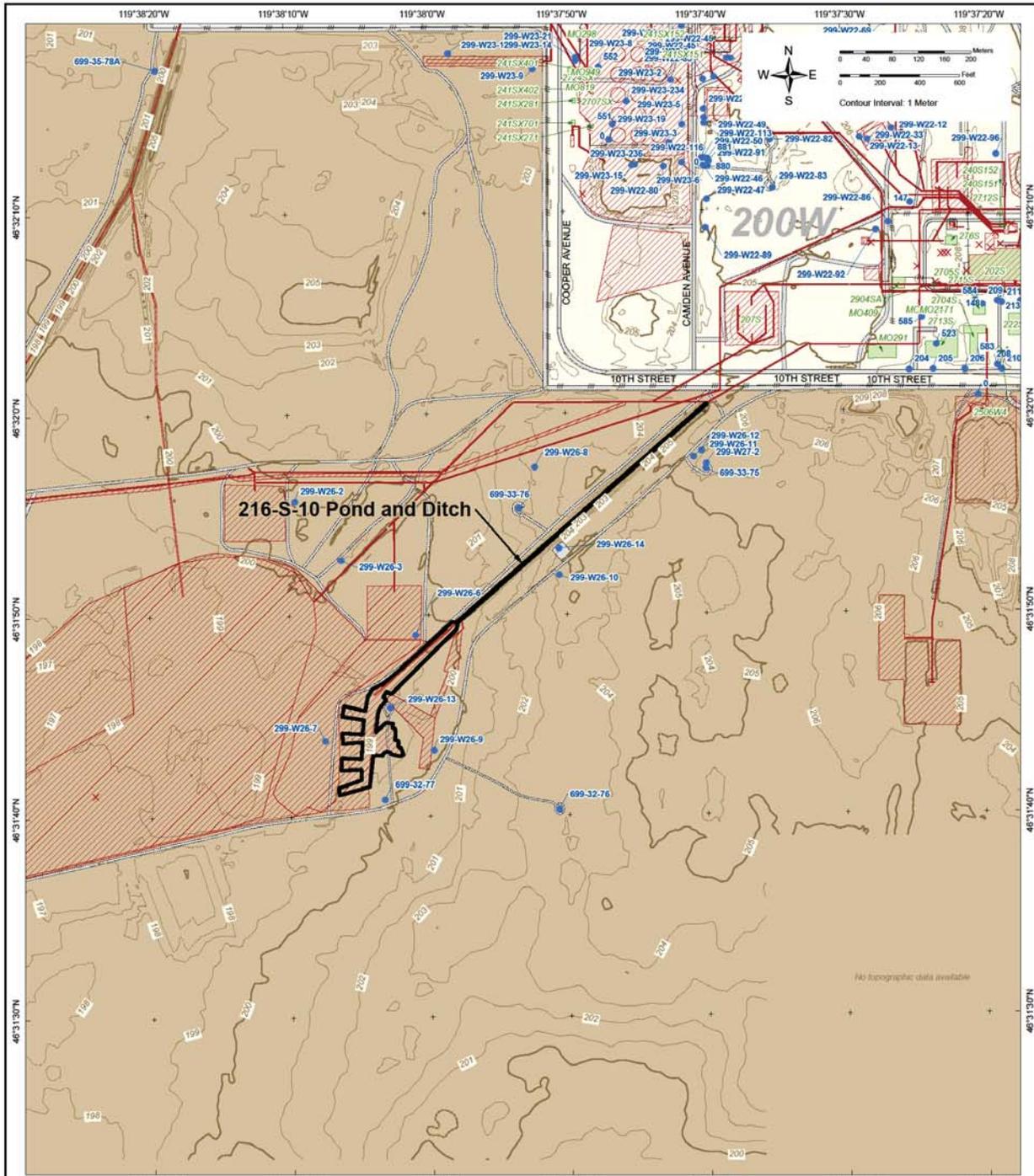
November 2017. The finger area part of the 216-S-10 Pond. Photo was taken facing south.



November 2017. Southwestern end of 216-S-10 Ditch at the 216-S-10 Pond. Photo was taken facing northeast.



November 2017. 216-S-10 Ditch. Photo was taken facing north.



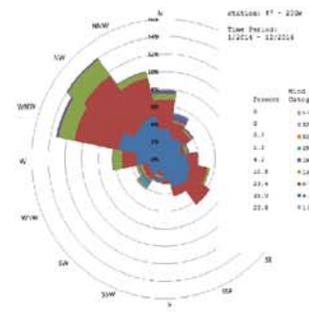
**The Hanford Site**



**216-S-10 Pond and Ditch in the 200 West Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Prepared for:  
 US DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
 Mission Support Alliance, Richland, WA (209) 373-9076

INTENDED USE: REFERENCE ONLY  
 Projection: Lambert Conformal Conic  
 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD88  
 Topographic Data  
 1996, Bechtel Hanford, Inc.

Attachment 8  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for the Hexone Storage and  
Treatment Facility in the 200 West Area

11 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the Hexone Storage and Treatment Facility in the 200 West Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the Hexone Storage and Treatment Facility in the 200 West Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
May 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**

*By Lynn M. Ayers at 6:22 am, May 06, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## **Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for Hexone Storage and Treatment Facility in the 200 West Area**

The Washington State Department of Ecology regulation at [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in its Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the Hexone Storage and Treatment Facility (HSTF). In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), [WAC 173-303-630](#), and [WAC 173-303-640](#) are not applicable for the HSTF.

The HSTF is located in the southeast corner of the 200 West Area of the Hanford Facility and northwest of the 202-S Building. The HSTF consisted of two tanks (276-S-141 and 276-S-142), a distillation system, and railroad container cars.

- Tanks 276-S-141 and 276-S-142 are cylindrical tanks placed horizontally below grade. The tanks were emptied through a distillation campaign. The tanks have been filled with grout.
- The distillation system consisted of two sets of distillation equipment in series located on a railroad car. The distillation equipment was removed and disposed as mixed waste.
- Railroad container cars received the distilled waste for temporary storage. The four railroad container cars were located on the railroad spur near the underground tanks. The container cars were rinsed and removed.

At this time, this Treatment, Storage, and Disposal (TSD) Unit Group is accessed only for the purpose of annual inspections and other surveillance and maintenance (S&M) activities.

### **1. Justification for the waiver from the WAC 173-303-340 requirements.**

[WAC 173-303-340\(1\)](#) *Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

*(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*

*(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*

*(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

#### **Waiver information and justification:**

This TSD Unit Group has no permanent personnel located at the site and is accessed only for the purposes of annual inspections and other S&M activities. Also, any dangerous waste residues remaining at the HSTF have been removed or grouted to the point that no dangerous waste characteristic hazards are present. The HSTF annual inspection includes inspecting signage, barriers, and ground subsidence.

This waiver is requested for the required equipment in WAC 173-303-340(1)(a), WAC 173-303-340(1)(d), and some of the equipment in WAC 173-303-340(1)(c). During

inspections and other S&M activities, personnel carry communications devices such as cellular telephones and two-way radios. The surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the surveillance personnel. Two-way radios and portable fire extinguishers will be required for inspections, and the function of the radios and the presence of the fire extinguishers will be verified through the inspection schedule in Addendum I, *Inspection Plan*.

If a fire occurs during an inspection or other S&M activities, the Hanford Fire Department will be notified. The Hanford Fire Department will supply firefighting personnel, fire control equipment, and water. Thus, an alarm system and fire control equipment are not necessary.

The tanks and any contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

(a) *Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

(b) *If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are present at the location only during inspections and other S&M activities. Personnel carry communication devices such as cellular telephones and two-way radios.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group. The railroad container cars were removed, so no waste is stored in this container management area.

WAC 173-303-340(4) *Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:*

(a) *Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;*

(b) *Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;*

(c) *Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and*

(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.

(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**2. Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), WAC 173-303-630, and WAC 173-303-640 do not apply to the Hexone Storage and Treatment Facility.**

WAC 173-303-806(4)(a)(viii) A description of procedures, structures, or equipment used at the facility to:

- (A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);
- (B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);
- (C) Prevent contamination of water supplies;
- (D) Mitigate effects of equipment failure and power outages;
- (E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and
- (F) Prevent releases to the atmosphere.

**Information and justification:**

The remaining parts of the HSTF are an inactive tank system with the two underground tanks. The tanks were emptied through a distillation campaign and filled with grout. The tanks cannot receive any additional waste. No dangerous waste is unloaded/loaded, or otherwise handled with equipment at the site location. Personnel are only present at the location during inspections and other S&M activities. Thus, these requirements are not applicable.

WAC 173-303-806(4)(a)(ix) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with WAC 173-303-395 including documentation demonstrating compliance with WAC 173-303-395(1)(c), and

WAC 173-303-395(1) **Precautions for ignitable, reactive, or incompatible wastes.**

(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(b) Where specifically required by other sections of this chapter 173-303 WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:

- (i) Generate extreme heat or pressure, fire or explosion, or violent reaction;
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
- (iv) Damage the structural integrity of the facility or device containing the waste; or

(v) *Through other like means, threaten human health or the environment.*

(c) *When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under WAC [173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

**Information and justification:**

The remaining parts of the HSTF are an inactive tank system with the two underground tanks. No reactive or incompatible waste was disposed at the TSD Unit Group. However, the tanks stored waste in the form of hexone (methyl isobutyl ketone), a volatile and ignitable organic chemical. The tanks were emptied and then ventilated with nitrogen gas for about 10 years to control and eventually eliminate the risk of ignitability. The tanks were then filled with grout. The grouting of the tanks prevents ignitability of the residuals waste at the bottom of the tanks. Thus, these requirements are not applicable.

[WAC 173-303-630](#) *Use and management of containers*

**Information and justification:**

The remaining parts of the HSTF are an inactive tank system with the two underground tanks. The railroad container cars were removed, so no waste is stored in the container management area. Thus, these requirements are not applicable.

[WAC 173-303-640](#) *Tank systems*

**Information and justification:**

There are no additional preparedness and prevention requirements.



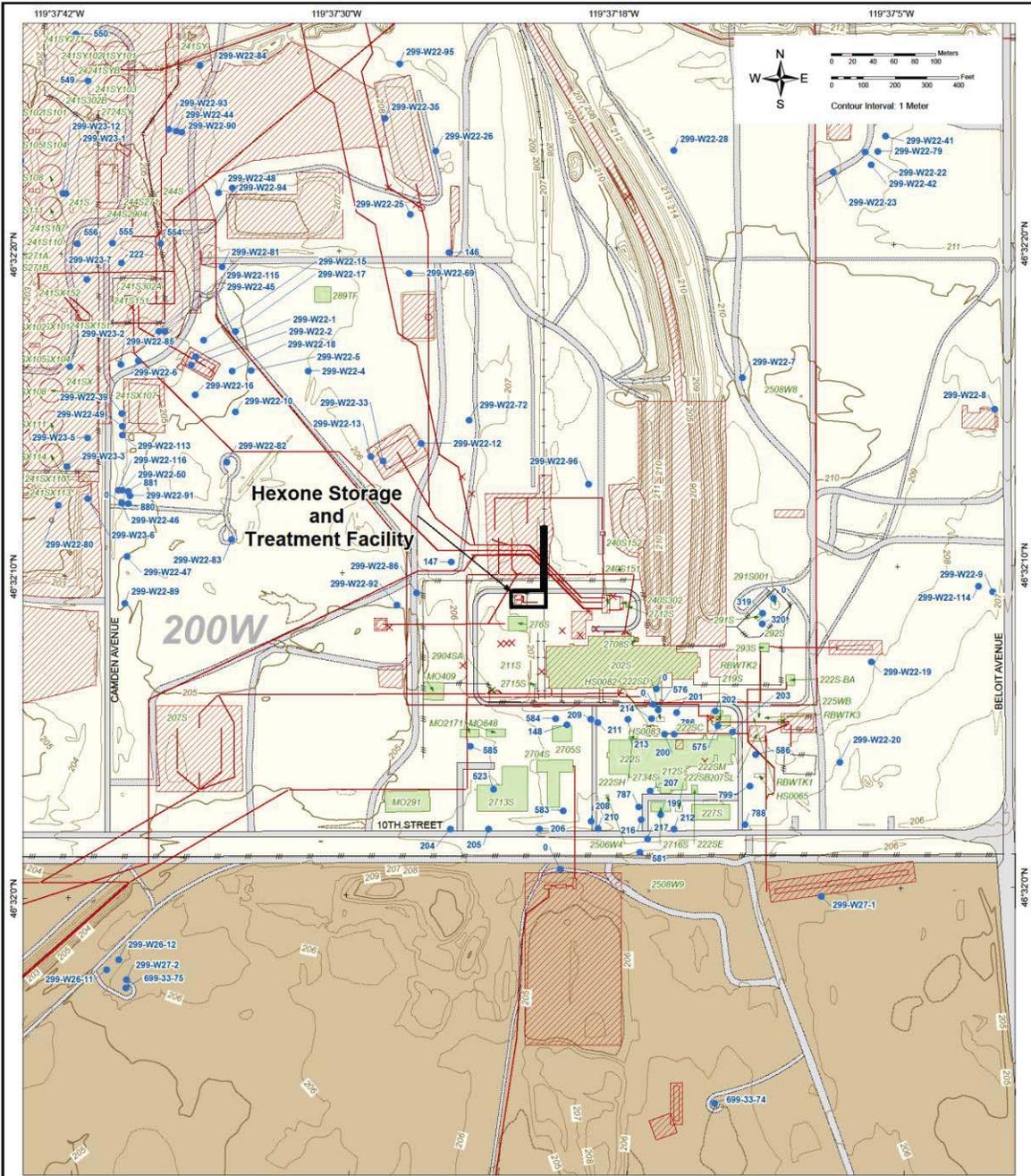
**276-S-141 and 276-S-142.** November 2017. The tanks are located underground inside the fenced area.



**Distillation Equipment,** November 2017. The distillation railroad car was parked on the train track in the left part of the photograph.



**Railroad Container Cars**, November 2017. The four railroad container cars were parked on the train track in this area.



**The Hanford Site**



Area Shown on Map

**Hexone Storage and Treatment Facility in the 200 West Area**

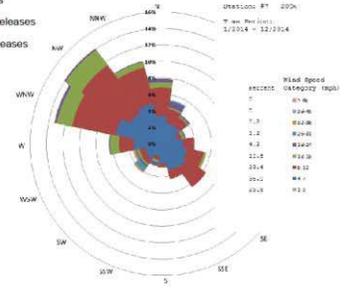
Prepared for:  
 US DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
 Mission Support Alliance, Richland, WA (509) 373-9076

INTENDED USE: REFERENCE ONLY  
 Projection: Lambert Conformal Conic  
 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD88  
 Topographic Data: 1996, Bechtel Hanford, Inc.

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Attachment 9  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for B Plant Complex in the 200  
East Area

10 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for B Plant Complex in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for B Plant Complex in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
May 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**

*By Sarah Harrison at 11:04 am, May 27, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for B Plant Complex in the 200 East Area

The Washington State Department of Ecology regulation at [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in its Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the B Plant Complex. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), [WAC 173-303-630](#), [WAC 173-303-640](#), and [WAC 173-303-695](#) are not applicable for the B Plant Complex.

The active portion of the B Plant Complex consists of the main canyon facility (221B Building), the 221BB Process Steam Condensate Building, and the 221BF Process Condensate Effluent Discharge Facility. More information about the dangerous waste management units (DWMUs) at the B Plant Complex can be found in Addendum A, Part A Form. The B Plant Complex contains the following types of DWMUs:

- Tank storage (54 tanks)
- Container storage area (1 area)
- Containment building storage (1 area)

The 221BB Process Steam Condensate Building (tank storage) and the 221BF Process Condensate Effluent Discharge Facility (tank storage) are located outside of the 221B Building. All the other DWMUs are located inside the 221B Building.

At this time, the unit group is only accessed for the purpose of inspections and surveillance and maintenance (S&M) activities.

### 1. Justification for the waiver from the WAC 173-303-340 requirements.

[WAC 173-303-340\(1\)](#) Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;

(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

#### Waiver information and justification:

This B Plant Complex has no permanent facility personnel located at the site. Thus, no internal communications or alarm system is installed capable of providing immediate emergency instruction to facility personnel. The B Plant Complex is accessed only for the purposes of inspections and S&M activities.

This waiver is requested for the required equipment in WAC 173-303-340(1)(a), WAC 173-303-340(1)(d), and some of the equipment in WAC 173-303-340(1)(c). During inspection and S&M activities, personnel carry communications devices such as two-way radios and cellular telephones capable of receiving emergency instructions and summoning emergency assistance. The personnel vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the inspection and S&M personnel. Two-way radios and portable fire extinguishers will be required for inspections, and the function of the radios and the presence of the fire extinguishers will be verified through the inspection schedule in Addendum I, Inspection Plan.

If a fire occurs during an inspection or S&M activities, the Hanford Fire Department will be notified. The Hanford Fire Department will supply firefighting personnel, fire control equipment and water. Thus, at the B Plant Complex, it is not necessary to have a permanently installed communications or alarm system, permanently located fire extinguishers, and permanently located fire control equipment.

The tanks and the containers are located under cover block and are not accessible. Thus, spill control equipment and decontamination equipment are not necessary. However, a spill/emergency response kit is available outside of the 221BK Building and is verified through the inspection schedule in Addendum I, Inspection Plan.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

(a) *Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

(b) *If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This Treatment, Storage, and Disposal (TSD) Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are only present at the location during inspection and S&M activities and carry communication devices such as two-way radios and cellular telephones.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Containerized waste is stored in Cell 4 in the 221B Building. This waste is radioactive and stored under cover blocks. The cover blocks provide shielding from radioactivity and prevent access to the waste. Unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment is not possible in this cell. Unobstructed access in this case would increase radioactive exposures to workers. Thus, aisle space requirements are not applicable to this TSD Unit Group.

WAC 173-303-340(4) Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:

(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;

(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.

(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in [Permit Attachment 4](#), DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

**Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), WAC 173-303-630 and WAC 173-303-640 do not apply to the B Plant Complex.**

WAC 173-303-806(4)(a)(viii) A description of procedures, structures, or equipment used at the facility to:

(A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);

(B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(C) Prevent contamination of water supplies;

(D) Mitigate effects of equipment failure and power outages;

(E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and

(F) Prevent releases to the atmosphere.

**Information and justification:**

The B Plant Complex has several inactive and unfit-for-use tank systems, a container storage area, and containment building waste storage. The tanks are inaccessible under cover blocks and cannot receive any additional waste. No additional containers can be added to Cell 4 in the 221B Building.

(A) No dangerous waste is unloaded/loaded.

(B) No waste is otherwise handled at the site location.

(C) Most of the dangerous waste at the B Plant Complex consists of dry waste, or potential small heels in tanks. The water supply to the 221B Building has been mechanically isolated. Thus, water is not available in sufficient quantities to contaminate the water supply.

- (D) Equipment failures and power outages are not applicable as all the major equipment in the 221B Building is no longer energized.
- (F) The 221B Building has a forced air ventilation system, and the filtered exhaust is regulated through the [Hanford Air Operating Permit 00-05-006](#).

Thus, the requirements in WAC 173-303-806(4)(a)(viii) (A) through (D) and (F) are not applicable.

The requirements in WAC 173-303-806(4)(a)(viii)(E) are applicable and are implemented by only allowing personnel access to limited parts of the B Plant Complex during inspections and S&M activities. This limits the exposure to mixed waste.

*[WAC 173-303-806\(4\)\(a\)\(ix\)](#) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with [WAC 173-303-395](#) including documentation demonstrating compliance with [WAC 173-303-395\(1\)\(c\)](#), and*

*[WAC 173-303-395\(1\)](#) **Precautions for ignitable, reactive, or incompatible wastes.***

*(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

*(b) Where specifically required by other sections of this chapter [173-303](#) WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

- (i) Generate extreme heat or pressure, fire or explosion, or violent reaction;*
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*
- (iv) Damage the structural integrity of the facility or device containing the waste; or*
- (v) Through other like means, threaten human health or the environment.*

*(c) When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under [WAC 173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

#### **Information and justification:**

The B Plant Complex has several inactive and unfit-for-use tank systems that will not be upgraded to meet regulatory requirements for active tanks. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

### WAC 173-303-630 Use and management of containers

#### **Information and justification:**

Cell 4 in the 221B Building is a container storage area and stores highly radioactive, solid mixed waste from Waste Encapsulation and Storage Facility (WESF). The waste contains no free liquids and consists of light bulbs and lead solder. This DWMU is subject to the B Plant transition phase process described in the Hanford Federal Facility Agreement and Consent Order (HFFACO) [Action Plan, Section 8](#). The cell was removed from receiving additional waste during B Plant transition phase which purpose was *“to place B Plant and its ancillary facilities in a safe, environmentally sound, and stable condition which requires minimal long term surveillance and maintenance, thereby reducing the risks associated with the current radiological and chemical inventory and the cost for S&M until the facility disposition phase.”*

A set of milestones with target dates were established for the transition phase through the Milestone Series M-82 (Change Number M-82-96-01 included in [Letter 97-EAP-032, Establish Milestones and Target Dates for B-Plant Facility Transition Milestone Series M-82](#)). All the target milestones have been completed.

The HFFACO Change Control Form was signed by all parties who agreed that labeling of containers would not be performed because: *“Cell 4 is remote access only. No crane access will occur during the S&M because the canyon crane will be unavailable.”* In addition, inspections would not be performed because: *“No visual inspections of the cell 4 container storage area will be performed during S&M. The canyon crane will be unavailable during S&M and would be required for access to the cell.”*

Thus, the requirements in WAC 173-303-630 are not applicable to the containers in Cell 4.

### WAC 173-303-640 Tank systems

#### **Information and justification:**

The B Plant Complex has several inactive and unfit-for-use tank systems that will not be upgraded to meet regulatory requirements for active tanks. Thus, the requirements in [WAC 173-303-640](#) applicable to an operating tank system do not apply. The requirements for unfit-for-use tanks in WAC 173-303-640(7) add no additional preparedness and prevention requirements that have not already been described in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-340](#) and [WAC 173-303-395\(1\)](#).

### WAC 173-303-695 Containment buildings

The 221B Building was designed and built before there were regulatory requirements for containment buildings in accordance with [WAC 173-303-695](#) incorporating [40 CFR 264.1101\(a\)](#) and (b). Revision 4 of B Plant Addendum A, Part A Form (1996) reclassified the 221B Building from “miscellaneous storage” to a containment building. The building was used for storage of solid mixed waste on the canyon deck area and thus needed a way to describe this storage as a DWMU. Thus, the 221B Building was certified in 1995 as a containment building in accordance with [40 CFR 264.1101\(c\)\(2\)](#).

The purpose of the B Plant transition phase was *“to place B Plant and its ancillary facilities in a safe, environmentally sound, and stable condition which requires minimal long term surveillance and maintenance, thereby reducing the risks associated with the current radiological and chemical inventory and the cost for S&M until the facility disposition phase.”* A set of milestones

with target dates was established for the transition phase through the Milestone Series M-82 ([Letter 97-EAP-032](#)). All the target milestones have been completed.

The containment building stores solid (liquid-free) mixed waste in the form of discarded equipment and lead shielding material at various locations on the canyon deck. The waste could rest directly on the canyon deck. Separate containers were not used for the waste.

The work performed according the Milestone Series M-82 placed “*B Plant and its ancillary facilities in a safe, environmentally sound, and stable condition which requires minimal long term surveillance and maintenance.*”

The requirements for a containment building add no additional preparedness and prevention requirements that have not already been described in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-340](#) and [WAC 173-303-395\(1\)](#).

Attachment 10  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for the PUREX facility in the 200  
East Area

10 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the PUREX facility in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the PUREX facility in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
May 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**  
*By Sarah Harrison at 9:18 am, May 27, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the PUREX facility in the 200 East Area

The Washington State Department of Ecology regulation at [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in its Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the PUREX facility. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), [WAC 173-303-640](#), [WAC 173-303-680](#), and [WAC 173-303-695](#) are not applicable for the PUREX facility.

The active portion of the PUREX facility consists of the main canyon building (202A Building), two storage tunnels, two tank farms separate from the canyon building, and buildings and process cells outside but connected to the main canyon building. More information about the dangerous waste management units (DWMUs) at the PUREX facility can be found in Addendum A, Part A Form. The PUREX facility contains the following types of DWMUs:

- Storage tanks inside the cells in the 202A Canyon (34 tanks)
- Storage tanks inside the 202A Building but outside the canyon (9 tanks)
- Storage tanks outside the 202A Building (2 tanks)
- Miscellaneous unit storage (2 tunnels)
- Containment building storage (1 area)

At this time, the unit group is only accessed for the purpose of inspections and surveillance and maintenance (S&M) activities.

### 1. Justification for the waiver from the WAC 173-303-340 requirements.

[WAC 173-303-340\(1\)](#) *Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

*(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*

*(b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*

*(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.*

*All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

#### **Waiver information and justification:**

This PUREX facility has no permanent personnel located at the site. Thus, no internal communications or alarm system is installed capable of providing immediate emergency instruction to facility personnel. The PUREX facility is only accessed for the purposes of inspections and S&M activities.

This waiver is requested for the required equipment in WAC 173-303-340(1)(a), WAC 173-303-340(1)(d) and some of the equipment in WAC 173-303-340(1)(c). During inspection and S&M activities, personnel carry communication devices such as two-way radios and cellular telephones capable of receiving emergency instructions and summoning emergency assistance. The personnel vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the inspection and S&M personnel. Two-way radios and portable fire extinguishers will be required for inspections, and the function of the radios and the presence of the fire extinguishers will be verified through the inspection schedule in Addendum I, Inspection Plan.

If a fire occurs during an inspection or S&M activities, the Hanford Fire Department will be notified. The fire department will supply firefighting personnel, fire control equipment and water. Thus, at the PUREX facility, it is not necessary to have a permanently installed communications or alarm system, permanently located fire extinguishers, and permanently located fire control equipment.

Most of the tanks are located under cover block and are not accessible. During the PUREX transition process, all tanks were emptied and flushed until the flush solution no longer designated as dangerous waste. Thus, for empty tanks and tanks with a minimum heel of nondangerous waste, spill control equipment and decontamination equipment are not necessary. However, a spill/emergency response kit is available near the PUREX North Gate and is verified through the inspection schedule in Addendum I, Inspection Plan.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

*(a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

*(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This Treatment, Storage, and Disposal (TSD) Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are present only at the location during inspection and S&M activities and carry communication devices such as two-way radios and cellular telephones.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

There is no containerized waste stored at the PUREX facility. Thus, aisle space requirements are not applicable to this TSD Unit Group.

WAC 173-303-340(4) Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:

(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;

(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.

(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

#### **Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in [Permit Attachment 4](#), DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

## **2. Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), WAC 173-303-640, WAC 173-303-680 and WAC 173-303-695 do not apply to the PUREX facility.**

WAC 173-303-806(4)(a)(viii) A description of procedures, structures, or equipment used at the facility to:

(A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);

(B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(C) Prevent contamination of water supplies;

(D) Mitigate effects of equipment failure and power outages;

(E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and

(F) Prevent releases to the atmosphere.

#### **Information and justification:**

The PUREX facility has several inactive and unfit-for-use tank systems, containment building waste storage, and two miscellaneous units (storage tunnels). Most of the tanks are inaccessible under cover blocks and cannot receive any additional waste. The canyon crane is disabled and cannot move containment building waste. The storage tunnels were filled with grout which prevent any movement of waste into or out of the tunnels.

Thus,

(A) No dangerous waste is unloaded/loaded.

(B) No waste is otherwise handled at the site location.

- (C) Most of the PUREX facility waste is dry waste, grouted waste, or potential small heels in tanks. The water supply to the 202A Building has been mechanically isolated. Thus, there is no water available in sufficient quantities to move waste so that it will contaminate the water supply.
- (D) Equipment failures and power outages are not applicable as all the major equipment in the 202A Building is no longer energized.
- (F) The 202A Building has a forced air ventilation system, and the filtered exhaust is regulated through the [Hanford Air Operating Permit 00-05-006](#).

Thus, the requirements in WAC 173-303-806(4)(a)(viii) (A) through (D) and (F) are not applicable.

The requirements in WAC 173-303-806(4)(a)(viii)(E) are applicable and are implemented by only allowing personnel access to limited parts of the PUREX facility during inspections and S&M activities. This limits the exposure to mixed waste.

[WAC 173-303-806\(4\)\(a\)\(ix\)](#) *A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with WAC [173-303-395](#) including documentation demonstrating compliance with WAC [173-303-395\(1\)\(c\)](#), and*

[WAC 173-303-395\(1\)](#) ***Precautions for ignitable, reactive, or incompatible wastes.***

*(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

*(b) Where specifically required by other sections of this chapter [173-303](#) WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

*(i) Generate extreme heat or pressure, fire or explosion, or violent reaction;*

*(ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*

*(iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*

*(iv) Damage the structural integrity of the facility or device containing the waste; or*

*(v) Through other like means, threaten human health or the environment.*

*(c) When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under WAC [173-303-380\(1\)](#). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

#### **Information and justification:**

The PUREX facility has several inactive and unfit-for-use tank systems that will not be upgraded to meet regulatory requirements for active tanks. Ignitable and reactive waste were managed in many of the tanks in the 202A Building. Ignitable waste was also managed in the 203A and 211A Tank Farms. During the PUREX transition process, all tanks were emptied and flushed until the flush solution no longer designated as dangerous waste. Thus, for empty tanks and tanks

will a minimum heel of nondangerous waste, the requirements WAC 173-303-395(1) are not applicable.

The PUREX storage tunnels contain waste that is considered ignitable because of the presence of silver nitrate ( $\text{AgNO}_3$ ), an oxidizer. Both Tunnel Number 1 and Tunnel Number 2 are filled with grout. Thus, because of the grout, the characteristics of ignitability can no longer be expressed and the requirements WAC 173-303-395(1) are not applicable.

#### WAC 173-303-640 Tank systems

##### **Information and justification:**

The PUREX facility has several inactive and unfit-for-use tank systems that will not be upgraded to meet regulatory requirements for active tanks. Thus, the requirements in [WAC 173-303-640](#) applicable to an operating tank system do not apply. The requirements for unfit-for-use tanks in WAC 173-303-640(7) add no additional preparedness and prevention requirements that have not already been described in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-340](#) and [WAC 173-303-395\(1\)](#).

#### WAC 173-303-680 Miscellaneous units

##### **Information and justification:**

The PUREX facility has two storage tunnels. Both Tunnel Number 1 and Tunnel Number 2 are filled with grout, and waste can no longer be added or removed. Personnel entry also is no longer possible.

The requirements for miscellaneous units add no additional preparedness and prevention requirements that have not already been described in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-340](#) and [WAC 173-303-395\(1\)](#).

#### WAC 173-303-695 Containment buildings

The 202A Building was designed and built before there were regulatory requirements for containment buildings in accordance with [WAC 173-303-695](#) incorporating [40 CFR 264.1101\(a\)](#) and (b). Revision 3 of PUREX Addendum A, Part A Form (1992) classified the 202A Building as a containment building subject to the newly promulgated requirements. The building was used for storage of solid mixed waste on its canyon deck area and thus needed a way to describe this storage as a DWMU. Thus, the 202A Building was certified in 1992 as a containment building in accordance with 40 CFR 264.1101(c)(2).

The purpose of the PUREX transition phase was to “*remove the need for routine personnel entry into the building and leave the facility in an environmentally sound, safe, and stable configuration.*” A set of milestones with target dates were established for the transition phase through the Milestone Series M-80 ([Change Number M-80-94-01](#)). All the target milestones have been completed and PUREX was placed in long-term surveillance and maintenance.

During the transition phase, most of the solid mixed waste was moved to PUREX Storage Tunnel Number 2 ([DOE/RL-95-78 Revision 1](#)). Solid mixed waste only remains in Cell F, consisting of concrete debris from the floor of Cell E. Some potential solid mixed waste also remains on the canyon deck.

The work performed according the Milestone Series M-80 accomplished the goal to “*remove the need for routine personnel entry into the building and leave the facility in an environmentally sound, safe, and stable configuration.*”

The requirements for a containment building add no additional preparedness and prevention requirements that have not already been described in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-340](#) and [WAC 173-303-395\(1\)](#).

Attachment 11  
Letter Number 21-ESQ-0033

Supplemental RCRA Permit Application Material  
Regarding Preparedness and Prevention  
Requirements for the 241-CX Tank System in the  
200 East Area

11 pages including cover sheet

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the 241-CX Tank System in the 200 East Area

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company

**P.O. Box 1600  
Richland, Washington 99352**

# Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the 241-CX Tank System in the 200 East Area

Document Type: RPT      Program/Project: CPRM

P. E. Eberlein  
CH2M HILL Plateau Remediation Company

Date Published  
May 2020

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788

**CH2MHILL**  
Plateau Remediation Company  
P.O. Box 1600  
Richland, Washington 99352

**APPROVED**

*By Lynn M. Ayers at 4:12 pm, May 05, 2020*

---

Release Approval

Date

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

## **Supplemental RCRA Permit Application Material Regarding Preparedness and Prevention Requirements for the 241-CX Tank System in the 200 East Area**

The Washington State Department of Ecology (Ecology) regulation at [WAC 173-303-806\(4\)\(a\)\(vi\)](#) allows the permittee, in its Part B permit application, to request a waiver of the preparedness and prevention requirements of [WAC 173-303-340](#). This attachment provides the justification for such a waiver for the 241-CX Tank System. In addition, this attachment demonstrates that other preparedness and prevention requirements in [WAC 173-303-806\(4\)\(a\)](#), [WAC 173-303-395\(1\)](#), and [WAC 173-303-640](#) are not applicable for the 241-CX Tank System.

The 241-CX Tank System is located in the 200 East Area of the Hanford Facility, east of the former 209E Building and south of 7<sup>th</sup> Street. The 241-CX Tank System consists of three underground tanks: 241-CX-70, 241-CX-71, and 241-CX-72. Each tank is a dangerous waste management unit. When operated, the tanks received waste through pipelines: tank 241-CX-70 received waste via the 200-E-244-PL pipeline; tank 241-CX-71 received waste via the 200-E-156-PL and 200-E-245-PL pipelines; and tank 241-CX-72 received waste via the 200-E-246-PL pipeline. Tank 241-CX-72 is located under a small building (241CX40).

Each tank was used during the 1950s to treat and store process waste from the 201C Building.

- Tank 241-CX-70 received reduction/oxidation (REDOX) waste. Corrosive mixed waste was removed from the tank and it is now empty.
- Tank 241-CX-71 was used to neutralize waste with a bed of limestone aggregate. The limestone is covered with grout.
- Tank 241-CX-72 was used to store pilot study waste. Waste remains at the bottom of the tank, and the tank has been filled with grout.

The 241-CX Tank System is an inactive tank system. An agreement was reached between the U.S. Department of Energy, Richland Operations Office and Ecology that the 241-CX Tank System is a tank system unfit for use and will not be upgraded to meet regulatory requirements for active tanks. As such, the tanks are subject to requirements of [WAC 173-303-640\(7\)](#) and destined for closure ([95-PCA-342](#), 1995, "Identification of Non-Permitted Treatment, Storage, or Disposal (TSD) Facilities and Related Potential Environmental Non-Compliant Conditions at the Hanford Site," letter to Daniel Silver, Washington State Department of Ecology, from John D. Wagoner, U.S. Department of Energy, Richland Operations Office, dated July 6, 1995; and [Letter 95-PCA-342](#), 2019, *Close Out Form Environmental Compliance Issues Identified in DOE/RL Letter 95-PCA-342 Dated July 6, 1995*).

At this time, this Treatment, Storage, and Disposal (TSD) Unit Group is accessed only for the purpose of annual inspections and other surveillance and maintenance (S&M) activities.

### **1. Justification for the waiver from the WAC 173-303-340 requirements.**

[WAC 173-303-340\(1\)](#) *Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:*

- (a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;*
- (b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;*
- (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and*

*(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.*

**Waiver information and justification:**

This TSD Unit Group has no permanent personnel located at the site and is accessed only for the purposes of annual inspections and other S&M activities. The 241-CX Tank System inspection includes inspecting signage, barriers, and ground subsidence.

This waiver is requested for the required equipment in WAC 173-303-340(1)(a), WAC 173-303-340(1)(d), and some of the equipment in WAC 173-303-340(1)(c). During inspections and other S&M activities, personnel carry communications devices such as cellular telephones and two-way radios. Surveillance vehicles carry portable fire extinguishers and other fire control equipment (shovels) for the personal protection of the surveillance personnel. Two-way radios and portable fire extinguishers will be required for inspections, and the function of the radios and the presence of the fire extinguishers will be verified through the inspection schedule in Addendum I, *Inspection Plan*.

If a fire occurs during an inspection or other S&M activities, the Hanford Fire Department will be notified. The Hanford Fire Department will supply firefighting personnel, fire control equipment, and water. Thus, an alarm system and fire control equipment are not necessary.

The tanks and any contaminated media are located underground and are inaccessible. Thus, spill control equipment and decontamination equipment are not necessary.

WAC 173-303-340(2) *Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:*

*(a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section;*

*(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.*

**Waiver information and justification:**

This TSD Unit Group is not operating, and no dangerous waste is poured, mixed, spread, or otherwise handled at the site location. Thus, these requirements are not applicable. Personnel are present at the location only during inspections and other S&M activities. Personnel carry communication devices such as cellular telephones and two-way radios.

WAC 173-303-340(3) *Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.*

**Waiver information and justification:**

Aisle space is not applicable to this TSD Unit Group as no waste is stored in a container management area.

WAC 173-303-340(4) Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:

(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility;

(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.

(5) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

**Waiver information and justification:**

All arrangements with local authorities and local authorities declining to enter into such arrangements are documented in Permit Attachment 4, DOE/RL-94-02, *Hanford Emergency Management Plan*, Table 3-1 and Appendix B.

## **2. Justification that other Preparedness and Prevention requirements in WAC 173-303-806(4)(a), WAC 173-303-395(1), and WAC 173-303-640 do not apply to the 241-CX Tank System.**

WAC 173-303-806(4)(a)(viii) A description of procedures, structures, or equipment used at the facility to:

(A) Prevent hazards and contain spills in unloading/loading operations (for example, ramps, berms, pavement, special forklifts);

(B) Prevent runoff from dangerous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(C) Prevent contamination of water supplies;

(D) Mitigate effects of equipment failure and power outages;

(E) Prevent undue exposure of personnel to dangerous waste (for example, protective clothing); and

(F) Prevent releases to the atmosphere.

**Information and justification:**

The 241-CX Tank System is an inactive tank system. The tanks cannot receive any additional waste. No dangerous waste is unloaded/loaded or otherwise handled with equipment at the site location. Personnel are present at the location only during inspections and other S&M activities. Thus, these requirements are not applicable.

WAC 173-303-806(4)(a)(ix) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with WAC 173-303-395 including documentation demonstrating compliance with WAC 173-303-395(1)(c), and

**WAC 173-303-395(1) Precautions for ignitable, reactive, or incompatible wastes.**

*(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.*

*(b) Where specifically required by other sections of this chapter 173-303 WAC, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:*

- (i) Generate extreme heat or pressure, fire or explosion, or violent reaction;*
- (ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;*
- (iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;*
- (iv) Damage the structural integrity of the facility or device containing the waste; or*
- (v) Through other like means, threaten human health or the environment.*

*(c) When required to comply with (a) and (b) of this subsection, the owner or operator must document that compliance in the operating record required under WAC 173-303-380(1). This documentation may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.*

**Information and justification:**

The 241-CX Tank System is an inactive tank system. No ignitable, reactive, or incompatible waste was disposed at the TSD Unit Group. Thus, these requirements are not applicable.

**WAC 173-303-640 Tank systems**

**Information and justification:**

There are no additional preparedness and prevention requirements.



Tank 241-CX-70, November 2017. Photograph was taken facing east.



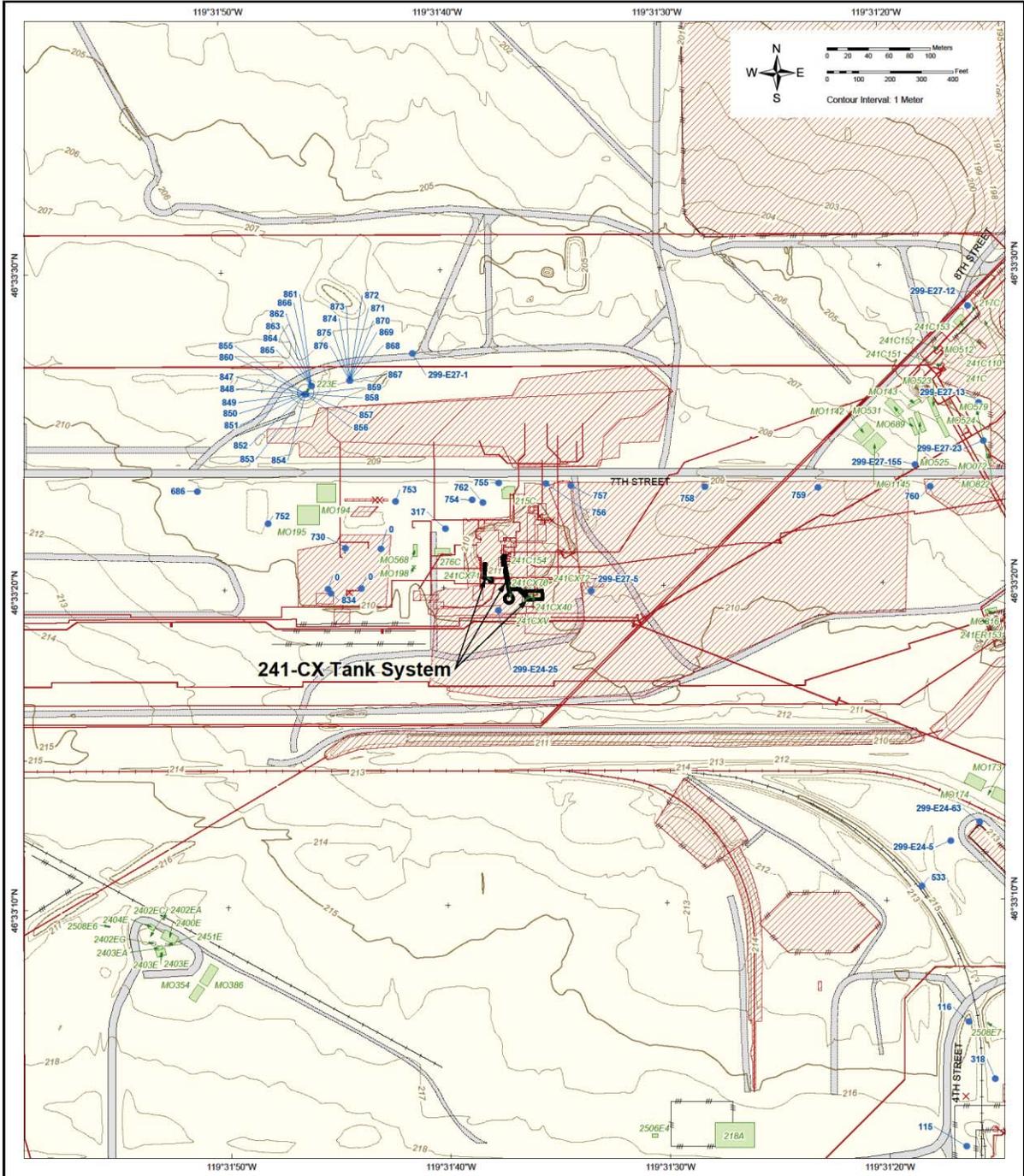
Tank 241-CX-71, November 2017.



Tank 241-CX-72, July 2012. Photograph shows the top of the tank at the bottom of the caisson.



241CX40 Building, November 2017. The building contains tank 241-CX-72.



**The Hanford Site**



Area Shown on Map

**241-CX Tank System in the 200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility
- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences

Prepared for:  
 US DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE

Created and Published by: Central Mapping Services  
 Mission Support Alliance, Richland, WA (509) 373-9076

**INTENDED USE: REFERENCE ONLY**  
 Projection: Lambert Conformal Conic  
 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD88  
 Topographic Data: 1996, Decatur Hanford, Inc.

