



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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November 12, 2020

20-NWP-183

Brian T. Vance, Manager  
Richland Operations Office  
United States Department of Energy  
PO Box 550, MSIN: H5-30  
Richland, Washington 99352

Ty Blackford, President and CEO  
CH2M HILL Plateau Remediation Company  
PO Box 1600, MSIN: A7-01  
Richland, Washington 99352

Re: Dangerous Waste Compliance Inspection on June 15, 2020, RCRA Site ID:  
WA7890008967, Nuclear Waste Program (NWP) Compliance Index No.: 20.703

Dear Brian T. Vance and Ty Blackford:

Thank you for your staff's time during the Low Level Burial Ground Trench 94 inspection on June 15, 2020. The Department of Ecology's (Ecology) compliance report of this inspection is enclosed. The report cites one concern with training.

Specific deficiencies or violations not listed in the enclosed compliance report do not relieve your facility from having to comply with all applicable regulations.

If you have questions or need further information, please contact me at (509) 492-1610 or [kathy.conaway@ecy.wa.gov](mailto:kathy.conaway@ecy.wa.gov).

Sincerely, Digitally signed  
by Conaway,  
Kathy (ECY)  
Date: 2020.11.12  
14:57:01 -08'00'

Kathy Conaway  
Dangerous Waste Compliance Inspector  
Nuclear Waste Program

kc/tla  
Enclosure

cc: See page 2

Brian T. Vance and Ty Blackford  
November 12, 2020  
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20-NWP-183  
LLBG Trench 94  
RCRA Site ID: WA7890008967  
NWP Compliance Index No.: 20.703  
Inspection Date: June 15, 2020

cc electronic w/enc:

Dave Bartus, EPA  
Dave Einan, EPA  
Cheryl Williams, EPA  
Ben Harp, USDOE-ORP  
Duane Carter, USDOE-RL  
Tony McKarns, USDOE-RL  
Allison Wright, USDOE-RL  
Danielle Collins, CHPRC  
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Jon Perry, MSA  
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Laurene Contreras, YN  
Debra Alexander, Ecology  
Kathy Conaway, Ecology  
Kelly Elsethagen, Ecology  
Jared Mathey, Ecology  
Amena Mayenna, Ecology  
John Price, Ecology  
Johnathan Rogers, Ecology, NWP Compliance Index File: 20.703  
Stephanie Schleif, Ecology  
Chris Wend, Ecology  
NWP RIM Coordinators, Ecology  
Environmental Portal  
TPA Administrative Record  
Hanford Facility Operating Record  
CHPRC Correspondence Control  
MSA Correspondence Control  
USDOE-ORP Correspondence Control  
USDOE-RL Correspondence Control  
EPA Region 10 Hanford Field Office Correspondence Control

# Washington Department of Ecology

## Nuclear Waste Program

### Compliance Report

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**Site:** Low-Level Burial Grounds – Trench 94  
**RCRA Site ID:** WA7890008967  
**Inspection Date:** June 15, 2020  
**Site Contacts:** Linda Petersen and Danielle Collins, CH2M Hill Plateau Remediation Company (CHPRC)  
**Site Location:** Hanford, 200 East Area  
**At This Site Since:** 1986 **NAICS#:** 56221, 924110, 54171  
**Current Site Status:** Treatment, Storage, and Disposal Facility

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#### Ecology

Lead Contact: Kathy Conaway

Phone: (509) 492-1610

Other Representatives: N/A

Report Date: November 12, 2020

Index #: 20.703

Report By: Kathy Conaway



Digitally signed by Conaway, Kathy (ECY)  
Date: 2020.11.12 15:01:57 -08'00'

(Signed)

(Date)

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#### Site Location

The Hanford Site was assigned a single United States Environmental Protection Agency (EPA) identification number, and is considered a single *Resource Conservation and Recovery Act of 1976* (RCRA), as amended, facility even though the Hanford Site contains numerous processing areas spread over a large geographic area. The Hanford Site is a tract of land approximately 580 square miles and is located in Benton County, Washington. This site is divided into distinct Dangerous Waste Management Units (DWMUs) which are administratively organized into “unit groups.” A unit group may contain only one DWMU or many; currently, there are 30 unit groups at the Hanford Site. Individual DWMUs make up a small portion of the Hanford Site. Additional descriptive information on the individual DWMUs is contained in unit group permit applications and in Parts III, V, and VI of the Hanford Facility RCRA Permit, Dangerous Waste Portion, WA7890008967, Revision 8C (hereafter referred to as the Permit).

#### Owner and Operator Information

United States Department Of Energy (USDOE) and CHPRC submitted a Part A permit application to the Washington State Department of Ecology (Ecology) on October 1, 2008. Since that time, CHPRC has been the contractor co-operating the Low-Level Burial Grounds (LLBG) Trench 94 (Trench 94) for USDOE.

#### Facility Background

In 2019, Trench 94 reported as a Large Quantity Generator of hazardous waste on their Dangerous Waste Annual Report. Trench 94 is a land-based unit in Hanford’s 200 East Area, in the northeast corner for 218-E-12B Burial Ground. It covers a total area of about 49 hectares.

Trench 94 is designed for the receipt and final disposal of decommissioned, defueled reactor compartments. The Puget Sound Naval Shipyard (PSNS) in Bremerton, Washington prepares the compartments for disposal and transports them by barge to the Port of Benton. They then go over the road to the Hanford Site. The first reactor compartment came to Trench 94 in April 1986. Trench 94 should continue to receive reactor compartments until closure begins.

### **Compliance Background**

On November 18, 2014, Ecology conducted a dangerous waste compliance inspection of the Low-Level Burial Grounds, Trench 94, Index number 14.511. The inspection found four areas of non-compliance in the training plan and contingency.

### **Inspection Summary**

Due to the COVID-19 pandemic, no site visit was performed as a part of this inspection. Instead, on June 15, 2020, I requested records to review and determine compliance.

### **Waste Analysis Records**

According to the Trench 94 Waste Analysis Plan I reviewed, it said that standing waste profiles are subject to review and to be recertified. I requested and received recertification documents for the past 3 years.

I reviewed the recertification for 03/21/2018, which was signed and dated. The recertification also marked that the profile sheet went through significant changes and listed these changes. The revision was approved with signatures and date. PSNS was listed as the company. A Standard Profile Sheet with the approved changes and a description of the changes was reviewed and was signed and dated 03/06/2018. A Solid Waste Information Track System (SWITS) was included with the Profile Approval Sheet.

I reviewed the recertification for 03/06/2019, which was signed and dated. No changes were made to the waste profile, SWITS included.

I reviewed the recertification for 03/06/2020, which was signed and dated. It also stated changes/revisions to the Waste Profile Sheet. The revision was approved with signatures and date. PSNS was listed as the company. A Standard Profile Sheet with the approved changes and a description of the changes was reviewed and had signatures and date; a SWITS datasheet was provided.

I asked how are containers receipt inspections documented and how are they part of the facility operating record. I requested inspection documents for the past 3 years. CHPRC explained,

Operations receives waste containers for disposal in accordance with procedure SWSD-PRO-OP-51636, *Management of Waste at LLBG*. Containers are inspected during the receipt, off-load, and TSD acceptance processes to identify discrepancies between SWITS 356 Receipt Report Information and incoming container records. Container integrity is also verified at this time.

Per the procedure, once the container inspection is complete the SWITS 356 Receipt Report is signed by the Nuclear Chemical Operator (NCO) to accept the waste. The SWITS 356 Receipt Report is included in the shipping paperwork and maintained in the Trench 94 operating record.

I reviewed the following Receipt Report inspections:

- Shipment 000704 – 09/19/17.
- Shipment 000702 – 09/25/17.
- Shipment 000697 – 09/17/18.
- Shipment 000712 – 09/24/18.
- Shipment 000716 – 10/07/19.
- Shipment 000NR1 – 10/14/19.

I observed for all of the above, the generator was PSN and receipt facility was Trench 94. There were signatures and dates for Verification, Technical Acceptance, Receipt Signature, and TSD Acceptance. A copy of the signed SWITS 356 Receipt Report was included.

### **Process**

According to the permit application (December 2015), the Trench 94 landfill operates under an exemption request with WAC 173-303-806(4)(h) from liner system requirements in WAC 173-303-665. This is a temporary exemption. WAC 173-303-665(2)(b) states the owner or operator will be exempted from the requirements of (2)(a) if the department finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics, will prevent the migration of dangerous waste constituents... Also includes leachate monitoring exemption WAC 173-303-665(4)(c)(i) *Landfills*.

I requested the final Engineered Performance Plan and the Ecology approval that grants this exemption including any supporting documentation.

I reviewed the following documentation. First, was a letter from USDOE to Ecology, Letter # 9259556D, dated 01/04/1993. The letter was requesting an exemption from liner requirements however, Ecology wanted to see a demonstration verifying that liquids would not leach out. The agreement was that an Engineering Performance Plan (EPP) would be developed. This was from a meeting Ecology and USDOE had 12/17/1992. The 1993 letter also asked for concurrence on the EPP, which was attached. The EPP was dated December 1992 and said a final report would be issued.

Second, I reviewed an Ecology approval dated 09/02/1993 of the Trench 94 liner exemption. The document was PRC-PRO-EP-52832, effective date 06/17/2014 and signed by Stephanie Johansen. The Ecology letter approved an alternative landfill design and could be used until a final design was approved or denied in the final permitting process. Joe Witczak and Davis Jansen signed the Ecology letter.

Third, I reviewed a USDOE letter dated 04/05/1995, transmitting a final EPP for Trench 94. Their letter was requesting Ecology concurrence on the EPP.

Lastly, I reviewed meeting minutes dated 04/17/1996 between USDOE, Ecology, and PSNS on Revision to the Exemption Request for Trench 94, reactor compartments. The purpose of the meeting was to discuss and concur on the changes.

## Surveying and Recordkeeping

According to the permit application, the following items are required to be kept in the operating record: a map of the exact location and dimensions, including depth of each cell with respect to permanently surveyed benchmarks; and the contents of each cell and location of the dangerous waste type. I asked the facility to provide the operating pages for the above information.

I was provided and reviewed 3 maps that indicated the location and dimensions, including depth, with respect to benchmarks. There was a map and table showing the location of each container within Trench 94. The containers are designated with the D008 waste code.

## Closure

Final Landfill Cover: I asked why has a final cover design (based on Subtitle C Barrier) not been decided, completed, and submitted as part of the Part B permit application and in accordance with WAC 173-303-610 closure requirements. USDOE and CHPRC provided this response:

The Permittees provided a conceptual design of the landfill cover in the DOE/RL-2015-74, *Hanford Facility Dangerous Waste Part B Application*. DOE/RL-93-33, *Focused Feasibility Study of Engineered Barriers for Waste Management Units in the 200 Areas*, is an engineering evaluation/report that addresses the Modified RCRA Subtitle C Barrier designed to meet or exceed regulatory requirements.

Until the Permittees are closer to receipt of the final volume of waste for Trench 94, it is impractical for the definitive cover design to be currently specified since any design will likely have to be modified just prior to closure.

Is less than a 100% cover design according to the Ecology Conceptual Agreement Package (CAP) USDOE and CHPRC provided this response: "Per Ecology RCR Comment #73 (17-NWP-064), Ecology deferred the landfill cover design for Trench 94 to the closure plan major themes. A small working group made up of USDOE, Ecology, and Contractor personnel is negotiating the level of detail for the cover design that will be submitted for the permit application."

Are there TPA milestones in place for a less than 100% cover design? USDOE and CHPRC provided this response: "There are no TPA milestones for the Trench 94 cover design."

Will there be issues obtaining the correct approved cover material (soil, fill, etc.)? USDOE and CHPRC provided this response: "The source of the material for the cover has not been established yet."

## Contingency

I asked where the Building Emergency Plan (BEP) is located for Trench 94. USDOE and CHPRC provided this response: "LLBG BEP HNF-IP-0263-BG is located electronically online and in hard copy at the MO-720 Incident Command Post, Conference Room A120."

I asked where the portable emergency equipment (fire extinguisher) was kept. USDOE and CHPRC provided this response. "There is one (1) ABC fire extinguisher located in Trench 94 at the Primary Staging Area. This fire extinguisher location is identified as Station #8 in the field



and on the procedure SW-040-041, Appendix F, Monthly LLBG, RCRA Fire Extinguisher Inspection sheet.”

I asked how do you ensure that all personnel are familiar with the correct evacuation procedure and its documentation. USDOE and CHPRC provided this response: “LLBG BEP HNF-IP-0263-BG, Section 7.1.1 Evacuation, describes actions to be taken in the event an evacuation is ordered or the evacuation siren sounds in the area of the LLBG. Approved staging areas are identified in Figures 1 and 2. LLBG Trench 94 personnel and unescorted visitors are required to complete emergency response information training, which includes staging areas for Trench 94.”

I asked if personnel are at Trench 94 and a Take Cover alarm sounds, where is the nearest approved building or trailer. USDOE and CHPRC provided this response: “The nearest habitable building for Take Cover is the 2025E Building at the Effluent Treatment Facility.”

### **Inspection Records**

I requested and reviewed all inspection records for the period December 2019 to January/February 2020 associated with Trench 94. SWSD-PRO-OP-51713, effective date 04/2019 was the procedure used for these inspection types.

Monthly Fire Extinguisher Appendix F: The inspection dates provided were 12/10/2019, 01/09/2020, and 02/12/2020. The type of fire extinguisher was ABC. Location was at Station 8 at Trench 94. All the areas inspected were marked with a Yes. I observed the inspection records contained the date and time of the inspections, the printed name and handwritten signature of the inspectors, and notations of the observations made. There were no listed comments observed in these records.

Weekly Dangerous Waste Inspections, Appendix D: I requested and reviewed all weekly inspections December 2019, January 2020, and February 2020. I observed that the weekly inspections covered an Area Inspection and a Trench Inspection. These weekly inspections also inspected the posted warning signs. All weekly records I reviewed were marked with a Yes. I observed the inspection records contained the date and time of the inspections, the printed name and handwritten signature of the inspectors, and notations of the observations made. I observed the comments marked on the inspections for the 3 months indicated tumbleweeds in the northwest and southeast corners with a comment for request date to pick up the tumbleweeds. Tumbleweeds were picked up and inspection records indicated that management of the tumbleweeds appeared satisfactory.

Monthly Telephone/Windsock Inspection, Appendix G: I requested and reviewed 3 monthly inspection records; 12/10/2019, 01/08/2020, and 02/12/2020. The telephone number for Trench 94 was 373-5687. All records for telephone and windsock were marked satisfactory. Windsocks were located east of Trench 94 and north of Trench 94. I observed the inspection records contained the date and time of the inspections, the printed name and handwritten signature of the inspectors, and notations of the observations made. I observed that the inspection record for 01/08/2020 marked a comment saying that the windsock at North Trench 94 was replaced. Also, I observed the inspection record 02/12/2020 had a comment that the windsock at East Trench 94 was replaced.

Significant Storm Event Inspection, Appendix O: There were 6 Storm Event inspection records provided for the time period requested. The dates were 12/02/2019, 01/02/2020, 01/13/2020,

02/03/2020, 02/10/2020, and 02/24/2020. Items inspected were trench berms, walls, floor intact, and the trench entrance ramp intact. All areas for these inspections were marked with a Yes. There were no noted comments. I observed the inspection records contained the date and time of the inspections, the printed name and handwritten signature of the inspectors.

In my document request for inspection records, I asked for any corrective action/remedy. USDOE and CHPRC provided this response. "In regards to 'any information for corrective action/remedy,' identified deficiencies are listed on the inspection sheet and tracked on an 'open Item List' until corrected. Open item R-19-05 identified on inspection sheet 6.4 2019-12-23 WEEKLY TR94 is for LLBG Trench 31 and is not related to LLBG Trench 94. Open Item NR-19-051 identified on inspection sheets 6.14 2019-12-10 MONTHLY LLBG RCRA FIRE EXTINGUISHER INSPECTION and 6.16 2020-02-12 MONTHLY LLBG FIRE EXTINGUISHER INSPECTION is not related to LLBG Trench 94. There were no RCRA open items for LLBG Trench 94 during the timeframe requested."

My review of these requested inspection records agrees with their response.

### **Personnel Training**

I requested and reviewed the most recent Dangerous Waste Training Plan for the LLBG Trench 94. I was provided Training Plan Revision 4, Change 1, effective date 09/17/2019. Training Plan PRC-STD-TQ-40227 covers the LLBG Trenches 31, 34, and 94.

I requested training records for staff who performed monthly inspections for the LLBG Trench 94 in January 2020. I was provided training records for two staff: Mr. Ruben Rivera, Nuclear Chemical Operator (NCO), and Ms. Linda Phillips, NCO.

I observed Mr. Rivera, NCO, did take Course #035100, Container Waste Management Initial but his training record did not list Course #035110, Container Waste Management Refresher (CBT) an annual frequency. I observed Mr. Rivera took annual Course #300536, CWC, LLBG, and WRAP Facility Emergency on 03/19/2020. He completed the initial Course #300701, Central Waste Complex Orientation 07/07/2015 and annual Course #000001, Hanford General Employee Training 03/19/2020.

I observed Ms. Phillips, NCO, did take Course #035100, Container Waste Management Initial but her training record did not list Course #035110, Container Waste Management Refresher (CBT), and an annual frequency. I observed Ms. Phillips took annual Course #300536, CWC, LLBG, and WRAP Facility Emergency on 9/03/2019. She completed the initial Course #300701, Central Waste Complex Orientation 9/03/2019 and annual Course #000001, Hanford General Employee Training 06/24/2019. Next training date needed was marked 10/24/2020.



Concern

- 1) **Personnel Training:** It appears that the LLBG Dangerous Waste Training Plan requires Course #035110, Annual Container Waste Management Refresher (CBT) for the NCO position. However, training records for two of the NCOs requested training records, do not include this training course. Reconcile this difference and provide to Ecology the outcome of this training discrepancy.

*To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 509-372-7950 or visit <https://ecology.wa.gov/accessibility>. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.*

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