



**U.S. Department of Energy  
Hanford Site**

August 11, 2020

20-ESQ-0087

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

Dear Ms. Smith:

RESPONSE TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY NON-COMPLIANCE IN 20-NWP-065 FROM DANGEROUS WASTE COMPLIANCE INSPECTION ON NOVEMBER 18, 2019, AT T-PLANT RESOURCE CONSERVATION AND RECOVERY ACT SITE ID: WA7890008967, NUCLEAR WASTE PROGRAM COMPLIANCE INDEX NUMBER: 19.688

This letter is responding to the June 11, 2020, 20-NWP-065 letter regarding the Washington State Department of Ecology's (Ecology) compliance inspection report at the T-Plant. The official receipt date for this letter was June 11, 2020.

Ecology identified as Compliance Issue 1, that Container 0099957 lacked information on Land Disposal Restrictions (LDR). The inspector's observations stated that LDR restrictions are determined at the point of generation and the information required in LDR notifications (except for manifest number) are required records for waste streams stored onsite in Treatment, Storage, or Disposal units. Ecology requested that within 60 days of receipt of their report, the U.S. Department of Energy, Richland Operations Office (RL) and CH2M HILL Plateau Remediation Company (CHPRC) submit to Ecology the Container 0099957 LDR information required and as applicable in the Washington Administrative Code 173-303-380(1)(o) & (k).

The RL and CHPRC have reviewed Compliance Issue 1 and are providing the requested land disposal notification and certification form for Container 0099957 in the Attachment.

If you have any questions, please contact me, or your staff may contact Brian J. Stickney, Assistant Manager for Safety and Environment, RL, on (509) 376-9079.

Sincerely



Digitally signed by Brian T. Vance  
DN: cn=Brian T. Vance, o=Office of River  
Protection, ou=Department of Energy,  
email=brian.t.vance@orp.doe.gov, c=US  
Date: 2020.08.11 12:43:19 -07'00'

Brian T. Vance  
Manager

ESQ:AKW

Attachment:  
Documentation for Container 0099957

cc w/attach:

D. B. Bartus, EPA  
P. Buser, Ecology  
D. Collins, CHPRC  
K. Conaway, Ecology  
J. Copeland, CHPRC  
J. W. Mathey, Ecology  
L. C. Petersen, CHPRC  
J. B. Price, Ecology  
A. Shaffer, Ecology  
S. A. Szendre, MSA  
Administrative Record, TSD: TS-2-7 (Hardcopy)  
Ecology NWP Library (Hardcopy)  
Environmental Portal, G3-35  
HF Operating Record (J. K. Perry, MSA A3-01)

cc w/o attach:

J. Bell, NPT  
J. E. Bramson, CHPRC  
R. Buck, Wanapum  
L. Contreras, YN  
L. Davies, EPA  
D. R. Einan, EPA  
M. N. Jaraysi, CHPRC  
S. Johansen, CHPRC  
M. Murphy, CTUIR  
K. Shupe, CHPRC

Attachment 1  
Letter 20-ESQ-0087

U.S. DEPARTMENT OF ENERGY  
AND  
CH2M HILL PLATEAU REMEDIATION COMPANY

Documentation supporting 20-NWP-065 Non-compliance 1  
for Container 0099957

**Consisting of 6 Pages Including this Coversheet**

Production

Solid Waste Information and Tracking System  
LAND DISPOSAL NOTIFICATION AND CERTIFICATION  
For Shipment Document #: HAZWST2004  
For EPA Manifest Tracking #: 012604131FLE  
For Package ID:

SWIR353

Manifest #: HAZWST2004  
EPA ID #: WA7890008967

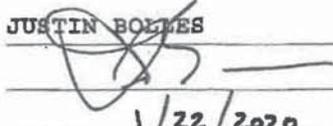
EPA Mfst Tracking #: 012604131FLE  
Containers: See attached PIN List (3)

The following notification and/or certification statement(s) apply to the waste on this shipment

Waste Management  
Reference Letter Certification Statement

- | Reference Letter | Certification Statement  |
|------------------|--|
| A                | <p><u>- WASTE REQUIRES TREATMENT</u><br/>This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268 Subpart D.</p>                      |
| H1               | <p><u>- HAZARDOUS DEBRIS REQUIRES TREATMENT</u><br/>This waste is hazardous debris that requires treatment using the alternative treatment standards of 40 CFR 268.45.</p> |

Name (print): JUSTIN BOLLES

Signature: 

Date: 1/22/2020

Production

Solid Waste Information and Tracking System  
LAND DISPOSAL NOTIFICATION AND CERTIFICATION  
For Shipment Document #: HAZWST2004  
For EPA Manifest Tracking #: 012604131FLE  
For Package ID:

---

SWIR353

Attached PIN List for Manifest #: HAZWST2004  
EPA Manifest Tracking #: 012604131FLE

---

Package ID

0099957

221T-19-000030

221T-19-000031

Total Pkgs: 3

Production

Solid Waste Information and Tracking System  
 LAND DISPOSAL NOTIFICATION AND CERTIFICATION  
 For Shipment Document #: HAZWST2004  
 For EPA Manifest Tracking #: 012604131FLE  
 For Package ID:

SWIR353

Generator Name: TRTFAC

Shipment Doc # : HAZWST2004

EPA Mfst Tracking #: 012604131FLE

Package ID: 0099957

Profile #: 1631661-00

EPA ID #: WA7890008967

1. Wastewater  Non-wastewater

USEPA Hazardous Waste Codes	Subcategory	Waste Management Reference Letter
D007	chromium characteristic	H1

6a.  Underlying Hazardous Constituent determination not applicable.

6b. The determination of underlying hazardous constituents was based on:

Generators knowledge of the waste  Analysis (attach when available)

H1 - HAZARDOUS DEBRIS REQUIRES TREATMENT.

This waste is hazardous debris that requires treatment using the alternative treatment standards of 40 CFR 268.45.

Debris Contaminants Subject to Treatment

CHROMIUM



Production

Solid Waste Information and Tracking System  
 LAND DISPOSAL NOTIFICATION AND CERTIFICATION  
 For Shipment Document #: HAZWST2004  
 For EPA Manifest Tracking #: 012604131FLE  
 For Package ID:

SWIR353

Generator Name:TRTFAC

Shipment Doc # :HAZWST2004

EPA Mfst Tracking #:012604131FLE

Package ID:221T-19-000031

Profile #:1618089-00

EPA ID #: WA7890008967

1. Wastewater  Non-wastewater

USEPA Hazardous Waste Codes	Subcategory	Waste Management Reference Letter
D001	High TOC Ignitable (greater than 10% total organic carbon)	A

6a.  Underlying Hazardous Constituent determination not applicable.

6b. The determination of underlying hazardous constituents was based on:

Generators knowledge of the waste  Analysis (attach when available)

A - WASTE REQUIRES TREATMENT

This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268 Subpart D.

**Washington Department of Ecology  
Nuclear Waste Program  
Compliance Report**

---

**SITE:** T Plant Complex  
**RCRA Site ID:** WA7890008967  
Inspection Date: November 18, 2019  
Site Contacts: Linda Petersen, CH2M Hill Plateau Remediation Company (CHPRC)  
Allison Wright, United States Department of Energy – Richland  
Operations Office (USDOE-RL)  
Site Location: Hanford Site  
At This Site Since: 1943 NAICS#: 56221, 924110, 54171  
Current Site Status: Treatment, Storage, Disposal Facility (TSDF) / Large Quantity Generator

---

**Ecology**

Lead Contact: Adam Shaffer

Phone: (509) 372-7909

Other Representatives: Kathy Conaway and Phillip Buser, Support Inspectors

Report Date: June 11, 2020

Index #: 19.688

Report By: Adam Shaffer



Digitally signed by Shaffer,  
Adam (ECY)  
Date: 2020.06.11 09:05:10 -07'00'

---

(Signed)

---

**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 (RCRA) of 1976, 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**

The United States Department of Energy – Richland Operations Office (USDOE-RL) is the owner and operator of the T Plant Complex (T Plant) and oversees ongoing waste management and cleanup activities at the Hanford Site. The CH2M Hill Plateau Remediation Company (CHPRC) is contracted by the USDOE-RL to co-operate the T Plant and associated DWMUs, which include performing waste treatment, storage, and disposal activities; conducting waste characterization, designation, and transportation services.

## **Facility Background**

In 2019, the Hanford Facility reported as a Large Quantity Generator of hazardous waste on their Dangerous Waste Annual Report.

T Plant is located in Hanford's 200 West Area. It was originally built for chemical separation of plutonium from uranium and fission products contained in irradiated fuel elements. Construction began in 1943 and operated as a facility for separation of plutonium from 1945 to 1956. In 1957, the T Plant converted to a radiological decontamination facility.

The primary missions of T Plant are treatment and storage of non-containerized and containerized dangerous or mixed waste. Waste to be managed at T Plant are dangerous or mixed waste that is generated from processes at the Hanford site and waste that is specifically identified in Section II, paragraph 8 of the Settlement Agreement re: Washington v. Bodman, Civil No. 2:30-cv-05018-AAM, January 6, 2006. No other waste will be managed at T Plant unless authorized by a permit modification decision under Permit Condition I.C.3.

At T Plant, the Permittees also vent containers, decontaminate equipment and debris, identify, verify, sample, treat, and repackage dangerous and mixed waste. T Plant also repairs and prepares equipment for return to service.

T Plant consists of nine DWMUs within buildings and twelve outdoor (storage modules, storage pads) DWMUs. These buildings, storage pads, storage areas, and storage modules provide space for storing dangerous and mixed waste containers. The 221-T Canyon Building Deck consists of 38 covered and uncovered process cells and the railway tunnel access. Waste management activities include storing, opening, sorting, treating, repackaging, sampling, and physical screening and chemical screening to characterize waste retrieved from the burial grounds and to verify the characterization of containers of dangerous and mixed waste. Washington State Department of Ecology's (Ecology) new permit (Rev. 9) would allow treatment of dangerous waste and mixed waste within the 221-T Canyon Building Deck, 221-T Cells, 221-T Railroad Tunnel, 2706-T Building, and 2706- TA Building.

T Plant submitted a Part A permit application for storage and treatment of dangerous and mixed waste under interim status regulations beginning, August 8, 1987. USDOE-RL and CHPRC submitted a Dangerous Waste Part B Application to Ecology in 2002 and an updated Part B application on January 27, 2016. T Plant is an active dangerous waste storage and treatment facility in support of Hanford Site cleanup. T Plant has a work schedule, milestone (M-091-44T), outlined in the Hanford Federal Facility Agreement and Consent Order (HFFACO), also known as the Tri-Party Agreement (TPA). Other permits for T Plant include AIR-07-306 (Notice of Construction [NOC] Radioactive Air Permit); AIR-06-1013 (NOC Radioactive Air Permit); DE-01NWP-002R1 (NOC Non-Radioactive Air Permit); and HAN-099 (Onsite Sewage System Permit).

The types of waste T Plant can manage include dangerous waste, low level radioactive waste (LLW), mixed low level waste (MLLW), transuranic waste (TRU), transuranic mixed-waste (TRUM), and Toxic Substance Control Act (TSCA) of 1976 polychlorinated biphenyls (PCB). T Plant capabilities provide capacity for treating and repackaging MLLW and TRUM, including waste sorting, processing, and volume reduction.

## **Compliance Background**

Washington State Department of Ecology (Ecology) compliance inspection 18.626 conducted on March 29, 2018 cited the following violations:

- Containers numbered 0094716 and 0047674 were missing some major hazard labels.
- Automatic Sprinkler Checklist Inspection missing printed names.

Ecology compliance inspection 18.653 conducted on November 13, 2018 and January 28, 2019 cited the following violations:

- Land disposal restriction records were not available for a container which had been shipped off-site.
- Sodium Hydroxide stored in tank M-101, is a waste, not a chemical product, and must be transferred to an appropriate Treatment Storage and Disposal (TSD) facility.
- Waste in tank 11-L was not actively managed after the effective date of RCRA. A permit application must be submitted for this waste unit.
- A waste container was treated with 10 times the manufacturer's recommended amount of sorbent. Dilution with the intent to designate a waste non-hazardous is prohibited.

## **Inspection Summary**

On November 13, 2019, I sent an email to USDOE-RL and CHPRC personnel announcing a compliance inspection of the T Plant Complex. At approximately 9:00 a.m. on November 18, 2019, Kathy Conaway, Phillip Buser, and I arrived at T Plant Complex Building MO-892. The following USDOE-RL and CHPRC personnel were present:

- Allison Wright, USDOE-RL, Inspection Coordinator.
- Ingrid Cotton, USDOE-RL, Department of Energy (DOE) Projects.
- Nicolette Standley, USDOE, General Support Services Contractor (GSSC).
- David Richards, CHPRC, T Plant Operations Manager.
- Cheryl Edwards, CHPRC, T Plant Engineer.
- Linda Petersen, CHPRC, Inspection Coordinator.
- Sarah Horn, CHPRC, Environmental Project Manager.
- Jon Fullmer, CHPRC, Environmental Compliance Officer.
- John Hultman, CHPRC, Environmental Compliance Officer.
- Mitchell Marrott, CHPRC, Inspection Coordinator.
- Kevin McCallum, CHPRC, Environmental Projects Operations Specialist.

After introductions, Mr. David Richards conducted a safety briefing. Ms. Linda Petersen asked for a summary of what we would like to see during the inspection. I stated we could discuss each DWMU at T Plant, and decide which to visit, including any satellite accumulation areas. I said I planned to review documents after a lunch break and ask any additional questions at that time. Ms. Kathy Conaway asked if there were any areas we should cover first in order to better accommodate the schedules of all participants. No one in the group made any suggestions and Mr. Richards said he would be leaving after noon, but other staff would be available to answer questions. I asked if there is any waste stored in any of the units undergoing closure. Mr. David Richards gave me an answer for each closure unit I named in the following list:

- 271-T Cage.
- 221-T Sand Filter Pad.
- 221-T R5 Storage Area.
- 211-T Pad.
- 277-T Outdoor Storage Area.
- 277-T Building.
- 2706-TB Tank System.
- 221-T Railroad Cut.
- 221-T Pipe Gallery Storage.
- 221-T Tank System.

After each of these closure units, Mr. Richards stated there was no waste present. I replied we did not need to visit any of these units due to no waste being present.

We then began to discuss active dangerous waste management units. I asked about the 221-T Canyon Deck. Mr. Richards said the deck is currently being used as a waste accumulation area to support the K-Basin project. I asked about the 221-T Cells 7L, 13R, 16R, and 17R. Mr. Richards said there is one low-level mixed waste container there with light bulbs inside as well as a waste container in Cell 16R, which contains a “jumper,” a pipe which was used in the plutonium extraction process. He said the jumper container was placed in the cell under shielding because it is a source of background radiation, and had been disruptive to personnel trying to screen themselves for radioactive contamination. Ms. Conaway asked what the L and R designation means. Mr. Richards answered that it stands for “Left” and “Right.”

I asked about the 221-T Railroad Tunnel. Mr. Richards said the tunnel is used to bring waste into the building and it is a contamination area with only camera access. I asked about the 221-T Head End. Mr. Richards explained, that it is the primary step-off pad for the building and is sometimes used to bring waste into the building, if it is brought in using a hand truck. I asked about the 221-T Operations Gallery Storage. He said the Operations Gallery Storage is a metal cabinet without any waste. I asked about the 221-T Bone Yard Storage Area. Mr. Richards said the storage area contains low-level waste roll-off boxes, three empty low-level waste containers which no longer meet Part A requirements, and a ten-drum cask with TRU/PCB waste inside.

I then asked about plans to limit inspections of the 2706-T Building sumps, which Ecology was concerned about. Mr. Richards said these plans include the sumps of both 2706-T and 2706-TA buildings because the periodic inspection of these sumps is too onerous. He also said they already use secondary containment pans for any waste within those two buildings due to ALARA (as low as reasonably achievable) radiological concerns. Ms. Ingrid Cotton asked if the sumps were visible from a distance or on a video camera. Mr. Richards said no, they cannot be inspected that way. Ms. Conaway asked if both of the two building sumps are designed this way. Mr. Richards stated yes, both sumps in 2706-T and 2706-TA share this in common. I asked if there was any waste in these buildings and Mr. Richards stated there is no waste in those two buildings currently.

I asked about the HS-030 and HS-032 storage modules in the 2706-T yard. Mr. Richards said mixed waste is stored in the modules, and this is the location of the central accumulation area, so we will want to go see them. He added, a visit to the 214-T Building would also be a good idea because this is the main waste building for the facility.

I asked about the 2706-T Asphalt pad. Mr. Richards said only one legacy container is present there—a custom-built steel box with an old glovebox inside. I asked about the 243-T Covered Storage Pad. Mr. Richards said this area is now only used for new empty containers ready to be used for the facility waste program. I asked about the 211-T Cage. Mr. Richards said only two Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) containers are stored there.

After going through the list of active DWMUs, Mr. Richards used dry-erase markers to plot out our on-site inspection tour on a large map of the T Plant facility on the wall. The general plan included a break so participants could use restrooms in the 221-T Building followed by an inspection of the 221-T Operations Gallery Storage and remote viewing of the 221-T Railroad Tunnel via closed-circuit video. After our visit to the 221-T Building, we planned on crossing over the 221-T Railroad Tunnel berm on the outside stairway to visit the 221-T Bone Yard Storage Area, returning over the berm to visit the 214-T Building and 2706-T Yard and Asphalt Pad before returning to the MO-892 conference room.

After leaving the MO-892 conference room we had a short break and then re-convened in the 221-T Building. We then took a stairway to the Operations Gallery. Mr. Richards brought us to the 221-T Operations Gallery Storage, a locked flammable cabinet. Mr. Richards unlocked the storage cabinet and showed us there were no waste containers present. He also showed us some sample container over-packs stored in the cabinet, ready for future use. Next to the storage cabinet there was another smaller steel cabinet that contained an empty bucket and spill supplies.

After inspecting the 221-T Operations Gallery Storage, we walked down the Operations Gallery hallway to a large cross-section schematic of the 221-Building where Mr. Richards could explain the different parts of the 221-T Building and its layout. I asked specifically about the Vent Tunnel shown on the schematic. Mr. Richards explained this tunnel was constructed for the building ventilation system which creates negative pressure in the building by drawing air from each of the shielded cells and through High Efficiency Particulate Air (HEPA) filters and the building emission stack. I asked if the original design of the building did not include any air emission filtering. Mr. Richards explained, yes, initially the building air emissions were not filtered, but afterward a sand filter was devised for this purpose, and once HEPA filters were invented, they came into use.

We then walked further down the Operations Gallery Hall to the closed-circuit video room. Mr. Richards sat down at the controls and gave us a tour of the 221-T Railroad Tunnel. Inside there were no trucks or rail cars present, but there were two mixed waste drums on the landing by the building entrance. Mr. Richards used the zoom function of the video camera to show us that these two containers were properly labeled and in good condition.

After leaving the 221-T Building, we walked past the 211-T Cage and over the 221-T Railroad Tunnel on a stairway provided for this purpose. When we reached the 221-T Bone Yard Storage Area, we saw two covered low-level waste roll-offs, staged in this area before being sent to Environmental Restoration Disposal Facility (ERDF). Next to the roll-offs there was an avenue which we followed to enter the back of the yard. In the back of the yard we saw the three empty low-level waste containers which no longer meet Part A requirements, and the ten-drum cask with TRU/PCB waste inside.

After leaving the 221-T Bone Yard, we passed back over the 221-T Railroad Tunnel and went to the 214-T Building. I observed numerous containers of universal waste, dangerous waste, and non-regulated waste. I observed hazardous waste labels, accumulation start dates, and dangerous waste codes on all dangerous waste containers. I observed all containers were on spill containment pallets. All the universal waste containers I observed had start dates within one year. I observed three of these containers had start dates in January of 2019. I asked about plans to ship them out. Mr. Richards said universal waste is sent out one to two months before a full year ends, to the Hanford Centralized Consolidation/Recycling Center (CCRC). He said the containers I observed were set to be shipped the week of December 5, 2019. I observed multiple nitrogen gas cylinders being stored in building 214-T. Mr. Richards said this nitrogen is used for purging K Basin sludge transport containers. I chose two containers (# 0099957 and 221T-19-000022) from this building for records review.

I observed lead acid batteries are stored in a large wooden box which bears a "Recycle" label. I also entered the universal waste lamp storage room in the northeast corner of the building. Inside the room universal waste lamps were enclosed in boxes, labeled "Universal Waste" with a box checked for lamps, and marked with the accumulation start date. In this same room there was a flammable materials cabinet. On the front of the cabinet a recycle label read "Empty Aerosol Cans." Mr. Richards opened the cabinet to show us several dozen un-punctured aerosol cans on the shelves inside. I asked why the cans had a recycle label and Mr. Richards stated it was because for all intents and purposes the cans were empty.

After leaving the 214-T Building, we walked to the 2706-T Yard and looked at the HS-030 and HS-032 Storage Modules. In Cell 3 of the HS-030 module we were shown four drums of transuranic mixed waste sent to the facility from the Central Waste Complex for venting. In Cell 2 of the HS-030 module we saw a container (#0094701) containing used rags with Loctite and Moly paste generated in the 221-T Railroad Tunnel. Mr. Richards showed us there was nothing stored in Cell 1 of the HS-030 module because the secondary containment liner had been breached years earlier. This cell also bears a sign which states, "No Waste Allowed."

Cell 3 of the HS-032 module houses the facility central accumulation area (CAA). On the day of the inspection, no waste was present in the CAA. In section 2 of the HS-032 module we saw one container of waste samples dated November 4, 2002. In Cell 1 of the HS-032 module we saw one container of mixed waste.

After leaving the 2706-T Yard, we walked to the 2706-T Asphalt Pad and saw the legacy container. This container is a custom-built steel box with an old glovebox inside. The container bore a PCB label and a toxic major hazard label. After this we walked back to building MO-892 for lunch.

We re-convened in the building MO-892 conference room at approximately noon. As per our plans with Mr. Richards, he did not return to the inspection after lunch, and we were joined by the following individuals:

- Erika Garcia, CHPRC, Environmental Documentation.
- Kym Tarter, CHPRC, Document Specialist.
- Paul Garello, CHPRC, T Plant Operations.

I began our discussion by asking whether there was any instrumentation of the liquids in the 221-T Cell 11L waste tank. Ms. Sarah Horn said there is no level indicator for the tank, so there is some legacy material still left in the tank, but exactly how much is not known. I asked if the tank had been isolated. Ms. Horn said yes, the tank has been sealed off. I asked what sort of design drawings exist to document the tank was isolated. Ms. Horn said only one design drawing exists. I said our document request would include this design drawing. I said we would also be requesting the laboratory test results of the liquid in the tank. Ms. Horn said that would be fine, however, those results were already provided for the records request of the Ecology inspection performed last year. She added, any other questions we might have about the tank could be answered if we would refer back to the information recently submitted to Ecology.

I asked if there had been any incoming manifests of wastes to T Plant or off-site shipments of waste from T Plant within the past year. Ms. Horn said they had combed through their records looking for any manifests during February and August of this year, as was requested in our email inspection announcement, but there were no shipments, in or out, during those months. I said in that case I would be including in my subsequent records request all of the manifests during the months of March through October. I asked where the waste sent to T Plant comes from. Mr. Paul Garello answered, aside from the K-Basin sludge, much of the waste is sent so T Plant can stay current on waste treatment techniques. I asked if any other treatment had been taking place in relation to the K-Basin sludge. Ms. Horn said that project is under CERCLA and so no RCRA waste treatment is done for it.

I asked if there has been any waste storage at the facility for more than one year. Ms. Horn said some remotely handled TRU mixed waste has been stored more than a year. I asked if the TSD storage acceptance date is when the waste arrives at the facility. We looked at the waste inventory together and found 29 drums had acceptance dates in 1979. Mr. Garello confirmed these drums have not been at T Plant since that time. Ms. Horn said, other than these 29 drums, the TSD dates should reflect the date the wastes were accepted at the T Plant facility.

I asked if the facility does any treatment by generator. Mr. Garello stated, during the management of some wastes generated at T Plant, such as during the packaging process, occasionally some treatment of the waste is done. I asked if the treatment of the waste was documented on Treatment by Generator logs. Mr. Garello said he was not aware of any logs made and had never heard of a form called "Treatment by Generator Logs."

<p><b>Note:</b> On May 6, 2020, Ecology received the following statement from DOE/CHPRC in response to a document request: "Treatment by generator under WAC 173-303-170 is not performed at any T Plant locations."</p>
--

At this point, I began to review the waste designation and management files for the three waste containers I had selected. The first file I reviewed was for container number 0047674. The container file indicated this container holds the sample returns from the tank in Cell 11L. There were two large stacks of paperwork which contained technical background information and sample results. The third stack of documents contained inventory sheets from 2002 along with sample results. A fourth stack of documents in the file contained the waste designation worksheets with background information from designations performed in both 1999 and 2019. I asked if this file contained any information on land disposal restrictions (LDR). Ms. Cheryl Edwards showed me there are LDR waste codes on every waste designation worksheet along

with a field to write an LDR description. I observed some of the LDR descriptions on the waste designation worksheets in the file were blank and not filled out, however, the file contained many designation worksheets completed at different times over the years while the container has remained in storage.

As I reviewed the container files, Ms. Conaway asked what the update date and initials shown in the waste description column of the waste inventory means. Ms. Horn answered, anyone updating container files in the Solid Waste Information Tracking System (SWITS) must input the date the change is made and their initials.

I reviewed the file for container number 221T-19-000022. I observed a large stack of historical background documents along with approximately 30 pages of waste inventory, safety data sheets, and designation worksheets. I found one designation worksheet with LDR waste codes which stated "free liquid" for the LDR description, but Ms. Edwards directed me to a more current waste designation sheet in the file that read "none" for the description.

I reviewed the file for container number 0099957. I observed a large stack of historical background documents along with approximately 13 pages of correspondence. The most current waste designation sheet for this container had a D007 LDR waste code without an LDR description.

Next, I asked to see all the weekly inspection records for the 214-T Building during August 2019. Ms. Kym Tarter projected these documents on a large screen. I observed that inspector observations, inspector name, as well as date and time were all documented along with the handwritten signature of the inspector for each week during August 2019. I also observed during each inspection in the month of August no deficiencies were noted. The weekly inspection date, time, and inspectors are as follows:

- August 5, 2019, at 0805 hours, with Inspector Isaac Villareal.
- August 12, 2019, at 0915 hours, with Inspector Sherry White.
- August 19, 2019, at 0830 hours, with Inspector Lane Martell.
- August 26, 2019, at 1300 hours, with Inspector Sherry White.

I asked when they last had a spill at the facility. Mr. John Fullmer stated that he was sure no spills had occurred within the past year, but we would have to check the spill log to find when the last spill had occurred. I asked who the current Building Emergency Director (BED) was for that day and Mr. Fullmer answered the BED was Ms. Kendra Reed. I asked to see the spill log. Mr. Garello said he would need to go get the log and stepped out to find it. When he returned, he stated the spill log for the facility was with the entire Hanford site spill log and he had been unable to locate the point of contact for the log. He encouraged us to include the spill log information in our subsequent records request. I asked if the facility had ever experienced a loss of water pressure and how they ensure a reliable supply of water at the facility. Mr. Garello said water pressure is checked weekly, and during his tenure, and to his knowledge, there has never been an unplanned loss of water pressure at the facility.

I asked to see the training records for two employees: a Treatment, Storage, and Disposal Unit Acceptance Representative (TSDR), and an Environmental Compliance Officer (ECO). Ms. Tarter explained they have three TSDRs on staff at the facility, but only one ECO. She said the three TSDRs are Rick Austin, Justin Bowles, and Mel Lakes.

Ms. Tarter said the one ECO is John Fullmer. I replied that I would like to see the records for Mel Lakes and John Fullmer. Ms. Tarter brought these two training records up on the screen. I said we would be including these records in our subsequent written records request.

I asked to see the current facility waste minimization certification. Ms. Horn said this is a document which is signed annually. With Ms. Horn's help Ms. Tarter was able to bring up this document on the screen. I observed this document was signed by Moses N. Jarays on August 6, 2019. I asked whether the facility generated more or less waste in 2018 than in 2017. Ms. Horn said we would need to request that information and they would work to research this question if needed.

I asked if there is a closure plan for the tank in Cell 11L. Ms. Horn said no, this is not a RCRA tank and so it does not have a closure plan under RCRA. Ms. Conaway asked how the tank is described currently. Ms. Horn replied this tank is described as a past practice tank. She added, for additional information about the tank please refer to the information already submitted.

After inspection interviews, at approximately 1:30 p.m., Kathy Conaway, Phillip Buser, and I (Adam Shaffer) of Ecology left the T Plant facility.

## **Document Review**

### **Container 221T-19-000022 Operating Records**

In record *Waste Planning Checklist*, for work document number 2T-18-00930, signed by Richard Willson and dated August 10, 2019, I observed the following:

- Estimated waste types and quantities.
- Existing waste profile numbers that may cover the waste when generated including both WPTPLANTSOP001, and WPSWOCMLLW002.
- The rationale for designating this material as a mixed waste is based on SDS numbers of paints being removed and applied (076987 and 071219), and the radiological status of the location where the work is being done.
- The waste minimization technique listed was, "Minimize the materials used."

In record WMP-340, Section 3.10, under procedure TPLN-PRO-WM-51787 Rev. 6 Change 3, with an effective date of April 22, 2019, pages 4 and 5 of 17, in Appendix A, *Container Inventory Sheet*, I observed the following:

- Container identification number 221T-19-000022.
- Accumulation and TSD storage start date of August 15, 2019.
- Container type UN1H2 with a 6.5 gallon container size.
- Mixed Waste designation.
- 214T Container Location.
- Method of waste generation states "Fixed Contamination Area repainting per work package."
- Work document number 2T-18-00930 added to record on January 8, 2020.
- Container Closure information section including date closed on December 5, 2019, gross waste weight of 14.42 lbs., and signature by Field Work Supervisor Dave Richards dated December 5, 2019.
- Full inventory on the second page showing the contents of the container:

- Dry Paint Chips with rock/dirt sweepings.
- Two Paint Rollers.
- Absorbent pads.

In record WMP-340, Section 3.10, under procedure TPLN-PRO-WM-51787 Rev. 6 Change 3, with an effective date of April 22, 2019, page 15 of 17, in Appendix K, *T Plant Complex Waste Container Request (WCR)*, I observed the following:

- Container identification number 221T-19-000022.
- Waste type mixed low level waste (MLLW).
- Waste Container type listed as poly bucket with a plastic bag liner.
- Waste label types including, Caution Radioactive Material, and EPA Hazardous Waste.
- Waste Code WT02.
- Toxic Hazard Labeling.
- Signature of Field Work Supervisor Kindra Reed with August 15, 2019 date.

### **Container 0047674 Operating Records**

I observed an email thread titled *Training Topic*, dated October 11, 2000, between Kent McDonald and Tom McLaughlin, where they discuss whether liquids within the T Plant cells are listed waste. Mr. McDonald states that if the materials ever contacted something, that would now be considered listed waste. It would not matter if this happened before or after the effective date of RCRA at Hanford. Mr. McLaughlin responded that according to his process knowledge 18 cells (mostly under sections 8-15) *could* have received decontamination fluids via the draining of decontamination vessels or residuals from hanging pumps. I also observed the *IEFD-Liquid Waste Handling* engineering drawing, dated December 1, 1983 is included in the operating record file for this waste container. It appears that the presence of waste from the tank in Cell 11L, along with this drawing and the conclusions made by Mr. McDonald and Mr. McLaughlin above, are the reason F-Listed waste codes were attached to this container.

I observed the record *Chemical Hazard Information*, dated June 11, 2001. This record states that a variety of commercially available chemical test strips were used in an effort to obtain primary chemical hazard information on the contents of Cell 11-L. The test strips were attached to a piece of cardboard to allow the strips to be lowered remotely into the cell via one of the canyon overhead cranes. The test strips showed the pH in the tank to be above 13. The test materials also showed the contents of the tank to be negative for organic solvents and peroxides.

I observed the *Sampling and Analysis Plan for Characterization of Cell 11-L of the 221-T Canyon Building* (HNF-8620), dated December 5, 2001, in the operating record.

I observed a series of emails titled *Official Designation on the Liquid Sample From Cell 11L*, dated July 9, 2002. These emails were from Mark Ellefson to Brett Barnes and Gary Cox discussing the waste designation for this container which was being developed. Mr. Ellefson stated the waste codes F001-F005 were added via process knowledge and additional testing so far added the waste codes D002, D006, D007, D008, D010, and shown the waste to contain Underlying Hazardous Characteristic metals.

In the record *Solid Waste Treatment Project Container Request*, dated August 6, 2002, I observed the following:

- Process Generating the Waste described as, “Waste contents will consist of various 221T Canyon sample returns (i.e. Tank 5-7, Tank in 11L etc.)”
- Container type 55 gallon galvanized steel drum.
- Container identification number 221T-02-000087.

I observed the record *Solid Samples from Cell 11L of the 221-T Canyon Analytical Results for the Final Report*, was dated August 20, 2002.

I observed another series of emails titled *Final 222-S Laboratory Results for Cell 11L*, dated August 21, 2002, from Mark Ellefson to Brett Barnes where Mr. Ellefson mentioned data quality issues with the samples and gave a break-down of waste codes for the liquid and solid phases of the waste. For the liquid phase, Mr. Ellefson gives the following waste codes: D002, D006, D008, D010, and F001-F005, with silver, antimony, and thallium as underlying hazardous constituents. For the solid phase, Mr. Ellefson gave the waste codes D010, and F001-F005, along with chromium, lead, and thallium as underlying hazardous constituents.

In the record *Data Assessment Checklist*, for the T Plant 11L Tank Characterization, dated August 29, 2002, I observed the solid samples were held past proper sample hold times and the liquids sampled were not performed as specified by the *Sampling and Analysis Plan for Characterization of Cell 11-L of the 221-T Canyon Building (HNF-8620)* because the liquid layer was so shallow, a peristaltic pump was used to sample the liquid.

In the record *Box or Drum Container Inventory Sheet*, dated March 11, 2003 when the last waste was added to the container, I observed the following:

- Container identification number 221T-02-000087.
- Container type UN1A2.
- Waste stream description is “221T Canyon Tank Samples.”
- A container closure and TSD storage date of November 4, 2002.
- Full inventory showing the contents of the container:
  - Anti-corrosive pads.
  - Plastic liners.
  - Shredded absorbent.
  - Sample returns in glass and rubber test tubes.
  - 1 gallon plastic bucket with sample.

In the record *Solid Waste Information and Tracking System Container List Report*, dated December 2, 2009 I observed the following:

- Container identification number 0047674.
- Container type 85 gallon drum.
- Container contents listed as, “Overpack of 221T-02-000087. Tank 11L sample returns.”
- Waste weight is 10 lbs.

I observed the email record titled *0047674 Update* from Kevin Chase to Jessica Morales on June 11, 2018, states, “DSSI will not be able to treat this sample waste due to a problem with possible organics that arose from data quality issues during testing.” The possibility of submitting a regulatory variance for solidification and macro-encapsulation treatment is also mentioned.

**Note:** In the email record 0047674 *Update* the DSSI facility is mentioned. This acronym refers to Diversified Scientific Services Inc., which is a subsidiary of Perma-Fix located in Tennessee.

I observed in a June 14, 2018 email record titled 0047674 *Treat For Disposal* from Mitchell Marrott to Dave Richards, Mark Dagostino, David Andrews, Jill Shupe, Jessica Morales, and Jonathan Fullmer, LDR requirements at ERDF were discussed. The email supports the use of Bat Mat material to solidify and neutralize the waste in the fume hood at 2706-T. This precaution would manage any residual liquids in this container.

I observed email record titled 0047674 *R120* from Jessica Morales to Mr. Jeffrey and Scott Bisping on August 2, 2018 explains the rationale for removing the D002 waste code from container 0047674. At that point, no free liquids remained in the container so the decision was made to remove the D002 waste code and to scrutinize the heavy metal waste codes to see if any other waste codes should be removed.

I observed the 2T-18-04236 Package Tank 11-L Sample Returns (Drum 0047674) Work Plan section 1.0 states,

*Liquid and solid materials from the T Plant Canyon Cell 11-L were sampled in 2002 and sent to 222-S Laboratories for characterization. Once analysis was complete the left over sample materials were returned to T Plant, placed in a 55-gallon drum (PIN# 221T-02-000087) and eventually overpacked into an 85-gallon drum (PIN# 0047674). Drum 0047674 is currently stored in HS-032/BIN2 and the left over sample returns (approx. volume < 2 liters) require final disposition. Due to the low volumes and high ALARA concerns associated with direct treatment and disposal of the sample returns within 221T-02-000087, it was decided that 0047674 will be overpacked into a 110 gal drum and shipped to ERDF for disposal without additional treatment.*

This statement explains the current plan for managing this waste.

I observed in an August 30, 2018 email record titled 0047674 from Mark Dagostino to Jonathan Fullmer, it was agreed that the corrosive label on container 0047674 should be removed or blackened out due to the removal of the D002 waste code from container 0047674.

The undated memorandum by Mark Ellefson, *T3-05, Data Assessment and Designation From Sampling and Analysis of the Tank in Cell 11L of the 221-T Building* stated lab results were not of sufficient quality to make an LDR certification for this waste.

In a note to the record dated January 3, 2019 Jessica Morales states, "I have reviewed and concur with the designation document #T3-05 created by M.D. Ellefson."

In the record *Solid Waste Designation Worksheet*, dated January 29, 2019 I observed the following:

- Applicable waste codes for container 0047674 are:
  - F001.
  - F002.
  - F003.
  - F004.
  - F005.
  - D006.
  - D007.
  - D008.
  - D009.
  - D011.

- The applicable LDR codes shown in this worksheet are the same as the waste codes above, but under waste class “DW” is written rather than wastewater/non-wastewater.
- Container is regulated by Toxic Substances Control Act due to PCB within the container greater than 50 ppm.
- Underlying hazardous constituents in this waste include nickel, thallium, antimony, arsenic, and barium.
- Signature of designation specialist Jessica Morales dated January 29, 2019.

I observed four photographs of labeling on container 0047674 taken at different dates showing changes made over time. The last photograph taken on February 21, 2019 shows the waste codes F001-F005, D002, D006, D007, D008, D009, D010, and D011, with the major hazard of Toxic and a label which states the container holds waste which contains PCBs. I also observed a corrosive DOT shipping label which had yet to be removed as was discussed in an email record from Mark Dagostino to Jonathan Fullmer on August 30, 2018.

I observed Waste Planning Checklist 2T-18-04236, dated December 10, 2018, stated how container 0047674 will be prepared for shipment and disposal:

*Drum 0047674 (85 gal Overpack) will be packaged/prepared for shipment to ERDF. Drum 0047674 overpack and the inner 55 gal waste drum will be opened and void filled with tube sand. Once closed Drum 0047674 will be packaged inside a 110 gal drum for shipment to ERDF.*

The planned start date in this document is listed as “TBD.”

### **Container 0099957 Operating Records**

In record WMP-340, Section 3.10, under procedure TPLN-PRO-WM-51787 Rev. 6 Change 3, with an effective date of April 22, 2019, pages 4 and 5 of 17, in Appendix A, *Container Inventory Sheet*, I observed the following:

- Container identification number 0099957.
- Accumulation and TSD storage start date of August 27, 2019.
- Container type UN1A2 with a 55 gallon container size.
- Mixed Waste designation added on August 27, 2019.
- 214-T Basement container location.
- Method of waste generation states “Sodium Tank M-101.”
- Container Closure Information section including date closed on August 29, 2019, gross waste weight of 100 lbs., and signature by Field Work Supervisor Dave Richards dated August 29, 2019.
- Full inventory beginning on the first page and continuing on the second showing the contents of the container:
  - Paper Hoods, Towels, Wraps, and Filters
  - Long-Sleeve Blues and Plastic Aprons
  - Nitrile Gloves
  - Yellow Plastic Booties
  - Bat Mat
  - Duct Tape
  - Reinforced Bags
  - Dust Pan and Brush
  - Taped Wire Brush
  - Plastic Bucket with NaOH

In record WMP-340, Section 3.10, under procedure TPLN-PRO-WM-51787 Rev. 6 Change 3, with an effective date of April 22, 2019, page 15 of 17, in Appendix K, *T Plant Complex Waste Container Request (WCR)*, I observed the following:

- Container identification number 0099957.
- Generating activity list as, “Sodium Hydroxide Solid and Debris.”
- Waste type DW.
- Waste Container type listed as a 55 gallon metal drum with a 90 mil rigid liner and a 10 mil inner liner.
- Waste Codes WT02 and WSC2, “Washington State Only DW.”
- Hazard labeling listed as Corrosive and Toxic.
- 214T listed as location for container storage.
- Signature of Field Work Supervisor Dave Richards with August 27, 2019 date.
- WSC2 waste code/ Corrosive Hazard labeling added by Kindra Reed on September 25, 2019.

I observed the sample analytical letter and certificate of analysis sent from GEL Laboratories LLC., dated September 20, 2019.

I observed an October 15, 2019 email record titled *0099957 Waste Designation* from Richard Willson to Mark Dagostino, agreed this container will carry the D007 waste code. On this email copy, a hand written note was added stating, “labeling corrected per waste management representative (WMR) direction on October 15, 2019” with what appears to be Dave Richard’s signature.

In the record *Waste Designation Worksheet*, dated November 14, 2019 I observed the following:

- Applicable waste code for container 0099957 is D007 due to chromium based on lab results.
- D007 is listed under applicable LDR codes.
- “DW” is written in the LDR section rather than wastewater/non-wastewater.
- Comments state, “To be treated under §268.45. UHCs not applicable.”
- Signature of designation specialist Richard Willson dated November 14, 2019.

### **Spill log for the T Plant complex for the last 3 years (October 1, 2016 to October 1, 2019)**

The spill log as provided in response to the document request for this inspection:

- 12/29/16: ~1 gallon oil in Room 119.
- 12/29/16: ¼ cup transmission fluid in T Plant Ops Gallery.
- 1/24/17: 5-6 drops hydraulic fluid in T Plant tunnel.
- 9/18/19: ~1/2 cup oil.

### **Current Training Records for Jon Fullmer and Melvin Lakes**

I reviewed the training records for Jonathan Fullmer and Melvin Lakes against the requirements in the *T Plant Dangerous Waste Training Plan PRC-STD-TQ-40228, Revision 1, Change 6*, effective October 29, 2019. Mr. Fullmer’s training records appear to be complete as shown below:

**ECO Training Plan**

Course Number	Course Title	Date Taken	Frequency
000006	CHPRC General Employee Training	4/23/2019	Annual
03E048	T Plant Facility Emergency and Hazard Identification Checklist	7/25/2019	Annual
450700	T Plant Facility Orientation	8/4/2015	Initial
600100	Environmental Compliance Officer – Core	8/8/2018	Initial
600304	Waste Disposition – ECO	12/17/2018	Initial

**Note:** During the last Ecology inspection (Compliance Index #18.653) Kim Tarter displayed a memo indicating Mr. Fullmer had been appointed to ECO on August 13, 2018. According to WAC 173-303-330(1)(c)(ii), Mr. Fullmer had six months from his appointment date to complete Waste Disposition Training (600304). As shown above this training was taken during the proper six month period.

I reviewed the training records for Waste Management Representative/Treatment Storage and Disposal Representative Melvin Lakes. Mr. Lakes' trainings appear to be complete as shown below:

**WMR/TSDR Training Plan**

Course Number	Course Title	Date Taken	Frequency
000006	CHPRC General Employee Training	7/8/2019	Annual
450700	T Plant Facility Orientation	4/9/1999	Initial
03E048	T Plant Facility Emergency and Hazard Identification Checklist	11/11/2019	Annual
035100	Container Waste Management	3/17/2019	Annual
035010	Waste Designation	6/10/1999	Initial
035012	Waste Designation Qualification	2/25/2019	Annual
153020	Waste Fundamentals Qualification Card	8/9/2013	Initial
153021	Waste Management Representative Qualification Card	9/11/2013	Initial
153022	Treatment Storage and Disposal Representative Qualification Card	7/31/2018	Initial

**Waste volume during calendar years 2017 and 2018**

- 2017: Waste Volume: 2.13 cubic meters.
- 2018: Waste Volume: 3.98 cubic meters.

### **CERCLA Containers in 211-T Cage**

On April 9, 2020, in a document request I asked the following questions and on May 6, 2020 I received the following answers:

**Q:** Why were two CERCLA containers stored in the 211-T Cage, a dangerous waste management unit? This was told to us during the T-Plant inspection on 11/18/2019.

*A: The CERCLA waste is stored in the 211-T Cage consistent with the CERCLA definition of "on-site" at 40 CFR 300.5, which defines on-site as "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." The proximity of the 211-T Cage to the location where the K Basin sludge is stored meets this definition and is suitable for temporary management of wastes generated in support of the CERCLA action.*

*The use of areas external to the T Plant CERCLA cells for waste storage is in DOE/RL-2011-15, Rev 1. Section 5.2, Waste Management, as modified by TPA-CN-0801, states the following:*

*"Waste generated from work associated with storage of untreated sludge will be stored in established CERCLA waste management areas."*

*The intent of this provision is that activities associated with the storage of untreated sludge could result in generation of waste that can be stored outside of T Plant cells, 3L, 8R, 9L, 10L, 13L, 14R, and 15L, in established CERCLA waste management areas. The 211-T Cage is clearly marked as a CERCLA waste management Area.*

*The 211-T cage does not store dangerous waste at T Plant because it was determined by Ecology to be unauthorized for dangerous waste storage under WAC 173-303 (16-NWP-013). Because the 211-T Cage is unauthorized for dangerous waste storage, it can be used for temporary storage of wastes generated in support of sludge management. There is no issue with co-mingling of CERCLA onsite and TSD-managed offsite wastes.*

**Q:** Where were the two CERCLA containers generated from? Please provide documentation, such as the action memorandum/ROD, used to store these containers within the 211-T Cage. Specifically, Ecology is looking for the approval to store CERCLA waste in a DWMU at T-Plant.

*A: The generation of these CERCLA wastes was from activities associated with receipt and storage of the K Basins sludge at T Plant, is consistent with DOE/RL-2011-15, Rev 1, Section 5.2, which addresses storage of CERCLA wastes generated from managing the sludge. There is no other specific "approval" needed to store this CERCLA waste on-site within the meaning and intent of 40 CFR 300.5.*

**Q:** Are any other dangerous waste management units at the T-Plant Complex approved to store CERCLA waste?

*A: The CERCLA waste is not stored at any active dangerous waste management areas at T Plant. The 211-T Cage is unauthorized for use as a storage area until the T Plant Complex RCRA Permit is issued. All CERCLA wastes generated in support of sludge storage are managed on-site in established CERCLA waste management areas consistent with the intent of 40 CFR 300.5 and DOE/RL-2011-15, which allow for management of wastes collected from work at a CERCLA action to be stored in suitable proximity to the work.*

## Compliance Problems

The Dangerous Waste inspection on November 18, 2019, found the following compliance problems.

Each problem is covered in three parts:

- (1) **Citation from the regulations**
- (2) **Specific observations** from the inspection that highlight the problem
- (3) **Required actions** needed to fix the problem and achieve compliance

The problems listed below must be corrected to comply with Washington Dangerous Waste Regulations (Chapter 173-303 WAC), or other environmental laws or regulations. Complete the required actions listed below and respond to Ecology at the following address within the times specified below. Include all supporting documentation such as photographs, records, and statements explaining the actions taken and dates completed to return to compliance.

Attention: Adam Shaffer  
Washington Department of Ecology  
Nuclear Waste Program  
3100 Port of Benton Blvd  
Richland, WA 99354

You may request an extension of the deadlines to achieve compliance. Make the request in writing, including the reasons an extension is necessary and proposed date(s) for completion, and send it to Adam Shaffer before the date specified below. Ecology will provide a written approval or denial of your request.

**If you have any questions about information in this Compliance Report, please call:  
Adam Shaffer at (509) 212-1516**

This does not relieve you of your continuing responsibility to comply with the regulations at all times.

### 1) Citation from the Regulations

**WAC 173-303-400(3), as referenced by the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion Revision 8C - Condition I.A Effect of Permit.**

**WAC 173-303-380(1) (o) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under 40 C.F.R. 268.7;**

**WAC 173-303-380(1) (k) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under 40 C.F.R. 268.7;**

**WAC 173-303-140(2)(a) Land disposal restrictions for wastes designated in accordance with WAC 173-303-070 (3)(a)(i), (ii), and (iii) are the restrictions set forth by the Environmental Protection Agency in 40 C.F.R. Part 268 which are incorporated by reference into this regulation, as modified in (c) through (f) of this subsection, and the restrictions set forth in subsections (3) through (7) of this section. The words "regional administrator" (in 40 C.F.R.) will mean the "department," except for 40 C.F.R. Parts 268.5 and 268.6; 268 Subpart B; 268.42(b) and 268.44 (a) through (g). The authority for implementing these excluded C.F.R. sections remains with the U.S. Environmental Protection Agency. The word "EPA" (in 40 C.F.R.) means "Ecology" at 40 C.F.R. 268.44(m) and 268.45(a). The exemption and exception provisions of subsections (3) through (7) of this section are not applicable to the federal land disposal restrictions. Where the federal regulations that have been incorporated by reference refer to 40 C.F.R. 260.11, data provided under this section must instead meet the requirements of WAC 173-303-110.**

**§268.7. Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.**

**(a) *Requirements for generators:* (1) A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in §268.40, 268.45, or §268.49. This determination can be made concurrently with the hazardous waste determination required in §262.11 of this chapter, in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, (incorporated by reference, see §260.11 of this chapter), depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in §268.40, and are described in detail in §268.42, Table 1. These wastes, and soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of §268.9 of this part in addition to any applicable requirements in this section.**

## Observations

I reviewed the file for container number 0099957. I observed a large amount of historical background documents along with approximately 13 pages of correspondence. The most current waste designation sheet for this container had a D007 LDR waste code without an LDR description. Upon further review of the operating record for this container, I observed waste analysis data which supported the waste code D007 designation and records documenting this waste is debris which meets the alternative treatment standards found in 40 CFR 268.45(b). However, during my review of the operating records for container 0099957, I did not find any indication this waste had been or would be treated to meet these alternative standards. I also did not find a statement declaring that the waste is subject to land disposal restrictions and the applicable wastewater or non-wastewater category.

## Action Required

LDR restrictions are determined at the point of generation and the information required in an LDR notification (except for manifest number) are required records for waste streams stored in on-site TSDs. Within 60 days of receipt of this report, USDOE-RL and CHPRC must submit to Ecology the information required and as applicable in WAC 173-303-380(1)(o) & (k) for container 0099957.

## Regulatory Concerns

1. During the inspection on November 18, 2019, Mr. Richards stated two CERCLA containers were stored in the 211-T Cage unauthorized for the storage of dangerous/mixed waste. On May 6, 2020, Ecology received the following statement from DOE/CHPRC in response to a document request:

*“The CERCLA waste is stored in the 211-T Cage consistent with the CERCLA definition of “on-site” at 40 CFR 300.5, which defines on-site as “the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action.” The proximity of the 211-T Cage to the location where the K Basin sludge is stored meets this definition and is suitable for temporary management of wastes generated in support of the CERCLA action.”*

Ecology letter 16-NWP-013, explains 211-T Cage is not approved for waste storage and is unfit for use. The K-Basin sludge ROD amendment, which allowed for transport of the sludge, does not extend to the storage of CERCLA wastes at other units at T-Plant. An off-site determination would need to be performed to ensure this unit is acceptable under the off-site rule.

The issue of what is “on-site” for CERCLA actions and thus what is subject to the CERCLA permit exemption has been addressed at Hanford. See the document *U.S. Department of Energy, Hanford Nuclear Reservation, “Determination Regarding CERCLA and RCRA Jurisdictional Relationship,”* Docket Number RCRA-10-99-0106. This is an Administrative Law Judge determination dated February 9, 2000. A key passage from this determination addresses the DOE/CHPRC response:

*“EPA also maintains that the Section 121 permit exemption does not apply because there has been no showing that storage of the drums in the 200 East Pipe Yard was part of any removal or remedial action carried out in compliance with that section. To so qualify, an action must be authorized under the remedial action provisions of the Section, a process requiring a determination that it is necessary to be carried out under CERCLA Section 104 or secured under section 106, the abatement actions provision, and also in concert with Section 120, the federal facilities section.”*

This passage makes it clear that, in addition to the requirement that units be “suitable areas in very close proximity to the contamination,” two additional conditions must be satisfied for a particular waste area to be “on-site” and thus eligible under CERCLA 121(e): The waste area must be authorized under the CERCLA remedial action provisions; and there must be a determination that waste management in the unit is necessary to be carried out under CERCLA.

Although the 211-T Cage appears to be in close proximity to the T-Plant canyon cells, there does not appear to be any documentation that use of the 211-T Cage is part of the K-Basin Sludge CERCLA decisions, or that use of the 211-T Cage is necessary for implementation of the remedial action.

The *Remedial Design/Remedial Action Work Plan for K Basins Interim Remedial Action: Treatment and Packaging of K Basins Sludge*, DOE/RL-2011-15, Revision 1 Section 5.2 states:

*“Waste generated from work associated with storage of untreated sludge may be staged in T Plant cells 3L, 8R, 9L, 10L, 13L, 14R, and 15L. After initial accumulation of up to 55 gallons, such waste will be stored in established CERCLA waste management areas.”*

As discussed above, the 211-T Cage is not an “established CERCLA waste management area” and is thus not eligible to receive wastes associated with the K-Basins Interim Remedial Action. Ecology also notes that EPA has advised the department that waste management units considered on-site are specific to individual CERCLA actions—in this sense, the concept of an “established CERCLA waste management unit”, at least those that are not specific to any particular CERCLA action, is inconsistent with the off-site rule and the analysis presented above.

2. During the inspection, Mr. Paul Garello said he had been unable to locate the point of contact for the facility spill log. Although the spill log was provided subsequently in response to a document request, in accordance with §I.E.15.d of the 8C site-wide permit, any release or noncompliance not required to be reported to Ecology immediately must be entered into the TSD Operating Record. As per WAC 173-303-380(3) facility operating records must be made available for inspection during site visits.

*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.*

**Attachment 1  
 T Plant Inspection Photo Log  
 Index No. 19.688**

<b>T Plant Compliance Inspection (WA7890008967)</b>	
Inspection Date: November 18, 2019	
Photographer: Phillip Buser	Support: Kathy Conaway

#	Title/Description	Photograph
1	<p>221-T Operations Gallery Storage</p> <p>A flammable cabinet locked with a padlock. Next to the storage cabinet there was another smaller steel cabinet that only contained an empty bucket and spill supplies.</p>	 <p align="center"><b>DSC02618</b></p>
2	<p>221-T Operations Gallery Storage</p> <p>Mr. Richards unlocked the storage cabinet and showed us there were no waste containers present. He also showed us some sample container over-packs which are stored in the cabinet ready for future use.</p>	 <p align="center"><b>DSC02619</b></p>

#	Title/Description	Photograph
3	<p>221-T Bone Yard Storage Area</p> <p>This storage area contains low-level waste roll-off boxes, three empty low-level waste containers which no longer meet Part A requirements, and a ten-drum cask with TRU/PCB waste inside (shown here in the photograph).</p>	 <p style="text-align: right; color: orange;">11 18 2019</p> <p style="text-align: center;"><b>DSC02620</b></p>
4	<p>221-T Bone Yard Storage Area</p> <p>This storage area contains low-level waste roll-off boxes, three empty low-level waste containers which no longer meet Part A requirements (shown here in the photograph), and a ten-drum cask with TRU/PCB waste inside (see last photograph).</p>	 <p style="text-align: right; color: orange;">11 18 2019</p> <p style="text-align: center;"><b>DSC02621</b></p>
5	<p>277-T Building</p> <p>This building is a DWMU which was empty during the inspection. The outside concrete apron is also permitted. This photograph was taken to document no waste or other materials were on the apron outside the building.</p>	 <p style="text-align: right; color: orange;">11 18 2019</p> <p style="text-align: center;"><b>DSC02622</b></p>

#	Title/Description	Photograph
6	<p>214-T Building Back Door</p> <p>This is the main waste building for the facility. This photograph was taken to document the signage on the back door.</p>	 <p style="text-align: center;">DSC02623</p>
7	<p>214-T Building Front Door</p> <p>This is the main waste building for the facility. This photograph was taken to document the signage on the door.</p>	 <p style="text-align: center;">DSC02624</p>
8	<p>214-T Building Container 0099957</p> <p>This photograph was taken to document container labeling and condition. Container 0099957 was one of three containers chosen for operating record review.</p>	 <p style="text-align: center;">DSC02625</p>

#	Title/Description	Photograph
9	<p>214-T Building</p> <p>Container 221T-19-000022, with three other containers.</p> <p>This photograph was taken to document container labeling and condition. Container 221T-19-000022 was one of three containers chosen for operating record review. This container is shown on the left.</p>	 <p style="text-align: center;"><b>DSC02626</b></p>
10	<p>214-T Building Aerosol Can and Universal Waste Lamp Closet</p> <p>This photograph shows the flammable cabinet used to hold empty aerosol cans and two boxes of Universal Waste lamps. More boxes of lamps in similar condition were in this closet beyond the frame of the photograph.</p>	 <p style="text-align: center;"><b>DSC02627</b></p>
11	<p>A duplicate photo taken in error due to technical difficulties with the camera. To view the actual image, see photograph #17 with identification number DSC02634.</p>	 <p style="text-align: center;"><b>DSC02628</b></p>

#	Title/Description	Photograph
12	A duplicate photo taken in error due to technical difficulties with the camera. To view the actual image, see photograph #17 with identification number DSC02634.	 <p style="text-align: center;"><b>DSC02629</b></p>
13	A duplicate photo taken in error due to technical difficulties with the camera. To view the actual image, see photograph #17 with identification number DSC02634.	 <p style="text-align: center;"><b>DSC02630</b></p>
14	A duplicate photo taken in error due to technical difficulties with the camera. To view the actual image, see photograph #17 with identification number DSC02634.	 <p style="text-align: center;"><b>DSC02631</b></p>

#	Title/Description	Photograph
15	<p>A duplicate photo taken in error due to technical difficulties with the camera. To view the actual image, see photograph #17 with identification number DSC02634.</p>	 <p style="text-align: center;"><b>DSC02632</b></p>
16	<p>A duplicate photo taken in error due to technical difficulties with the camera. To view the actual image, see photograph #17 with identification number DSC02634.</p>	 <p style="text-align: center;"><b>DSC02633</b></p>
17	<p>The HS-030 Storage Module in the 2706-T Yard</p> <p>Mixed waste is stored in this module within Cells 2 and 3. Mr. Richards showed us there was nothing stored in Cell 1 of this module because the secondary containment liner had been breached years earlier. Cell 1 also bears a sign which states, “No Waste Allowed.”</p>	 <p style="text-align: center;"><b>DSC02634</b></p>

#	Title/Description	Photograph
18	<p>The HS-030 Storage Module Cell 3</p> <p>Cell 3 of the HS-030 module with four drums of transuranic mixed waste sent to the facility from Central Waste Complex for venting.</p>	 <p>DSC02635</p>
19	<p>The HS-032 Storage Module in the 2706-T Yard</p> <p>Mixed waste is stored in this module, and this is the location of the central accumulation area shown on the left in Cell 3.</p>	 <p>DSC02636</p>
20	<p>2706-T Asphalt Pad</p> <p>This is the only container at this location. It is a custom-built steel legacy container with an old glovebox inside.</p>	 <p>DSC02637</p>

*This page intentionally left blank*