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March 10, 2020

20-NWP-053

By certified mail

Brian T. Vance, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: H5-20
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 September 17, 2019, at the Hexone Storage and Treatment Facility, RCRA Site ID: WA7890008967, Nuclear Waste Program (NWP) Compliance Index No.: 19.680

Dear Brian T. Vance and Ty Blackford:

Thank you for your staff's time during the Hexone Storage and Treatment Facility inspection on September 17, 2019. The Department of Ecology's (Ecology) compliance report of this inspection is enclosed. The report cites three areas of non-compliance and one concern.

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) 372-7949 or jared.mathey@ecy.wa.gov.

Sincerely,

Jared Mathey
Dangerous Waste Compliance Inspector
Nuclear Waste Program

jm/tla

Enclosure

cc: See page 2

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Brian T. Vance and Ty Blackford
March 10, 2020
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20-NWP-053
Hexone Storage and Treatment Facility
RCRA Site ID: WA7890008967
NWP Compliance Index No.: 19.680
Inspection Date: September 17, 2019

cc electronic w/enc:

Dave Bartus, EPA
Dave Einan, EPA
Cheryl Williams, EPA
Duane Carter, USDOE-RL
Al Farabee, USDOE-RL
Tony McKarns, USDOE-RL
Ingrid Siddoway, USDOE-RL
Allison Wright, USDOE-RL
Darin Correll, CHPRC
Linda Petersen, CHPRC
Daniel Turlington, CHPRC
Jon Perry, MSA
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Deb Alexander, Ecology
Kathy Conaway, Ecology
Tabitha Liebrecht, Ecology
Jared Mathey, Ecology
Nina Menard, Ecology
John Price, Ecology
Stephanie Schleif, Ecology
Adam Shaffer, Ecology
Alex Smith, Ecology
Kim Welsh, Ecology
Environmental Portal
Hanford Facility Operating Record
CHPRC Correspondence Control
MSA Correspondence Control
USDOE-RL Correspondence Control
USDOE-ORP Correspondence Control
USEPA Region 10 Hanford Field Office
Correspondence Control

cc w/enc:

Ben Harp, USDOE-ORP
Susan Leckband, HAB
Administrative Record
NWP Central File
NWP Compliance Index File: 19.680

cc w/o enc:

Mason Murphy, CTUIR
Jack Bell, NPT
Laurene Contreras, YN

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

SITE: Hexone Storage and Treatment Facility
RCRA Site ID: WA7890008967
Inspection Date: September 17, 2019
Site Contacts: Mitch Marrott, 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#: 54171, 56221, and 924110
Current Site Status: Treatment, Storage, and Disposal Facility / Large Quantity Generator

Ecology

Lead Contact: Jared Mathey

Phone: (509) 372-7949

Other Representatives: Adam Shaffer (Compliance Support), Tabitha Liebrecht (Project Support), Kim Welsch (Project Support), and Deb Alexander (Permit Coordinator)

Report Date: March 10, 2020

Index #: 19.680

Report By: Jared Mathey


(Signed)

3/10/2020
(Date)

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 USDOE is the owner and operator of the Hexone Storage and Treatment Facility (Hexone Facility) and oversees waste management and cleanup activities ongoing at the Hanford Site. CHPRC is contracted by the USDOE to co-operate the Hexone Facility.

Facility Background

In 2018, the United States Department of Energy Hanford Site reported as a Large Quantity Generator of hazardous waste on their Dangerous Waste Annual Report.

According to the *Hexone Facility Dangerous Waste Permit Application Part A Form*, Revision 7, dated October 1, 2008, (Part A Form), the facility is located in the 200 West Area of the Hanford Site. The Hexone Facility is described as follows:

- Below grade carbon steel tank, 276-S-141 – 24,000 gallons tank storage capacity (Approximately 20,000 gallons of mixed waste were stored and treated annually).
- Below grade carbon steel tank, 276-S-142 – 24,000 gallons tank storage capacity (Approximately 16,000 gallons of mixed waste were stored and treated annually).
- A distillation system – 3,000 gallon treatment capacity per day.
- Railroad tank cars – 40,000 gallon container storage capacity.

The Hexone Facility stored reagent-grade methyl isobutyl ketone (Hexone) for the Reduction and Oxidation (REDOX) Plant from 1951 through 1967. After 1967, the Hexone Facility received and stored liquid mixed waste from the REDOX Plant and possibly the Hot Semi-works Plant. Activities associated with the 276-S-141 and 276-S-142 tanks can be found in the Part A Form, which included storage of radioactively contaminated hexone from a one-time campaign to separate americium, curium, and promethium from reactor blanket fuel.

The distillation campaign took place from July to December 1990 and included pumping mixed waste from the 276-S-141 and 276-S-142 tanks through the distillation system to decrease the radioactivity of the waste. The mixed waste was sent to railroad tank cars located within the Hexone Facility, where it was stored until the mixed waste was transferred to an offsite incinerator in June of 1992. The railroad cars were decontaminated, sampled, and released for other uses on the Hanford site. Three distillation vessels associated with the Hexone Facility that contained process residue were sampled and sent for management as mixed waste at the Central Waste Complex.

According to the Part A Form, currently the 276-S-141 and 276-S-142 tanks each contain from 5 to 30 gallons of mixed waste (93% NPH and 7% hexone) and up to 250 gallons of phosphate tar. In 2002, the two tanks were stabilized by filling them with grout. The purge system was then deactivated. According to the Part A Form, dangerous waste codes associated with the Hexone Facility include F003 and D001 due to the hexone stored in the 276-S-141 and 276-S-142 tanks. Additionally, it appears the dangerous waste was mistakenly assigned a state-only toxic dangerous waste code, WT02, as the waste was previously designated with F003 and D001 federal waste codes. Other dangerous waste codes associated with the Hexone Facility can be found on the Part A Form.

Compliance Background

The Department of Ecology's Silver Memo, *Close Out Form for Environmental Compliance Issues Identified in DOE/RL Letter 95-PCA-342*, dated July 6, 1995 (Close Out Form #16.6.2:40.16) established that the Hexone tanks including the cover gas system and the liquid level monitors must be inspected weekly.

On November 6, 1998, USDOE informed Ecology that the Hexone Facility would be managed under the *REDOX facility Surveillance and Maintenance Plan*, DOE/RL-98-19, as referenced in a 1998 draft version of that document transmitted to Ecology (Accession Number D199046833) which stated:

Certain Treatment, Storage, and Disposal (TSD) standards of Washington Administrative Code (WAC) 173-303 apply to the Hexone Storage Tanks at REDOX. These tanks have been deemed unfit for use and are therefore subject to the requirements of 40 Code of Federal Regulations (CFR) 265.196 as invoked by WAC 173-303-400. In addition, WAC 173-303-400 invokes standards of WAC 173-303-280 through -440, including provisions for security, personnel training, general inspections, contingency planning and emergency preparedness, and facility recordkeeping and reporting. Particularly relevant with regards to the REDOX Surveillance and Maintenance (S&M) activities are the inspection requirements of WAC 173-303-320. As agreed to with the regulators, these requirements are met by performing a weekly inspection to ensure proper operation of the associated nitrogen cover system. Additionally, weekly inspection of the liquid level monitors is performed. Any problems identified during inspections are remedied. Inspection records are kept in the Hanford Facility Operating Record. (*Close Out Form for Environmental Compliance Issues Identified in DOE/RL Letter 95-PCA-342*, dated July 6, 1995; Tracking Number 16.6.2: 40.16, approved January 13, 1997 [DOE-RL 1995].)

It appears that the draft version was not finalized, and Ecology has not observed a final version of DOE/RL-98-19 that included surveillance and maintenance of the Hexone Facility. During an Ecology inspection in 2000 (Compliance Index #00.178) the inspector observed the standards agreed upon in Close Out Form #16.6.2:40.16 were not being performed. The agreement was subsequently rescinded as a result of the inspection.

The Hexone Storage and Treatment Facility Tanks 276-S-141 and 276-S-142 are also identified in the Tri-Party Agreement (TPA) Milestone M-037-10, which was created in principal as part of the *Tentative Agreement on Hanford Federal Facility Agreement and Consent Order Change Forms Implementing Changes to the Central Plateau Cleanup*, dated March 31, 2010, and approved by both parties on October 26, 2010. M-037-10 requires completion of unit-specific closure requirements according to the dangerous waste closure plan by September 30, 2020.

Sampling and analysis was performed to support the interim stabilization of the tanks which resulted from dangerous waste violations found in the Ecology inspection in 2000 (Compliance Index #00.178, see below). The unapproved, draft closure plan, *Hexone Storage and Treatment Facility Closure Plan*, DOE/RL-2009-112, Revision 0, was published in May of 2010 and is based on that analysis. The draft closure plan calls for excavation and removal of the tanks, visual inspection and sampling of soil beneath the tanks and removal of soil should dangerous waste contamination be found. The closure schedule in the draft plan estimates this process will take 26 months including documentation, design, and procurement. By that schedule, if it were

approved in order to meet M-037-10 deadline, closure activity would have had to begin sometime in fiscal year 2018. The draft schedule in the closure plan does not include any time for the treatment of waste.

Ecology Inspection During Calendar Year 2000 (Compliance Index #00.178)

On April 25, 2000 and May 23, 2000, Ecology conducted a dangerous waste compliance inspection of the Hexone Facility. The Ecology inspection found that the facility was not being inspected weekly or maintained as was required by Close Out Form #16.6.2:40.16. As a result of the inspection, Ecology rescinded the enforcement discretion described as follows, in letter *Re: Notice of Correction for Stabilization of the Hexone Storage and Treatment Facility USDOE DOCKET NUMBER 00NWPKM005*, dated May 26, 2000:

Ecology's inspection revealed that the Hexone Tank System has not been removed from service as required by 40 CFR 265.196, and has not been managed in accordance with formal agreements made with Ecology as documented in Close Out Form #16.6.2:40.16, signed by USDOE on December 6, 1996...Ecology herein rescinds its agreement with the provisions of Close Out Form #16.6.2:40.16. In its place, Ecology will require the Hexone Facility be managed per the requirements set forth in this letter.

The Ecology letter provided management requirements, under the "corrective measures" section, in a series of three bullet points. The first two measures were for developing a schedule for removing, deactivating or stabilizing the tanks. The third measure specified an inspection schedule requiring the following: "USDOE and Bechtel Hanford Inc. must implement monthly inspections of the above-ground portions of the Hexone Facility to include inspection of all nitrogen purge feed lines to the Hexone Facility tanks and all exhaust system ventilation lines from the Hexone Facility tanks sufficient to ensure they are not leaking..." There was one violation cited:

1. WAC 173-303-400(3) and by reference 40 CFR Subpart J §265.196, "Response to leaks or spills and disposition of leaking or unfit-for-use tank systems."

This violation was closed out in a May 21, 2002, letter, *Re: Completion of Compliance Actions at the Hexone Storage and Treatment Facility*, which concurred with USDOE's intention to adopt an annual inspection schedule for the Hexone Facility. That intention was communicated in a March 22, 2002, letter number 02-RCA-0253, *Change in Hexone Storage and Treatment Facility Inspection Frequency Following Stabilization Completion*. In this letter USDOE-RL asserted,

This letter is to inform the State of Washington Department of Ecology of a change in the Hexone Storage and Treatment Facility inspection frequency. The current daily and monthly inspections will shift to an annual inspection following the Hexone Storage and Treatment Facility stabilization. The Hexone Storage and Treatment Facility inspection will be performed as part of the annual 202-S (REDOX) Facility inspection. The Hexone Storage and Treatment Facility will be visually inspected for surface subsidence, weed control, and proper posting.

As noted above, the required daily and monthly inspections were focused on a nitrogen purge system that had already been removed and USDOE expressed future inspections would focus on surveillance and maintenance activities. On March 28, 2002 (post grouting), there was an email

exchange between Mr. Bob Wilson (Ecology) and Mr. James Golden (Bechtel Hanford Inc) in which Mr. Golden affirmed the agreed basis for inspection stating, "here's the basis for changing the inspection frequency at Hexone:

The Hexone Tanks are unfit for use, and will not be upgraded to meet the regulatory requirements for active tanks. As such, the tanks are subject to the requirements of 40 Code of Federal Regulations (CFR) 265.196. The following actions have been taken to ensure protection of human health and the environment: 1) use of the tanks has ceased; 2) waste removal has occurred (only a hard heel remains) to a degree that prevents further release to the environment; 3) visible releases are not present; 4) the tanks are completely filled with grout (stabilized); 5) the regulatory authorities have been informed of any known releases associated with the units and the units are scheduled for closure (pursuant to the Tri-Party Agreement); and 6) any problems identified during the annual inspections will be remedied.

On March 22, 2002, Joel Hebdon from USDOE-RL sent Letter 02-RCA-0253 to Ecology requesting a change in the Hexone Storage and Treatment Facility inspection frequency to annual as a part of the 202-S (REDOX) Facility inspection.

On May 21, 2002, Bob Wilson from Ecology sent a letter to USDOE-RL and Bechtel Hanford Inc. granting the requested annual inspection schedule for the Hexone Storage and Treatment Facility.

Compliance Index #15.539

On December 1, 2015, Ecology conducted a Non-financial Record Review (NRR) inspection of the Hexone Facility. The Ecology compliance report documented two violations:

1. WAC 173-303-320(2): USDOE and CHPRC failed to document the time of the inspection on inspection logs.
2. WAC 173-303-380(1): USDOE and CHPRC failed to retain dangerous waste inspection logs in the operating record.

The two violations were resolved and the facility returned to compliance.

Compliance Index #16.555

On March 14, 2016, Ecology conducted a NRR inspection of the Hexone Facility. The Ecology Compliance Report documented one violation:

1. WAC 173-303-320(2) - Failure to document the time of the inspection on logs.

The one area of non-compliance was resolved and the facility returned to compliance.

Compliance Index #17.617

On September 29, 2017, Ecology conducted a NRR inspection of the Hexone Storage and Treatment Facility. The Ecology Compliance Report documented no areas of non-compliance.

Compliance Index #18.650

On September 26, 2018, Ecology conducted a NRR inspection of the Hexone Storage and Treatment Facility. The Ecology Compliance Report documented no areas of non-compliance.

Inspection Summary

At approximately 8:53 a.m. on September 17, 2019, Adam Shaffer, Deb Alexander, Tabitha Liebrecht, Kim Welsch, and I (Jared Mathey) of Ecology arrived at Building 4707 near the Fast Flux Test Facility. The following USDOE-RL and CHPRC personnel were in attendance for this inspection:

- Daniel Turlington – Environmental Compliance Officer
- Allison Wright, USDOE-RL – Inspection Lead
- Ingrid Siddoway, USDOE-RL – RL Projects
- Mitch Marrott, CHPRC – Inspection Coordinator
- Suzanne Collingham, CHPRC - Radiation Control Technician
- Dale Harder, CHPRC - Field Work Supervisor
- Darin Corriell, CHPRC - Surveillance and Maintenance Operations Director
- Sheri Niebel, CHPRC - Records Specialist
- Sophia Guillen, CHPRC – Environmental Intern
- Ryan Fisher, CHPRC – Environmental Compliance Officer
- Elis Eberlein, CHPRC – Environmental Scientist
- Bob Cathel, CHPRC – Environmental Project Manager
- William Doremus, CHPRC – Shift Operations Manager
- Dale Harrison, CHPRC – Operations Manager

Mr. Doremus gave a safety briefing explaining required Personal Protective Equipment, hazards for walking around the REDOX Plant, alarm response, and location of spill equipment. He explained there was work going on inside of REDOX today. We went through the requested records to verify if there was a need for any additional records. I asked about the locations and container numbers for holding any ancillary equipment from the Hexone Storage and Treatment Facility. Mr. Marrott said that the Solid Waste Operations Complex staff would have that information for me later during the records review of the inspection. He explained the Hexone Tank ancillary equipment was already disposed and not currently being stored at the Central Waste Complex. I said that I would not need to go to the Central Waste Complex for this inspection. We left Building 4707 for the REDOX Plant.

At 8:53 a.m., we met on the north side of the REDOX Plant near the railcar portion of the Hexone Storage and Treatment Facility. Mr. Doremus explained where the nearest take cover location was located. I walked to the rail line and observed it was covered with fill material to approximately 500 feet from the REDOX Plant north fence line. Mr. Turlington said that not all areas of fill were associated with the Hexone Storage and Treatment Facility. He explained there were some releases from a uranyl nitrate line between REDOX and U Plant that were outside of the Hexone Storage and Treatment Facility rail line area.

We walked along the east side of the rail line toward REDOX. On top of the covered rail line, near the fence line of REDOX, I observed a large open disposal container that appeared to be storing old wood pallets and other types of solid waste.



DSC02584 – Hexone Storage and Treatment Facility rail line covered with fill material



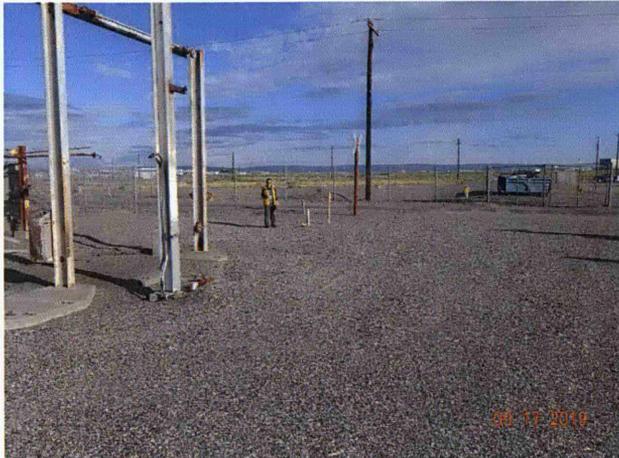
DSC02585 – Hexone Storage and Treatment Facility rail line covered with fill material

We entered the north REDOX Plant fence line where I observed a fenced in area that contained the underground Tanks 276-S-141 and 276-A-142 for the Hexone Storage and Treatment Facility. I observed signs stating “Danger – Unauthorized Personnel Keep Out,” “Danger – No Smoking,” and “Hazardous Waste – Radioactive – Flammable” on the south gate entrance to the Hexone Storage and Treatment Facility. The gate was locked. I did not observe a label or marking indicating a toxic hazard on aboveground postings or at the entrance to the active portion to the Hexone Storage and Treatment Facility. On the west, north, and east fence lines, I observed signs stating “Danger Hazardous Waste Storage Area,” “Danger – Unauthorized Personnel Keep Out,” and “Danger – No Smoking.”

Note: On October 23, 2019, Ecology received a photograph of the entrance to the active portion to the Hexone Storage and Treatment Facility. The photograph showed that the tank system was marked with an indication of the toxic hazard.



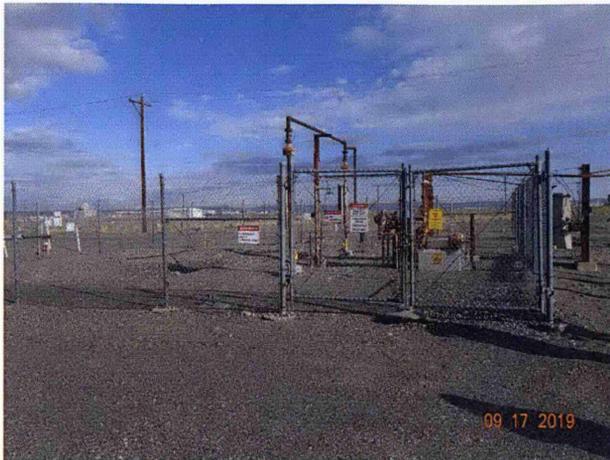
Entrance to active portion of the Hexone Storage and Treatment Facility



DSC02586 – Hexone Storage and Treatment Facility rail line covered with fill material (looking north)



DSC02587 – East side of the Hexone Storage and Treatment Facility



DSC02588 – South side of the Hexone Storage and Treatment Facility and gated entrance



DSC02589 – West side of the Hexone Storage and Treatment Facility



DSC02590 – North side of the Hexone Storage and Treatment Facility



DSC02591 – Capped off access to Tanks 276-S-141 and 276-A-142



DSC02592 – Ancillary equipment for Tanks 276-S-141 and 276-A-142

I said I understood that Tanks 276-S-141 and 276-A-142 had most of the waste removed and were grouted. I said WAC 173-303-340 allows for a facility to demonstrate to Ecology that none of the hazards posed by waste handled at the facility could require a particular kind of emergency equipment. I said I was not aware that Ecology approved a reduced set of emergency equipment for this facility. Mr. Turlington, Mr. Corriell, and I briefly discussed various types of emergency equipment, but I said we would cover this in detail during the records review of the inspection. We left the Hexone Storage and Treatment facility for Building 278WA at the Central Waste Complex for the records review portion of the inspection.

Records Review

At 9:49 a.m., we met in 278WA. I asked if I could see the most recent inspection record for the Hexone Storage and Treatment Facility. Mr. Marrott opened up procedure CPSM-PRO-EP-53098, Revision 0, Change 5, dated November 12, 2018 showing an inspection of the Hexone Storage and Treatment Facility that occurred on June 11, 2019. I observed the following question on the inspection record.

Signs reading “Danger – Unauthorized Personnel Keep Out” or equivalent language are posted and legible on locked entrance gate.

I said past Ecology inspectors wrote concerns about the inspection of security signs required under WAC 173-303-310, that the signs should be from every approach and not just on the gate. I observed the following requirement on the inspection record for the Hexone Storage and Treatment Facility.

The major risk marking (Hazardous Waste/Radioactive/Flammable) is present and legible on each side of the perimeter fence.

I said major risks markings indicated on the inspection sheet are now called hazards of the waste in accordance with the new dangerous waste regulations. I explained this question asked if these signs were present on each side of the fence, when the requirement in the dangerous waste regulations is for hazards for underground tanks to be placed on aboveground postings above

each underground tank system or at each entrance to the active portion. I explained these changes should be made to the inspection record. Mr. Turlington said they are in the process of updating this inspection procedure to fix these problems and that it would be completed soon.

I asked if I could see the most recent training plan for the Hexone Storage and Treatment Facility. Mr. Marrott provided me with a hard copy of PRC-STD-TQ-40235, Revision 2, Change 1, *Central Plateau Risk Management Dangerous Waste Training Plan*, dated November 1, 2018. I said I would be requesting training records for Deborah Older, Nuclear Chemical Operator and Brian Cordray, Field Work Supervisor who I observed both signed the most recent inspection of the Hexone Storage and Treatment Facility on June 11, 2019.

I asked if there was a Building Emergency Plan for the Hexone Storage and Treatment Facility. Mr. Marrott provided a hard copy of HNF-IP-0263-CP S+M, Revision 19, *Building Emergency Plan for Surveillance and Maintenance*, dated April 25, 2019.

I explained that all facilities must be equipped with the emergency equipment listed in WAC 173-303-340, unless it can be demonstrated to Ecology that none of the hazards posed by waste handled at the facility could require a particular kind of equipment. I said as I previously discussed, to my knowledge that Ecology has never approved a reduced set of emergency equipment for the Hexone Storage and Treatment Facility. I explained I wanted to go through each of these pieces of equipment to see what is available and what was not needed due to most of the waste being removed and the tanks grouted.

I asked if there was an internal communications or alarm system capable of providing immediate emergency instruction to facility personnel. Mr. Corriell said the Hanford Site alarms can be heard from this facility and they thought these would be needed pieces of emergency equipment. I asked if there was a device, such as a telephone or a hand-held, two-way radio, capable of calling emergency assistance from local police departments, fire departments, or state or local emergency response teams. Mr. Corriell said communication equipment such as two-way radios or cell phones are required for entry to this facility and that he thought this was needed emergency equipment. I asked if there were portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as devices using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment at this facility. Mr. Corriell said they have fire extinguishers and spill control equipment on spill and emergency response vehicles and trailers. Mr. Corriell said there is an emergency response kit with spill response and decontamination equipment at 291-S at the REDOX Plant. I asked if there was water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems. Mr. Corriell said there are fire hydrants available nearby. Mr. Marrott said fire hydrants were 30 to 40 yards from the Hexone Storage and Treatment Facility. Mr. Corriell said portable fire extinguishers, fire control equipment, spill control equipment, decontamination equipment, and water at adequate volume were not needed at the Hexone Storage and Treatment Facility as the hazard of ignitability is no longer an issue and the tanks have been grouted. Mr. Elis Eberlein said their permit application has no fixed emergency equipment for this facility. I explained they should request an approval from Ecology if they would not be maintaining emergency equipment at the Hexone Storage and Treatment Facility.

I asked how the Hexone Storage and Treatment Facility is going to be closed by September 30, 2020 as required in TPA Milestone M-037-10. Mr. Eberlein said the milestone is being updated/removed to only require the submittal of a closure plan.

I requested to see sampling records for the distillation columns for the Hexone Storage and Treatment facility. Ms. Horn pulled up an Excel spreadsheet showing a data pull from the Integrated Document Management System (IDMS) for all equipment related to the Hexone Storage and Treatment Facility. She explained that all containers are no longer at the Central Waste Complex and have been disposed. Ms. Horn said the distillation columns were likely in container HEXO-93-000300. I observed the following container numbers with applicable ancillary equipment associated with the Hexone Storage and Treatment Facility on the Excel spreadsheet and explained I would request a copy of this Excel Spreadsheet and operating records for these containers in my records request.

0005021	0005394	0005396
0005397	0005440	HEXO-92-000001
HEXO-92-000002	HEXO-92-000009	HEXO-92-000010
HEXO-92-000014	HEXO-92-000015	HEXO-92-000016
HEXO-92-000017	HEXO-92-000018	HEXO-92-000019
HEXO-92-000028	HEXO-93-000300	

I went over the records that were provided and the records I would be requesting in my records request. I explained the only area of non-compliance I observed today was the hazard labeling for the Hexone Storage and Treatment Facility. It did not convey the hazard of toxicity. I asked if a photo could be provided of an updated sign conveying the hazard of toxicity. Mr. Turlington said yes and asked that I put it in the records request. I thanked everyone for their time and we left the facility at 11:00 am.

Document Review

Building Emergency Plan

I requested and conducted a review of the Building Emergency Plan for Surveillance and Maintenance – HNF-IP-0263-CP S & M Revision 19, dated April 28, 2019. I observed the document was a building emergency plan for numerous Surveillance and Maintenance facilities across the Hanford Site including 224-T, B Plant, Plutonium Uranium Extraction Plant (PUREX,) REDOX, 224-B, 242-B/BL, 291-U Sand Filter, 216-Z-9 Waste Storage Crib, 241-A-361 Waste Settling Tank, and MO-294. I observed in Section 9.1 that there was no Fixed Emergency Equipment at any of these locations. Section 9.2 “Portable Emergency Equipment,” showed where locations of Fire Extinguishers and Emergency Response Kits were located. Section 9.3 “Communications Equipment/Warning Systems” stated that two-way radio and cellular telephones were located nearby in vehicles or with personnel. Section 9.5 “Spill Control and Containment Supplies” stated that the location of the spill kit was “Located as needed with each active <90 Day Waste Storage Area or Satellite Accumulation Area. (B-Plant 221BK, REDOX 291S, FFTF, PUREX Guard Shack).”

Inspection Record

I requested and reviewed the Appendix B – Inspection Data Sheets for the Hexone Storage and Treatment Tanks in CPSM-PRO-EP-53098, Rev. 0, Change 5, *CPRM Facility TSD's Inspection*, dated November 12, 2018. I observed the inspection was conducted on June 11, 2019 and contained the date and time of the inspection, the printed name and handwritten signature of the inspector, and notations of observations made. I did not observe any deficiencies noted in the inspection record.

Personnel Training

I requested and reviewed PRC-STD-TQ, Revision 2, Change 1, *Central Plateau Risk Management Dangerous Waste Training Plan*, dated November 1, 2018. I observed that this training plan did not contain the written description of the type and amount of both introductory and continuing training required for the Field Work Supervisor position. According to PRC-STD-TQ, Revision 2, Change 1, the field Work Supervisor only needs to take CHPRC General Employee Training and CPRM Orientation and Facility Emergency Hazards Identification Checklist (FEHIC). These two classes are required for all worker positions; however, the Field Work Supervisor needs to take the courses of the staff they supervise. I did not observe any of the courses of the positions the Filed Work Supervisors oversees included on their training requirements.

On December 18, 2019, Ecology received CR-2019-2776, *CHPRC Condition Report Form*, with an Analysis Completion Date of December 6, 2019 and PRC-STD-TQ-40236, Revision 2, Change 2, *Central Plateau Risk Management Dangerous Waste Training Plan*, dated December 11, 2019. I observed that along with the previously required trainings, the dangerous waste training plan was updated to include Course 02006G - Waste Management Awareness or Course 035100 - Container Waste Management Initial which requires an annual refresher of Course 035110 - Container Waste Management Refresher for the Field Work Supervisor position. Before changes were made to the dangerous waste training plan, these classes were not previously required to be taken by Field Work Supervisors to be qualified to work under their job position.

I reviewed training records for Deborah Older, Nuclear Chemical Operator and Brian Cordray, Field Work Supervisor against PRC-STD-TQ-40236, Revision 2, Change 2, *Central Plateau Risk Management Dangerous Waste Training Plan*, dated December 11, 2019. I observed Deborah Older and Brian Cordray were current on all required trainings.

Hexone Tank Operating Records

I requested and reviewed portions of the operating record for containers used to dispose of Hexone Storage and Treatment Facility components. The intention of this review was to document the removal of ancillary equipment and waste from the Hexone Storage and Treatment Facility which occurred after the Ecology inspection in 2000.

Container 0005021

I observed the following information in record 8.1.2 0005021 BH063 PIN File & SHIPMENT.pdf.

- Waste analysis records showing results of sampling that took place on March 3, 2001 and results analyzed on April 17-18, 2001.
- A waste inventory sheet dated February 20, 2002, indicating the container held parts and cut up piping from the Hexone Storage and Treatment Facility tank ancillary equipment.
- A waste designation for Hexone Storage and Treatment Facility Tank Waste, dated March 27, 2002. I observed the following on this record:
 - Land Disposal Restriction (LDR) notification statement.
 - The waste was a non-wastewater.
 - Applicable waste codes.
- A waste designation record for Container 0005021, dated March 28, 2002 that included the following:
 - Waste codes D030, D032, D033, D034, D036, D042, and F003.
 - Waste physical state: Solid.
- A SWITS SWIR310 Report dated April 2, 2002, indicating the wastes common names, physical form, and weight.
- A LDR notification form for Container 0005021, dated April 10, 2002.
- Two Solid Waste Information and Tracking System (SWITS) SWIR356 Report, dated April 11, 2002 and July 25, 2002, that container had waste codes D030, D032, D033, D034, D036, D042, and F003.
- A facility transfer record that recorded that the container was brought into the Central Waste Complex on July 25, 2002.
- A container activity record showing that the container was moved to the Waste Receiving and Packaging Facility on May 3, 2002 for Non-Destructive Examination (NDE).
- An illegible Uniform Hazardous Waste Manifest, dated April 2, 2003.

In record 8.1.1 0005021 SWITS310.pdf, I observed a SWITS SWIR310 report, printed on September 16, 2019, that indicated the container was stored at Building 2336 on May 2, 2002, at 2402WG on July 30, 2002, and sent offsite on April 18, 2003. The report contained the waste common names.

Container 0005396

In record 8.3.1 0005396 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container 0005396 was received by the Central Waste Complex for storage on June 19, 2002, and sent off-site on March 3, 2003, to what is now Perma-Fix Northwest. The record included the following:

- Waste weight.
- Description showing the container held metal, inert material, and waste.
- Waste codes F003, D030, D032, D033, D034, D036, and D042.
- Physical state of solid.

In record 8.3.2 0005396 BH071 PIN FILE & SHIPMENT.pdf, I observed the following:

- An e-mail dated May 10, 2001, stating that the piping from the hexone tank had residual at the very bottom which was <1% of the total weight.
- A container waste inventory sheet, dated March 26, 2002, showing that the container held the hexone related waste of carbon steel pipe, galvanized pipe, rubber valve, hose clamp, cloth tape, plastic, and PVC pipe.
- A designation sheet dated, March 28, 2002, for the secondary container number 202S-02-0022 (Same as Container 0005396), which included applicable waste codes, the physical state of the waste, waste common names, and underlying hazardous constituents.
- A note to the file about assumptions with underlying hazardous constituents, dated June 6, 2002, along with a listing of underlying hazardous constituents.
- A SWIR310 Report, dated June 13, 2002, showing a physical state of solid, waste weight, waste common names, and applicable waste codes.
- A Land Disposal Notification and Certification form, dated June 14, 2002, including:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste codes.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.
- A SWIR356 Report, dated June 18, 2002, listing the waste codes D030, D032, D033, D034, D036, D042, and F003.
- Uniform Hazardous Waste Manifest number BH071, signed at the receiving facility (Central Waste Complex) on June 19, 2002.
- A designation sheet dated June 27, 2002, which included applicable waste codes, a land disposal restriction notification statement, and non-wastewater determination.
- A verification checklist dated June 27, 2002, for a Non-Destructive Examination.
- A receipt report signature page showing that Container 0005396 was accepted at the Central Waste Complex (Building 2404-WB) on August 22, 2002.

Container 0005397

In record 8.4.1 0005397 SWITS310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container 0005397 was received by the Central Waste Complex for storage on June 25, 2002, and sent off-site on January 30, 2003, to what is now Perma-Fix Northwest. The record showed the following:

- Waste weight.
- Description showing the container held metal, inert material, and waste.
- Waste codes F003, D030, D032, D033, D034, D036, and D042.
- Physical state of solid.

In record 8.4.2 0005397 BH071 PIN FILE & SHIPMENT.pdf, I observed the following:

- An e-mail dated May 10, 2001, stating that the piping from the hexone tank had residual at the very bottom which was <1% of the total weight.
- A container waste inventory sheet, dated March 26, 2002, showing that the container held hexone related waste of carbon steel pipe, galvanized pipe, and two valves.
- A designation sheet dated, March 28, 2002, for the secondary container number 202S-02-0024 (Same as Container 0005397), which included applicable waste codes, the physical state of the waste, waste common names, and underlying hazardous constituents.
- A note to file about assumptions with underlying hazardous constituents, dated June 6, 2002, along with a listing of underlying hazardous constituents.
- A SWIR310 Report, dated June 13, 2002, showing a physical state of solid, waste weight, waste common names, and applicable waste codes.
- A Land Disposal Notification and Certification form, dated June 14, 2002, including:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste codes.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.
- A SWIR356 Report, dated June 18, 2002, listing the waste codes D030, D032, D033, D034, D036, D042, and F003.
- Uniform Hazardous Waste Manifest number BH071, signed at the receiving facility (Central Waste Complex) on June 19, 2002.
- A designation sheet dated June 27, 2002, which included applicable waste codes, a land disposal restriction notification statement and non-wastewater determination.
- A receipt report signature page showing that Container 0005397 was accepted at the Central Waste Complex (Building 2404-WB) on August 22, 2002.

Container 0005440

In record 8.5.1 0005440 SWITS310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container 0005440 was received by the Central Waste Complex for storage on June 18, 2002, and sent off-site on August 22, 2002, to what is now Perma-Fix Northwest. The record included the following:

- Waste weight.
- Description showing the container held hexone piping and related waste.
- Waste code F003.
- Physical state of solid.

In record 8.5.2 0005440 BH072 PIN & SHIPMENT FILE.pdf, I observed the following:

- A container waste inventory sheet, dated March 26, 2002, showing that the container held hexone related metal and HEPA filters.
- A Land Disposal Notification and Certification form, dated May 7, 2002, including:

- Non-wastewater determination.
- Listing of applicable dangerous waste codes.
- An Underlying Hazardous Constituent determination.
- A Land Disposal Restriction notification statement.
- A designation sheet dated, May 20, 2002, for the secondary container number 202S-02-0023 (Same as Container 0005440), which included applicable waste codes, the physical state of the waste, a land disposal notification statement, a non-wastewater determination, and waste common names.
- A corrected SWIR310 Report, dated May 20, 2002 and June 10, 2002, showing a physical state of solid, waste weight, waste common name, and applicable waste code.
- A SWIR356 Reports, dated May 22, 2002 and June 17, 2002, listing the waste code F003.
- A receipt report signature page showing that Container 0005440 was accepted at the Waste Receiving and Packaging Facility on June 14, 2002 for verification.
- A SWIR310 Report, dated June 10, 2002, showing a physical state of solid, waste weight, waste common name, and applicable waste code.
- A verification checklist dated June 14, 2002, for a Non-Destructive Examination.
- A non-legible Uniform Hazardous Waste Manifest number BH072.
- A receipt report signature page showing that Container 0005440 was accepted at the Central Waste Complex on June 18, 2002.

Container HEXO-92-000001

In record 8.6.1 HEXO-92-000001 07-1G-7DM-JA92.pdf, I observed a storage/disposal approval record for radioactive solid waste dated January 10, 1992, and a radioactive waste storage/disposal analysis record, dated January 13, 1992.

In record, 8.6.2 HEXO092-000001.pdf, I observed the following:

- A low-level waste storage/disposal record, dated January 15, 1992 showing that Container HEXO-92-000001 contained filter cartridges, copper tubing, rubber gloves, cloth rags, and hazardous constituents.
- A SWITS log sheet showing that Container HEXO-92-000001 was stored in Building 2402WE at the Central Waste Complex on January 17, 1992.
- A listing of the waste common name.
- Uniform Hazardous Waste Manifest number 11324, showing that Container HEXO-92-000001 was received at the Central Waste Complex on January 17, 1992.

In record, 8.6.3 HEXO-92-000001 SWITS310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000001 was received by the Central Waste Complex for storage on January 17, 1992, and sent off-site on December 4, 2003, to what is now Perma-Fix Northwest. The record included the following:

- Waste weight.

- Description showing the container held cloth, HEPA Filters, plastic, and rubber.
- Waste code F003.
- Physical state of solid.

In the operating records I reviewed for Container HEXO-92-000001, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000002

In record, 8.7.1 HEXO-92-000002 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record for radioactive solid waste, dated March 3, 1992.

In record, 8.7.2 HEXO-92-000002 LLW SD Record 5-20-92.pdf, I observed the following:

- A low-level waste storage/disposal record, dated May 18, 1992, showing the container held mask filter cartridges, metal scrap, sheet metal, Tygon tubing, plastic, cloth, paper, and wood scrap.
- A radioactive mixed waste attachment sheet, dated May 19, 1992 showing the waste common name.
- A Uniform Hazardous Waste Manifest number 20098, showing that Container HEXO-92-000002 was received at the Central Waste Complex on May 20, 1992.

In record, 8.7.3 HEXO-92-000002 5-20-92.pdf, I observed the following:

- A verification checklist dated June 12, 1997.
- A memo, dated June 16, 1997, indicating that a verification of the container resulted in the presence of lead.
- A verification worksheet, dated June 17, 1997.
- A memo, dated June 19, 1997, indicating that the container be labeled with the waste codes D008, and F003, and Toxic.

In record, 8.7.4 HEXO-92-000002 SSWITS310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000002 was received by the Central Waste Complex for storage on May 20, 1992, and sent off-site on March 5, 2001, to what is now Perma-Fix Northwest. The record included the following:

- Waste weight.
- Description showing the container held cloth, rags, nylon, filters, metal, iron, and galvanized sheet, plastic, paper, cardboard, and wood.
- Waste codes F003 and D008.
- Physical state of solid.

In the operating records I reviewed for Container HEXO-92-000002, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000009

In record 8.8.1 HEXO-92-000009 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record for radioactive solid waste, dated March 3, 1992, which included the applicable waste code F003 and a general description of the waste.

In record 8.8.2 HEXO-92-000009.pdf, I observed the following:

- A low-level waste storage/disposal record, dated May 18, 1992, showing:
 - The container held carbon steel pipe, filter housing and screen, copper tubing, mask cartridges, sheet plastic, and cloth, rags.
 - The container was stored in Building 2402-WE at the Central Waste Complex.
 - Waste common name.
 - F003 Waste Code.
- A Uniform Hazardous Waste Manifest number 20098, marked as received at the Central Waste Complex on May 20, 1992.

In record 8.8.3 HEXO-92-000009_SWITS310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000009 was received by the Central Waste Complex for storage on May 20, 1992, and sent off-site on March 5, 2001, to what is now Perma-Fix Northwest. The record included the following:

- Waste weight.
- Description showing the container held cloth, rags, nylon, filters, metal, iron, and galvanized sheet, cooper metal, plastic, paper, cardboard, and wood.
- Waste code F003.
- Physical state of solid.

In record 8.8.4 HEXO-92-000009 5-20-92.pdf, I observed the following:

- A verification checklist dated June 12, 1997.
- A memo dated June 16, 1997, showing that the container passed a verification review.
- Duplicate records from record 8.8.2 HEXO-92-000009.pdf.

In the operating records I reviewed for Container HEXO-92-000009, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000010

In record 8.9.1 HEXO-92-000010 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record for radioactive solid waste, dated March 3, 1992, which included the applicable waste code F003 and a general description of the waste.

In record 8.9.2 HEXO-92-000010 LLW SD Record 5-20-92.pdf, I observed the following:

- A low-level waste storage/disposal record, dated May 18, 1992, showing:
 - The container held scrap carbon steel piping.
 - The container was stored in Building 2402-WE at the Central Waste Complex.

- Waste common name.
- F003 Waste Code.
- A Uniform Hazardous Waste Manifest number 20098, marked as received at the Central Waste Complex on May 20, 1992.

In record 8.9.3 HEXO-92-000010 SWITS310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000010 was received by the Central Waste Complex for storage on May 20, 1992, and sent off-site on March 5, 2001, to what is now Perma-Fix Northwest. The record included the following:

- Waste weight.
- Description showing the container held metal, iron, and galvanized sheet and plastic/polyurethane.
- Waste code F003.
- Physical state of solid.

In record 8.9.4 HEXO-92-000010.pdf I observed the following:

- A verification checklist dated June 12, 1997.
- A memo dated June 16, 1997, showing that the container passed a verification review.
- Duplicate records from record 8.9.2 HEXO-92-000010.pdf

In the operating records I reviewed for Container HEXO-92-000010, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000014

In record 8.10.1 HEXO-92-000014 07-1G7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000014 and included general information on the contents and specification of the container.

In record 8.10.2 HEXO-92-000014 [D194018599].pdf, I observed a low level waste storage/disposal record dated May 18, 1992. The record listed the container waste weight, waste common name (Hexone), and included Uniform Hazardous Waste Manifest number 20098 showing that the container was received at the Central Waste Complex on May 20, 1992. I observed the manifest showed the F003 dangerous waste code.

In record 8.10.3 HEXO-92-000014 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000014 was received by the Central Waste Complex for storage on May 20, 1992 and sent off-site on October 20, 2003, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held scrap piping and carbon steel, had waste code F003, and was the physical state of solid.

In the operating records I reviewed for Container HEXO-92-000014, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000015

In record 8.11.1 HEXO-92-000015 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000015 and included general information on the contents and specification of the container.

In record 8.11.2 HEXO-92-000015 [D194018600].pdf, I observed a low level waste storage/disposal record dated May 18, 1992. The record listed the container waste weight, waste common name (Hexone), and included Uniform Hazardous Waste Manifest number 20098 showing that the container was received at the Central Waste Complex on May 20, 1992. I observed the manifest showed the F003 dangerous waste code.

In record 8.11.3 HEXO-92-000015 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000015 was received by the Central Waste Complex for storage on May 20, 1992 and sent off-site on February 21, 2001, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held metal, iron, galvanized sheet, had waste code F003, and was the physical state of solid.

In record 8.11.4 HEXO-92-000015 NA [D198001996].pdf, I observed a waste verification checklist for Container HEWO-92-000015, dated May 27, 1997, a low level waste storage/disposal record dated May 20, 1992, and a verification worksheet for surveillance, dated June 12, 1997.

In the operating records I reviewed for Container HEXO-92-000015, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000016

In record 8.12.1 HEXO-92-000016 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000016 and included general information on the contents and specification of the container.

In record 8.12.2 HEXO-92-000016 [D194018601].pdf, I observed a low level waste storage/disposal record dated May 18, 1992. The record listed the container waste weight, waste common name (Hexone), and included Uniform Hazardous Waste Manifest number 20098 showing that the container was received at the Central Waste Complex on May 20, 1992. I observed the manifest showed the F003 dangerous waste code.

In record 8.12.3 HEXO-92-000016 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000016 was received by the Central Waste Complex for storage on May 20, 1992 and sent off-site on October 28, 2003, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held glass, metal, plastic, soil, rock, gravel, and wood, had waste code F003, and was the physical state of solid.

In the operating records I reviewed for Container HEXO-92-000016, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000017

In record 8.13.1 HEXO-92-000017 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000017 and included general information on the contents and specification of the container.

In record 8.13.2 HEXO-92-000017 [D194018602].pdf, I observed a low level waste storage/disposal record dated August 21, 1992. The record listed the container waste weight, waste common name (Hexone), and included Uniform Hazardous Waste Manifest number 21018 showing that the container went to the Central Waste Complex on August 21, 1992. I observed the manifest showed the F003 dangerous waste code. The date received by the facility owner was not legible on the manifest copy.

In record 8.13.3 HEXO-92-000017 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000017 was received by the Central Waste Complex for storage on August 21, 1992, and sent off-site on October 20, 2003, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held metal and plastic, had waste code F003, and was the physical state of solid.

In the operating records I reviewed for Container HEXO-92-000017, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000018

In record 8.14.1 HEXO-92-000018 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000018 and included general information on the contents and specification of the container.

In record 8.14.2 HEXO-92-000018 [D194019392].pdf, I observed a low level waste storage/disposal record dated December 10, 1992. The record listed the container waste weight, waste common name (Hexone), a SWITS log sheet, and included Uniform Hazardous Waste Manifest number 21532, showing that the container was received at the Central Waste Complex on December 10, 1992. I observed the manifest showed the F003 dangerous waste code. The SWITS log sheet showed that Container HEXO-92-000018 was stored in Building 2403WA.

In record 8.14.3 HEXO-92-000018 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000018 was received by the Central Waste Complex for storage on December 10, 1992, and sent off-site on April 18, 2003, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held metal and plastic, had waste code F003, and was the physical state of solid.

In the operating records I reviewed for Container HEXO-92-000018, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000019

In record 8.15.1 HEXO-92-000019 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000018 and included general information on the contents and specification of the container.

In record 8.15.2 HEXO-92-000019 [D194019393].pdf, I observed a low level waste storage/disposal record dated December 10, 1992. The record listed the container waste weight, waste common name (Hexone), and included Uniform Hazardous Waste Manifest number 21532 showing that the container was received at the Central Waste Complex on December 10, 1992. I observed the manifest showed the F003 dangerous waste code.

In record 8.15.3 HEXO-92-000019 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000019 was received by the Central Waste Complex for storage on December 10, 1992, and sent off-site on April 18, 2003, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held inert hazardous material, cloth, glass, HEPA filters, metal, and plastic, had waste code F003, and was the physical state of solid. In the operating records I reviewed for Container HEXO-92-000019, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000028

In record 8.16.1 HEXO-92-000028 07-1G-7DM-0301.pdf, I observed a storage/disposal approval record, approved March 3, 1992. The record was for numerous containers including for Container HEXO-92-000028 and included general information on the contents and specification of the container.

In record 8.16.2 HEXO-92-000028 [D194018603].pdf, I observed a low level waste storage/disposal record dated August 21, 1992. The record listed the container waste weight, waste common name (Hexone), and included Uniform Hazardous Waste Manifest number 21018 showing that the container went to the Central Waste Complex on August 21, 1992. I observed the manifest showed the F003 dangerous waste code. The date received by the facility owner was not legible on the manifest copy.

In record 8.16.3 HEXO-92-000028 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-92-000019 was received by the Central Waste Complex for storage on August 21, 1992, and sent off-site on October 20, 2003, to what is now Perma-Fix Northwest. The record showed the waste weight, a description showing the container held metal, paper, and plastic, had waste code F003, and was the physical state of solid.

In the operating records I reviewed for Container HEXO-92-000028, I did not observe any land disposal restriction notification statements.

Container HEXO-92-000300

In record 8.17.1 HEXO-93-000300 07-4A-1JM-030A.pdf, I observed the following information pertinent to Container HEXO-93-000300:

- A radioactive waste storage/disposal analysis record for Container HEXO-92-000300, dated September 10, 1993
 - The record showed the container held three 300-gallon distillation vessels and two demister housing, sealed with bolted flanges.
 - Container dimensions 116”L x 103”W x 75”H.
- A waste storage/disposal sheets accepted on August 23, 1993.
 - Listed general information about the container and its contents.
- A solid waste engineering analysis, dated September 10, 1993.
 - Showing designation information including waste common names, WC01 and F003 waste codes, and a physical state of solid.
 - Summary of analysis information, such as metal concentrations.

In record 8.17.2 HEXO-93-000300 [D196031943].pdf, I observed the following:

- A SWITS log sheet showing Container HEXP-93-000300 was stored at the Central Waste Complex in Building 2403W on September 28, 1993.
- A low level waste storage/disposal record, dated September 28, 1993. The record listed the container waste weight, and waste common name (Hexone).
- A Uniform Hazardous Waste Manifest number 22820 showing that the container was sent to the Central Waste Complex on September 28, 1993. I observed the manifest showed the F003 and WC01 dangerous waste codes. The date received by the facility owner was not legible on the manifest copy.

In record 8.17.3 HEXO-93-000300 SWIT310.pdf, I observed a SWIR310 report dated September 16, 2019. I observed the record showed that Container HEXO-93-000300 was received by the Central Waste Complex for storage on September 28, 1993, and sent off-site on May 11, 2010, to an unknown Treatment, Storage, and Disposal Facility. The record included the waste weight, a description showing the container held metal, fiberglass, and absorbent material, had waste code F003, and was the physical state of solid. In the operating records I reviewed for Container HEXO-93-000300, I did not observe any land disposal restriction notification statements.

Additional Operating Record Review

In addition to a request for operating records for specific containers holding waste from dismantling the Hexone Tanks, I requested portions of the operating record for Tanks 276-S-141 and 276-S-142, including all operating records for treatment and disposal of waste from Tanks 276-S-141 and 276-S-142. Below are my observations from this records request.

Container HEX-90-001

In record 9.1.1 HEX-90-001.pdf, I observed the following:

- A SWITS log sheet showing Container HEX-90-001 was stored at 276S on December 10, 1990.
- A solid waste storage/disposal record dated December 7, 1990, showing:

- The container held gloves, tape, rags, plastic items, glass bottle, steel pipe and miscellaneous metal, strainer basket, and chemical mask cartridges.
- The waste common name and F003 waste code.

In record, 9.2.9 FC007.pdf, I observed the following:

- A Land Disposal Restriction Notification Form for Container HEX-90-001, dated February 14, 2007, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.
- Uniform Hazardous Waste Manifest No. 000394087 JJK for Container HEX-90-001 signed by the receiving facility Materials and Energy Corporation on February 27, 2007.

Container HEX-90-002

In record 9.1.2 HEX-90-002.pdf, I observed the following:

- A solid waste storage/disposal record, dated December 7, 1990, showing:
 - The container held plastic items, gloves, strainer screen in metal can, tape, fittings and miscellaneous metal, and chemical mask cartridges.
 - The waste common name and F003 and D001 waste codes.
- Uniform Hazardous Waste Manifest number 90200, received at the Central Waste Complex on December 10, 1990.

Container HEX-90-003

In record 9.1.3 HEX-90-003.pdf, I observed the following:

- A SWITS log sheet showing the container was located in building 276S on January 14, 1991.
- A solid waste storage/disposal record, dated January 14, 1991, showing the container held plastic items, gloves, chemical mask cartridges, paper, wood, steel, and rags.
- A waste inventory sheet dated December 11, 1990.

Container HEX-90-004

In record 9.1.4 HEX-90-004.pdf, I observed the following:

- A solid waste storage/disposal record, dated January 14, 1991, showing the container held chemical mask cartridges, wood, rags, plastic items, gloves, paper, metal tools, and copper tube.
- A waste inventory sheet dated, January 14, 1991.

Container HEX-90-005

In record 9.1.5 HEX-90-005.pdf, I observed the following:

- A solid waste storage/disposal record, dated January 14, 1991, showing the container held metal, pump parts, chemical cartridges, plastic, gloves, rags, and paper.
- A waste inventory sheet dated, January 14, 1991.

Container HEX-90-006

In record 9.1.6 HEX-90-006.pdf, I observed the following:

- A solid waste storage/disposal record, dated January 14, 1991, showing the container held plastic, gloves, rags, paper, metal, wood and chemical cartridges.
- A waste inventory sheet dated, December 11, 1990.

Container HEX-90-007

In record 9.1.7 HEX-90-007.pdf, I observed the following:

- A solid waste storage/disposal record, dated January 14, 1991, showing the container held wood, gloves, paper, tape, rags, metal screen/filter, plastic, and Styrofoam pads.
- A waste inventory sheet dated, December 11, 1990.

Container HEX-90-008

In record 9.1.8 HEX-90-008.pdf, I observed the following:

- A solid waste storage/disposal record, dated January 14, 1991, showing the container held metal, gloves, plastic items, paper, wood, rubber and chemical mask cartridges.
- A waste inventory sheet dated, December 11, 1990.
- A Uniform Hazardous Waste Manifest, number 91201, showing the container was received at the Central Waste Complex on January 14, 1991. The manifest listed the F003 and D001 waste codes and was for six containers.

Containers HEX-90-002, HEX-90-003, HEX-90-004, HEX-90-005, HEX-90-006, HEX-90-007, and HEX-90-008

In record 9.2.11 GC018.pdf, I observed the following:

- Land Disposal Restriction Notification Forms for Containers HEX-90-002, HEX-90-003, HEX-90-004, HEX-90-005, HEX-90-006, HEX-90-007, and HEX-90-008, dated August 1, 2007, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.
- Uniform Hazardous Waste Manifest No. 000394197 JJK for Containers 0006537 and 0006539 signed by the receiving facility Perma-Fix Northwest Inc. on August 3, 2007.

Containers HEXO-92-000003 through HEXO-92-000008 and HEXO-92-000011 through HEXO-92-000013

In records 9.1.9 HEXO-92-000003.pdf, 9.1.10 HEXO-92-000004.pdf, 9.1.11 HEXO-92-000005.pdf, 9.1.12 HEXO-92-000006.pdf, 9.1.13 HEXO-92-000007.pdf, 9.1.14 HEXO-92-000008.pdf, 9.1.15 HEXO-92-000011.pdf, 9.1.16 HEXO-92-000012.pdf, 9.1.17 HEXO-92-000013.pdf, I observed the following:

- A low level waste storage/disposal record, dated May 4, 1992, showing the container held a 15 gallon 17E Drum and hazardous constituents.
- A radioactive mixed waste attachment sheet dated, May 1, 1992 listing the F003 waste code and waste common names and weights.
- A Uniform Hazardous Waste Manifest, number 20105, showing the container was received at the Central Waste Complex on May 4, 1992. The manifest listed the F003 waste code and was for nine containers of liquid hazardous waste.

In record 9.2.7 EC008.pdf, I observed the following:

- Uniform Hazardous Waste Manifest No. EC008 for Containers HEXO-92-000003, HEXO-92-000004, HEXO-92-000005, HEXO-92-000006, HEXO-92-000007, HEXO-92-000008, HEXO-92-000011, HEXO-92-000012, and HEXO-92-000013 signed by the receiving facility now known as Perma-Fix Northwest on June 30, 2005.
- Land Disposal Restriction Notification Forms for Containers HEXO-92-000003, HEXO-92-000004, HEXO-92-000005, HEXO-92-000006, HEXO-92-000007, HEXO-92-000008, HEXO-92-000011, HEXO-92-000012, and HEXO-92-000013, dated July 9, 2005, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.

Container HEXO-92-000023

In record, 9.1.18 HEXO-92-000023.pdf, I observed the following:

- A low level waste storage/disposal record, dated December 10, 1992, showing the container held a 15 gallon 17E Drum, normal paraffin hydrocarbon, and hazardous constituents.
- A radioactive mixed waste attachment sheet dated, December 11, 1992, listing the F003 waste code and waste common name and weight.
- A Uniform Hazardous Waste Manifest, number 21532, showing the container was received at the Central Waste Complex on December 10, 1992. The manifest listed the F003 waste code and was also for Containers HWXO-92-000018 and HEXO-92-000019.

In record 9.2.7 EC008.pdf, I observed the following:

- Uniform Hazardous Waste Manifest No. EC008 for Containers HEXO-92-000023 signed by the receiving facility Pacific Ecosolutions, LLC, PECOS (Now known as Perma-Fix Northwest) June 30, 2005.
- A Land Disposal Restriction Notification Form for Container HEXO-92-000023, dated July 9, 2005, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.

Containers 11325, 11350, 11344, and 12003 – Railroad Tanker Cars

In record, 9.2.1 11325, 11350, 11344, 12003.pdf, I observed the following:

- Several designation records dated November 18, 1991, showing waste codes F003 and D001 for the waste hexone in the railroad tanker cars.
- A Hazardous Waste Disposal Analysis Record, dated November 19, 1991, showing four railroad tanker cars holding 8,405, 6,602, 8,286, and 5,596 gallons of waste methyl isobutyl ketone and kerosene were getting ready to be shipped.
- Numerous letters (dated November 22, 1991, December 10, 1991, December 19, 1991, and January 3, 1992) for Manifests 11325, 12003, 11350, and 11344, stating that the organic waste is categorized as a spent, nonhalogenated solvent (F003-acetone/methyl isobutyl ketone), and is restricted under the requirements of 40 CFR 268.30(a). The waste must be treated to the standard expressed as "Constituent Concentration in the Waste Extract" as outlined in 40 CFR 268.41.
- Uniform Hazardous Waste Manifest No. 11325 for one non-specified container of methyl isobutyl ketone signed by the receiving facility Diversified Scientific Services, Inc. (DSSI), on December 5, 1991.
- Uniform Hazardous Waste Manifest No. 11344 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on December 16, 1991.
- Uniform Hazardous Waste Manifest No. 11350 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on December 23, 1991.
- A shipping document, dated January 21, 1992, showing a truckload of approximately 5,100 gallons of mixed water and hexone from Hanford to DSSI.
- Uniform Hazardous Waste Manifest No. 12003 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on January 29, 1992.
- Uniform Hazardous Waste Manifest No. A2163 for one non-specified container of methyl isobutyl ketone sent on June 12, 1992. The manifest was not signed by the destination facility.
- A letter dated, January 6, 1993, from Diversified Scientific Services, Inc. of Kingston, Tennessee (DSSI) that included Certificate of Destructions for wastes sent to them.

- A Certificate of Destruction (No. 93-10) from DSSI for Hazardous Waste Manifest Number 11344 that certified destruction as of January 8, 1993.
- A Certificate of Destruction (No. 93-11) from DSSI for Hazardous Waste Manifest Number 11350 that certified destruction as of January 8, 1993.
- A Certificate of Destruction (No. 93-12) from DSSI for Hazardous Waste Manifest Number 12003 that certified destruction as of January 8, 1993.
- A Certificate of Destruction (No. 93-13) from DSSI for Hazardous Waste Manifest Number A2062 that certified destruction as of January 8, 1993.
- A Certificate of Destruction (No. 93-14) from DSSI for Hazardous Waste Manifest Number A2070 that certified destruction as of January 8, 1993.
- A Certificate of Destruction (No. 93-15) from DSSI for Hazardous Waste Manifest Number A2085 that certified destruction as of January 8, 1993.
- A letter dated, March 10, 1994, from DSSI that included Certificate of Destructions for wastes sent to them. The letter stated that DSSI regretted the extended storage and delay in processing these wastes due to a fire in 1992 and the extensive improvements to their facility.
 - A Certificate of Destruction (No. 94-07) from DSSI for Hazardous Waste Manifest Number A2163 that certified destruction as of March 5, 1994.

Containers ERO-93-00880, ERO-93-00881, ERO-93-00882, and ERO-93-00883

In record 9.2.2 23407.pdf, I observed the following:

- A designation record dated December 14, 1993, for four 55-gallon containers, numbers ERO-93-00880, ERO-93-00881, ERO-93-00882, and ERO-93-00883 showing the F003 waste code.
- A waste storage/disposal request, dated November 29, 1993, giving a written description for containers ERO-93-00880, ERO-93-00881, ERO-93-00882, and ERO-93-00883. The description said the container held Nixtox activated charcoal filters from hexone tanks, which are in 30-gallon steel containers inside of a 55-gallon container.

In record 9.2.8 ERO-93-000880 – 000883.pdf, I observed the following:

- A SWITS log sheet and low-level waste storage/disposal records showing Containers ERO-93-00880, ERO-93-00881, ERO-93-00882, and ERO-93-00883 accepted at the Central Waste Complex in Building 2403WC on February 1, 1994.
- A Uniform Hazardous Waste Manifest number 23407, signed at the receiving facility (Central Waste Complex) on February 1, 1994.

In record, 9.2.6 CC021.pdf, I observed the following:

- Uniform Hazardous Waste Manifest No. CC021 for Containers ERO-93-00880, ERO-93-00881, ERO-93-00882, and ERO-93-00883 signed by the receiving facility Allied Technology Group, Inc. (Now known as Perma-Fix Northwest) on July 17, 2003.
- A Land Disposal Restriction Notification Form, dated July 16, 2003, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.

In record 9.2.3 A2062, A2070, A2085, A2136.pdf, I observed the following applicable documents:

- Numerous letters (dated March 2, 1992, March 10, 1992, and March 26, 1992) for Universal Hazardous Waste Manifests A2062, A2070, and A2085, stating that the organic waste is categorized as a spent, nonhalogenated solvent (F003-acetone/methyl isobutyl ketone), and is restricted under the requirements of 40 CFR 268.30(a). The waste must be treated to the standard expressed as "Constituent Concentration in the Waste Extract" as outlined in 40 CFR 268.41.
- Uniform Hazardous Waste Manifest No. A2062 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on March 6, 1992.
- Uniform Hazardous Waste Manifest No. A2070 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on March 17, 1992.
- Uniform Hazardous Waste Manifest No. A2085 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on April 1, 1992.
- A letter dated June 10, 1992, for Universal Hazardous Waste Manifest A2163, stating that the waste being submitted for treatment on the subject Uniform Waste Manifest is restricted from land disposal due to the following:
 - Technology-based standards expressed as technology-based standards are listed in 40 CFR 263.42(a). D001 – High Total Organic Carbon (TOC) Ignitable Liquids >10% TOC: Treatment codes FSUBS, RORGS, or INCIN.
- Uniform Hazardous Waste Manifest No. A2163 for one non-specified container of methyl isobutyl ketone signed by the receiving facility (DSSI), on June 17, 1992.
- A Land Disposal Restriction Notification Form, dated July 2, 1992 for Manifest No. A2163, that listed Waste Codes F002, F003, F005, and D001, and listed the applicable Land Disposal Restriction notification statement.

Containers 9800158 and 9800240

In record, 9.2.4 BH032.pdf, I observed the following:

- A waste inventory sheet dated August 24, 2001 for container 9800240 including its contents and waste weight.

- A waste inventory sheet dated August 29, 2001 for container 9800158 including its contents and waste weight.
- A SWIR310 Report dated September 12, 2001, for Container 9800158 listing the following:
 - Waste weight.
 - Description showing the container held waste, activated charcoal, metal, and plastic.
 - Waste code F003.
 - Physical state of solid.
- A SWIR310 Report dated September 12, 2001, for Container 9800240 listing the following:
 - Waste weight.
 - Description showing the container held waste constituents, activated charcoal, cloth, HEPA Filters, metal, paper, and plastic.
 - Waste code F003.
 - Physical state of solid.
- Land Disposal Notification Forms, dated September 12, 2001, for Containers 9800158 and 9800240 listing the following:
 - F003 Waste Code.
 - LDR notification statement.
 - Non-wastewater determination.
- A designation sheet dated October 3, 2001, for Container 9800158.
- A SWIR356 Report, dated October 3, 2001, showing that Containers 9800150 and 9800240 held the F003 waste code.
- Uniform Hazardous Waste Manifest No. BH032 for Containers 9800158 and 9800240 signed by the receiving facility (Central Waste Complex), on October 10, 2001.
- A record showing that Containers 9800150 and 9800240 were received and verified at the Waste Receiving and Packaging Facility on October 17, 2001 and received back for storage at the Central Waste Complex on November 1, 2001.

In record 9.2.12 HC027.pdf, I observed the following:

- A Land Disposal Restriction Notification Form for Containers 9800158 and 9800240, dated June 4, 2008, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.
- Uniform Hazardous Waste Manifest No. 000394379 JJK for Containers 9800158 and 9800240 signed by the receiving facility Perma-Fix Northwest, Inc. on June 16, 2008.

Containers 0006537 and 0006539

In record, 9.2.5 BH073.pdf, I observed the following:

- Waste inventory sheets dated March 26, 2002, for Containers 0006537 and 0006539 including their contents and waste weights.
- A waste designation sheet dated June 14, 2002, for Package Identification Numbers 202S-02-0026 and 202S-02-0027 and for Containers 0006537 and 0006539.
- SWIR356 Reports, dated June 18, 2002, showing that Containers 0006537 and 0006539 held waste codes D018, D019, D021, D022, D023, D024, D025, D027, D028, D029, D030, D034, D037, D039, D040, D041, D042, D043, and F003.
- SWIR310 Reports dated June 18, 2002, for Containers 0006537 and 0006539 listing the following:
 - Waste weight.
 - Description showing the container held numerous waste constituents, cloth, (metal for 0006539) and plastic.
 - Waste codes D018, D019, D021, D022, D023, D024, D025, D027, D028, D029, D030, D034, D037, D039, D040, D041, D042, D043, and F003.
 - Physical state of solid.
- Land Disposal Notification Forms, dated June 18, 2002, for Containers 0006537 and 0006539 listing the following:
 - D018, D019, D021, D022, D023, D024, D025, D027, D028, D029, D030, D034, D037, D039, D040, D041, D042, D043, and F003 Waste Codes.
 - LDR notification statements.
 - Non-wastewater determination.
- A record showing that Containers 0006537 and 0006539 were received and verified at the Waste Receiving and Packaging Facility on June 20, 2002.
- A record showing that Containers 0006537 and 0006539 were received for storage at the Central Waste Complex on June 24, 2002.

In record 9.2.10 FC017.pdf, I observed the following:

- A Land Disposal Restriction Notification Form for Containers 0006537 and 0006539, dated January 17, 2007, showing:
 - Non-wastewater determination.
 - Listing of applicable dangerous waste code.
 - An Underlying Hazardous Constituent determination.
 - A Land Disposal Restriction notification statement.
- Uniform Hazardous Waste Manifest No. 000394079 JJK for Containers 0006537 and 0006539 signed by the receiving facility DSSI on January 29, 2007.

Hexone Operating Logs

In record, 9.3.1 93-ERB-087.pdf, I observed the original handwritten operating logs of the process when the ancillary equipment from the Hexone Tanks was removed. These are the same records that Ecology has in its library for this Unit Group and were previously reviewed as a part of the scoping for this inspection.

Waste Analysis Records

In record 9.3.2 WHC-SD-DD-PLN-004.pdf, I observed document WHC-SD-DD-PLN-004, Rev. 0, *Waste Analysis Plan for Hexone Remediation Demonstration*, dated July 11, 1990. It described the laboratory analysis requirements for the Hexone Remediation Demonstration. It stated the hexone solvents in the 276-S-141 and 276-S-142 tanks will be distilled and separated into radioactive contaminated tar and into a non-radioactive distillate. It explained that the solvents consist of 20,000 gallons of hexone, 14,000 gallons of mixed solvents. I observed this was consistent with the operating records of waste that was sent to DSSI by rail and truck.

In record 9.3.3 Rail Car Samples.pdf, I observed results from four rail car tank cars containing distilled products from the Hexone Remediation Project that were sampled in December of 1990. The results showed that the waste was primarily hexone, with smaller to trace amounts of acetone, chloromethane, chloroform, methylene chloride, chloromethane, 1,1,2,2 tetrachloroethane and xylene found in Tank Cars #3 and #4. Metals of arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury were also analyzed. It should be noted that each one was marked with a less than symbol and the Toxicity Characteristic Leaching Procedure (TCLP) analytical method was not used. When this waste was shipped for incineration at DSSI the waste codes associated with this waste were D001 and F003.

Compliance Problems

The Dangerous Waste inspection on September 17, 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 timelines specified below. Include all supporting documentation such as photographs, records, and statements explaining the actions taken and dates completed to return to compliance.

Attention: Jared Mathey
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 Jared Mathey before the date specified above. Ecology will provide a written approval or denial of your request.

**If you have any questions about information in this Compliance Report, please call:
Jared Mathey at (509) 372-7949**

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

- 1) **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 173-303-330 Personnel training. (2) Written training plan. The owner or operator must develop a written training plan which must be kept at the facility and which must include the following documents and records: (b) A written description of the type and amount of both introductory and continuing training required for each position;

Observations: During the inspection, I observed that the Field Work Supervisor job position did not include a requirement to take Course 02006G - Waste Management Awareness or Course 035100 - Container Waste Management Initial, or Course 035110 - Container Waste Management Refresher. My review of the dangerous waste training plan showed that the training plan did not include all of the required dangerous waste trainings for a Field Work Supervisor.

Action Required: On December 18, 2019, Ecology received a revision to CR-2019-2776, *CHPRC Condition Report Form* and PRC-STD-TQ-40236, Revision 2, Change 2, *Central Plateau Risk Management Dangerous Waste Training Plan*, dated December 11, 2019, showing that along with the previously required trainings, the dangerous waste training plan was updated to include that the Field Work Supervisor is now required to take either an initial Course 02006G - Waste Management Awareness training, or Course 035100 - Container Waste Management Initial which requires an annual refresher of Course 035110 - Container Waste Management Refresher. **No further action required**

- 2) **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 173-303-640(5)(d) All tank systems holding dangerous waste must be:

(i) **Marked with labels or signs to identify the waste contained in the tank legible at a distance of at least fifty feet. For underground tank systems, labels or signs must be either placed on aboveground postings above each underground tank system or at each entrance to the active portion (area where the underground tank system is located).**

(iii) **Clearly marked or labeled with an indication of the hazards of the contents (example includes, but is not limited to, the applicable dangerous waste characteristic(s) and criteria of ignitable, corrosive, reactive and toxic and the applicable hazard(s) identified for listed dangerous wastes) legible at a distance of at least fifty feet. All hazard labels must include descriptive word(s) and/or pictogram(s) that identifies the hazards associated with the waste being stored or treated in the tank system(s) for the public, employees, emergency response personnel, and waste handlers. For underground tank systems, markings or labels of the hazards of the contents of the tank system must either be placed on above-ground postings above each underground tank system, or at each entrance to the active portion (area where the underground tank system is located).**

Observations: During the inspection, I observed a fenced in area which contained the underground Tanks 276-S-141 and 276-A-142 for the Hexone Storage and Treatment Facility. I observed signs stating “Danger – Unauthorized Personnel Keep Out”, “Danger – No Smoking”, and “Hazardous Waste – Radioactive – Flammable” on the south gate entrance to the Hexone Storage and Treatment Facility. I did not observe a label or marking indicating a toxic hazard on aboveground postings or at the entrance to the active portion to the Hexone Storage and Treatment Facility.

The September 22, 2008, Part A Application for the Hexone Storage and Treatment Facility lists the following waste codes: D001, D018, D019, D023, D025, D027, D028, D029, D030, D032, D033, D034, D036, D037, D039, D040, D041, D042, D043, and F003.

Action Required: On October 23, 2019, Ecology received a photograph of the entrance to the active portion to the Hexone Storage and Treatment Facility. The photograph showed that the tank system was marked with an indication of the toxic hazard. **No further action required**

3) WAC 173-303-380(1) Operating record. The owner or operator of a facility must keep a written operating record at their facility. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility: (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;

Observations: In all of the operating records I reviewed for Containers HEXO-92-000001, HEXO-92-000002, HEXO-92-000009, HEXO-92-000010, HEXO-92-000014, HEXO-92-000015, HEXO-92-000016, HEXO-92-000017, HEXO-92-000018, HEXO-92-000019, and HEXO-92-000028, I did not observe any LDR notification statements.

Action Required: On March 4, 2020, Ecology received an update to the operating record for Containers HEXO-92-000001, HEXO-92-000002, HEXO-92-000009, HEXO-92-000010, HEXO-92-000014, HEXO-92-000015, HEXO-92-000016, HEXO-92-000017, HEXO-92-000018, HEXO-92-000019, and HEXO-92-000028, showing that the land disposal restriction notifications cannot be located in the operating record. **No further action required**

Concerns

- 1) In my records request, I requested disposal records for Containers 0005021, 0005394, 0005396, 0005397, 0005440, HEXO-92-000001, HEXO-92-000002, HEXO-92-000009, HEXO-92-000010, HEXO-92-000014, HEXO-92-000015, HEXO-92-000016, HEXO-92-000017, HEXO-92-000018, HEXO-92-000019, HEXO-92-000028, and HEXO-93-000300, but this information was not included in the records provided.

WAC 173-303-380 Facility Recordkeeping (3)(a), states the following:

All facility records, including plans, required by this chapter must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the department who is designated by the director.

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.