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Washington Department of Ecology
Nuclear Waste Program
Compliance Report

Site: Waste Receiving and Processing Facility (WRAP)
RCRA Site ID: WA7890008967
Inspection Date: March 23, 2016
Site Contacts: Joel Williams, Regulatory Inspection Lead,
CH2M HILL Plateau Remediation Company (CHPRC)
Tony McKarns, Compliance
United States Department of Energy – Richland Office (USDOE-RL)
Phone: (509) 376-4782 **FAX:** N/A
Site Location: 200 West Area, Hanford Site
Benton County, Washington
At This Site Since: 1943 **NAICS#:** 56221, 924110, 54171
Current Site Status: Treatment, Storage, and Disposal Facility/Large Quantity Generator
Operating Unit Group # 7

Ecology

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Other Representatives: Kathy Conaway (Support Inspector)
Stuart Luttrell (Waste Management Permit Lead)
John Temple (Permit Writer)

Report Date: July 25, 2016
Index: #16.556
Report By: Nancy Ware

Nancy Ware 7/25/2016
(Signed) (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 of 1976, as amended, (RCRA) 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 583 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 37 unit groups at the Hanford Site. Individual DWMUs utilize only a very 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, and Revision 8C (hereafter referred to as the Permit).

Owner/Operator

USDOE is the owner of the WRAP and oversees waste management and cleanup activities ongoing on the Hanford Site. CHPRC is contracted by USDOE-RL to operate the WRAP and its corresponding DWMUs, including performing waste treatment, storage, and disposal activities, conducting waste characterization, designation, manifesting, and transportation services:

Facility Background

The WRAP, Operating Unit Group #7, is located in the Northwestern portion of the 200 West Area of the Hanford facility, Benton County, Washington, and is adjacent to the North End of the Central Waste Complex (CWC). Operations for processing mixed low-level waste (MLLW) and transuranic mixed waste (TRUM) at the WRAP began in March 1997. The WRAP provides waste receipt, confirmation, repackaging, certification, and/or storage of dangerous, mixed, and radioactive waste from onsite generators or offsite generators, DWMUs, or as a result of operations.

According to the approved WRAP Part A and Hanford Site-wide Permit, Revision 8c, Permit Condition I.A, the WRAP has six DWMUs operating to interim status standards, including:

- 2336W Building, Shipping and Receiving Area.
- 2336W Building, Non-Destructive Assay (NDA)/Non-Destructive Examination (NDE) Area.
- 2336W Building, Process Area.
- 2336W Building, Room 152.
- 2404-WB, Waste Storage Building.
- 2404-WC, Waste Storage Building.

USDOE-RL and CHPRC are seeking authorization to operate an additional DWMU:

- High Energy Real Time Radiography (HERTR) and Super High Energy Neutron Counter (HENC) Waste Outdoor Storage Area.

The processing area contains process enclosures (glove boxes) for opening, sorting, sampling, and repackaging the contents of the waste containers. In the NDA/NDE area and the HERTR and Super HENC areas, WRAP personnel can perform x-ray imaging of the contents of containers (NDE) and radioactive analysis (NDA) of the contents of containers. The facility also includes a process support area, a sample management area, and an administrative area.

Compliance Background for the WRAP

March 14, 2011 – The National Enforcement Investigations Center (NEIC) conducted a compliance evaluation inspection (CEI) of the Hanford Solid Waste Operating Complex (SWOC), which included the WRAP. Their inspection findings were provided to EPA Region 10. EPA issued a Consent Agreement and Final Order (CAFO) to USDOE-RL in 2013.

May 20, 2011, July 2011, and September 17, 2012 – Ecology conducted a focused compliance inspection of the WRAP 2404-WB Building after a container spill of mixed waste (MW). Based on Ecology's inspection and investigation, the following violations were:

- 1) Failure to timely notify Ecology of a release to the environment.
- 2) Failure to timely implement a Contingency Plan.
- 3) Failure to designate waste according to required procedures.

- 4) Failure to confirm knowledge about a dangerous waste (DW) before it is treated, stored, or disposed.
- 5) Failure to inspect the facility to prevent malfunction and deterioration, operator errors, and discharges, which may cause or lead to the release of DW constituents to the environment, or a threat to human health.
- 6) Failure to take immediate remedial action when a hazard was imminent or has already occurred.
- 7) Failure to record on an inspection log or summary the date and notations of observations made and the date and nature of repairs or remedial actions taken.
- 8) Failure to adequately label containers with the major risk, and/or to maintain identification of containers.
- 9) Failure to ensure the compatibility of waste with containers.
- 10) Failure to protect containers.

An enforcement action led to negotiations between USDOE-RL and Ecology and resulted in an Agreed Order. The Agreed Order and Stipulated Penalty was effective January 24, 2014, docket number DE10156, and is still in effect.

June 26, 2013 – EPA, Region 10, filed a CAFO to resolve violations of RCRA at the USDOE-RL Hanford facility that were identified by NEIC during an inspection at SWOC in 2011. The CAFO cited the following violations:

- 1) Operating eight DWMUs at SWOC without authorization.
- 2) Failure to have adequate closure plans for those units.
- 3) Failure to close or obtain an extension to operate two inactive DWMUs.
- 4) Failure to treat waste before placement inside of burial grounds inside SWOC as required by land disposal restriction requirements.

In the CAFO, USDOE-RL agreed to:

- 1) Submit closure plans for the eight units as permit modifications and to close those units according to the Permit.
- 2) Immediately comply with applicable final treatment, storage, and disposal (TSD) facility standards at these eight units.
- 3) Submit closure plans or get authorization for the two inactive units.
- 4) Cease treatment of waste within the low level burial grounds.
- 5) Pay a penalty of \$137,000.

EPA, Region 10, referred eleven other DWMUs with respect to permit authorization to Ecology.

October 22, 2014 – Ecology conducted a focused compliance inspection on the status of operating authority and closure for the eleven DWMUs, including units at the WRAP as a follow-up to the EPA referral mentioned above. USDOE-RL indicated that the some of these units would be needed for operation to meet clean-up milestones established through the Tri-Party Agreement, specifically the M-091 Series. Based upon the Ecology inspection, three violations and 12 concerns were issued. One concern from this inspection related to the WRAP.

1. One section of the WRAP weekly inspection sheets has a notation that reads,

*checking 'n/a' indicates:

- No waste containers in storage
- No spill pallets in use
- No waste containers in the ACMP

It was unclear in this notation what 'n/a' meant (i.e., did it mean one of the bullets or all of the bullets?). Notations on required DW inspection sheets should be clearly explained.

April 29, 2015 – Ecology conducted a CEI at the Hanford WRAP. Ecology cited a violation for failure to include all job titles/positions in the DW training plan and a concern for providing further clarity to inspection records.

Inspection Summary

On Wednesday, March 23, 2016, Ecology performed a CEI of the WRAP. At 9:15 a.m., Ms. Conaway, Mr. Luttrell, Mr. Temple, and I arrived at the CWC Building MO-720 parking lot. We were met by USDOE-RL and CHPRC personnel.

Duane Carter, USDOE-RL, Environmental
Tony McKarns, USDOE-RL, Environmental
Brett Barnes, CHPRC, Inspection Lead
Sasa Kosjerina, CHPRC, Environmental
Stuart Mortensen, CHPRC, Facility Manager

Mr. Mortensen directed us to go over to the MO-438 Building to sign in and gain radiological access to the WRAP areas. We signed in under Radiological Work Permit 007.

We then drove to the WRAP, and reconvened at the 2336W Building conference room. We were joined by Tim Fulton, Operations. After introductions, Mr. Mortensen and Mr. Fulton provided a safety briefing. Mr. Fulton said that we may encounter maintenance crews who were performing maintenance to replace lights. He said that we would take flashlights with us as a contingency in case the lights in any building were unavailable when we entered a waste storage building. He told us that a contamination area in the 2404-WC Building and a radiological area in the 2404-WB Building had been set up by Radiological Controls. Mr. Fulton said these areas may include containers with higher radiological doses, and that we should follow instructions in those areas to avoid receiving any excessive dose.

I introduced myself as the lead inspector and stated that this was a planned, announced, and focused compliance inspection of the WRAP's DW management units as part of the required annual CEI of the Hanford Site. I said that I would not be looking at generator activities during this inspection. I said the purpose of this inspection was to determine compliance with the Interim Status Treatment, Storage, and Disposal requirements under 40 CFR 265, as incorporated by WAC 173-303-400, and applicable chapters of WAC 173-303 for dangerous waste management.

I explained that I would like to start with a discussion of the DWMUs, and then follow with a physical inspection of the DWMUs, including looking at container management. I said that after we completed the physical inspection, I may have additional questions.

I asked Mr. Mortensen to provide me with the names of all WRAP DWMUs, a description of each DWMU, future operational plans for each DWMU, and the date of last receipt of DW at each DWMU. He said that the WRAP had the following DWMUs:

- 2336W Building, Process Area
- 2336W Building, NDA/NDE Area
- 2336W Building, Shipping and Receiving Area
- 2336W Building, Room 152
- 2404-WB, Waste Storage Building
- 2404-WC, Waste Storage Building
- HERTR and Super HENC Waste Outdoor Storage Area

Mr. Mortensen said that all of these DWMUs were used for waste storage, and that no treatment was currently being performed at the DWMUs. I asked him to explain the future operational plans for these DWMUs, and he said that all areas of the WRAP were planned to remain in a minimal operational mode currently. Mr. Mortensen added that WRAP operations personnel were currently performing all the DW activities of an operating facility and maintaining the facility for future operations. Mr. Mortensen said that he did not have the dates of last receipt of DW at each DWMU available at this time. Mr. Barnes said that CHPRC could look this information up and submit the information to me after the inspection.

I asked Mr. Mortensen if there were any additional storage areas at WRAP for DW or MW. He said no.

We began our physical inspection by viewing a model of the 2336W Building areas, which was located near the main entrance of the 2336W Building. Mr. Mortensen indicated to us where each DWMU was located on the model, and where each DWMU was in relationship to where we were currently located.

We went first to 2336W Building, Room 152, and as we entered, I observed multiple containers sitting on the floor. I asked if any waste was currently stored in this room. Mr. Fulton said no. He said that all of these were product containers. I also observed two flammable storage cabinets. Mr. Fulton opened the cabinets and told me that the contents of the cabinets were also product containers.



Photo # DSC01170, Building 2336W, Room 152

We next went into the 2336W Building, Shipping and Receiving Area. To the left I observed the automatic drum stacker. Mr. Mortensen said this piece of equipment was referred to as the “taxi.” He explained that during the period when CHPRC was performing campaigns to certify waste containers for shipment to the Waste Isolation Pilot Plant (WIPP), Carlsbad, New Mexico, this area had been used to store MW containers. He said that the automatic drum stacker would place metal drums on pallets in stacks of three and when needed, retrieve the drums. Mr. Mortensen pointed to an area at the end of the drum stacker and container area. He said that in this area the automatic drum stacker would place a pallet of metal drums down so that container inspections could be performed. Mr. Mortensen explained that the operation of the drum stacker was automated and showed us the computer used to program the stacker. By using this system, the operator would then be able to observe the entire outer container for inspection.

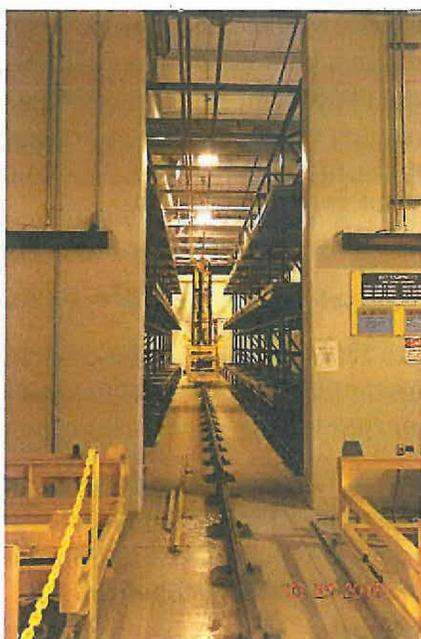


Photo # DSC01171, Automatic Drum Stacker

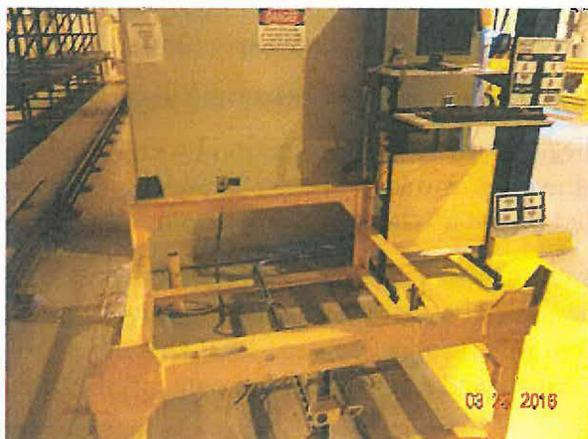


Photo # DSC01173, Pallet Stand for Container Inspections

I observed that the floors in this DWMU were coated for containment and appeared to be in good condition.

We walked around the corner to the left, and I observed nine plastic containers on a handcart. I observed that each container was a plastic bag, horse-tailed closed, and taped shut. I observed that the plastic bags contained batteries, and that the battery terminals had also been taped. I observed that each container was labeled as hazardous waste, corrosive, and had an accumulation start date of March 8, 2016. Mr. Mortensen told us that WRAP Operations had performed a maintenance campaign for the replacement of the uninterruptible power supply. He stated that ~60 batteries had been taken out of service during the campaign, and that they were able to recycle most of the batteries, with the exception of these nine lead-acid batteries. He said that containers were ordered to ship the batteries to an offsite TSD for treatment and disposal. Mr. Fulton added that the lead-acid batteries designated as D008 and WSC2 waste codes.

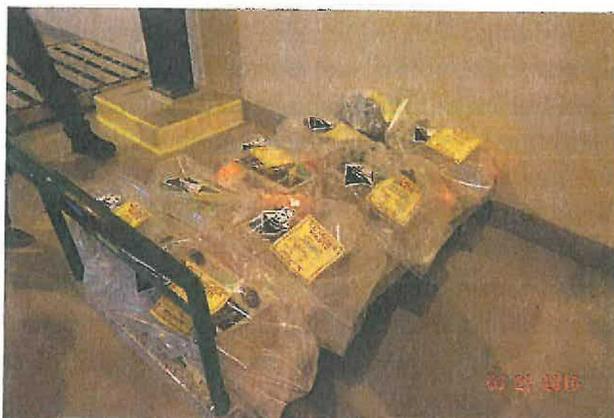


Photo # DSC01174, nine DW containers (lead-acid batteries)

We proceeded along this corridor in the Shipping and Receiving Area. Mr. Mortensen explained that we were then in the Transuranic Waste (TRU) Pack Bay. He said that CHPRC had not performed any TRU packing since late 2011. Mr. Mortensen told us that the Central Characterization Project (CCP) from the WIPP had set up operations in this area to certify TRU waste containers as CHPRC packed the containers. He said that this process allowed the containers to be pre-certified for shipment to WIPP. Mr. Mortensen said that CCP had also halted their operations at the WRAP in late 2011 and had taken their equipment with them.

I observed two vacuum canisters in this area, and asked if any filters were generated from use of the vacuums. Mr. Mortensen and Mr. Fulton both stated that the vacuums had been used during the TRU pack operations and had not been used since.

Mr. Mortensen next showed us a piece of equipment, which he called the “Automatic Center of Gravity Lifter.” He said the Automatic Center of Gravity Lifter is used to fit the TRU packs together to ensure proper placement of the containers in the pack.

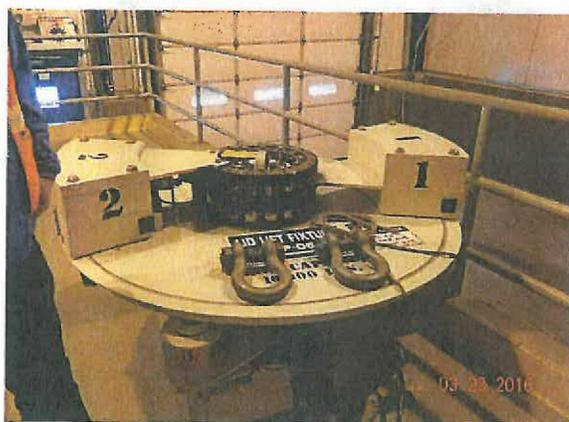


Photo # DSC01177, Automatic Center of Gravity Lifter

Next we walked to the 2336W Building NDA/NDE Area. We entered the aisle on the North Side of the DWMU. Mr. Mortensen explained that CHPRC had started in early calendar year 2000, retrieving waste containers, which had been buried in the Low Level Burial Grounds Retrieval Trenches from prior to and during the 1970's. He said that historic container records indicated that the waste was TRUM. Mr. Mortensen said that at the time of burial, there was no place established to send TRUM, so it had been accepted into burial storage until a path forward for treatment and disposal could be determined. He said that when WIPP was established as a destination for TRUM, retrieval of these waste containers began. Mr. Mortensen said that, as designated by the historic records, the waste was presumed to be TRUM upon retrieval. He explained that during the retrieval campaigns, CHPRC used both the NDE and the NDA at the WRAP to determine if the presumption was correct for each container.

Mr. Mortensen pointed out the NDE machines, which x-ray the container and its contents. He told me that because it was unknown where this waste would eventually be treated and disposed, no criteria was available at the time of burial for acceptable waste items. He said that once WIPP was named as the destination disposal, they were able to use the WIPP acceptance criteria to sort through the waste for acceptable items. Mr. Mortensen said that WRAP Operations personnel used the NDE machines to look for prohibited waste in the containers. He said that an individual waste drum would be placed on the conveyor belt and moved into the NDE machines. He said that the NDE machine would then x-ray the container and its contents and record the data for technical review.

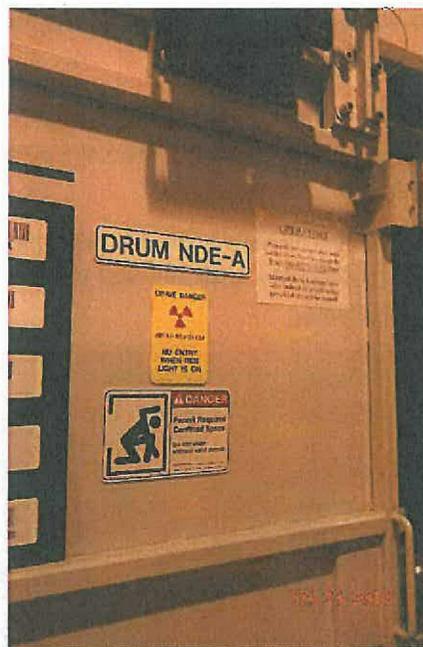


Photo # DSC01179, Drum X-Ray Machine (NDE)

Mr. Mortensen also pointed out the NDA machines. He said there were two different brands of assay machines used, the gamma energy assay (GEA) and the image passive active neutron assay (IPAN). He explained that each type of assay machine would measure for different radionuclides.

Mr. Mortensen said that the assay equipment scans the container and waste contents to measure the radiological content and record the data for technical review. He said that technical reviewers can analyze the data and determine if the waste in each container is low level waste (LLW) or TRU. He said

that once that determination is made, further decisions can be made for the treatment and disposal of the waste.



Photo # DSC01182, Image Passive Active Neutron Machine (NDA)

I observed a container inside the NDA machine labeled as IPAN-B. Mr. Mortensen told me that the metal drum contained a radiological source used for radiation measurements. He said the source was needed for use at the WRAP, and that WRAP Operations had placed the container inside the IPAN for shielding purposes.

We went past the container NDA and NDE equipment, and Mr. Mortensen showed us the two conveyor belts, which moved containers into the 2336W Building Process Area. He explained that if containers were identified through NDE to have prohibited items or non-conforming conditions, the containers would be moved through these conveyor belts to the gloveboxes in the 2336W Building Process Area. He said that by using the glove-boxes, Nuclear Chemical Operators (NCOs) were able to safely remove items from the waste and repackage the waste into WIPP-compliant containers.



Photo # DSC01184, Conveyor Belts to Gloveboxes

We then went down the aisle on the South Side of the 2336W Building NDA/NDE Area. Mr. Mortensen showed us the boxed waste assay system. He said they referred to this system as B-WAS. He said that the system had not been used.

Mr. Mortensen also showed us the box NDE system, which he said had been used. He explained that this system was old and that technology had outdated the system. He said that the HERTR system, which is located in Building 2406W, now performs NDEs resulting in more precise definition and resolution.

We completed our physical inspection of the DWMUs inside the 2336W Building, and walked to the 2404-WB Building. We entered the 2404-WB Building from the East Side. Mr. Mortensen told me that there were six containers of waste being stored inside of the 2404-WB Building. He said that the waste was non-hazardous waste from the Plutonium Finishing Plant. Mr. Mortensen said the other containers being stored in this building were empty containers.

In the 2404-WB Building, I observed stains on the floor. I observed that the floor was marked "roof leak" and had arrows pointing to two circles of staining.



Photo # DSC01197, Interior of 2404-WB Building,
Marking on floor indicating two areas of roof leakage

We left the 2404-WB Building and went to the 2404-WC Building. On the way, I observed an emergency spill kits box. I asked if I could look inside the box. Mr. Fulton said that he would call an NCO to arrange this. I said we could continue our physical inspection of the 2404-WC Building first if we needed to wait for an NCO. Mr. Mortensen said that would give them time to call a NCO to come over. We proceeded to the 2404-WC Building.

Mr. Mortensen reminded us before entering the building that a radiological area had been established in this building for some high radiological dose containers. He asked that we pay attention to the rope barricades, radiological posting signs, and stay together as a group to avoid unnecessary exposure to high radiological doses.

We entered the 2404-WC Building from the East Entrance. Mr. Mortensen said that the first row of containers that we encountered were empty containers. I next observed a row of standard waste boxes, which Mr. Mortensen said were also empty. I observed Container #0087221 was labeled as hazardous waste and toxic. I observed Container #0087233 was labeled as hazardous waste and toxic. Mr. Mortensen stated that the two 110-gallon metal drums had been shipped to CWC by Washington Closure Hanford for storage. On the other side of the building, I observed one row of 18 containers and another row of nine containers of hazardous waste. Mr. Mortensen said that these containers had been shipped to CWC for storage from the Plutonium Finishing Plant Comprehensive Environmental

Response, Compensation, and Liability Act of 1980 clean-up location. I also observed 24 metal 55-gallon drums, which were labeled as hazardous waste. Mr. Mortensen said that these containers were from the Hanford Engineering Development Laboratory (HEDL) waste stream that had been retrieved from the burial ground waste retrieval trenches. He said that this waste stream had proven problematic as several of the inner containers from this stream had corroded through the outer containers. He said that CWC Operations had decided to send all the waste containers from this HEDL waste stream to PermaFix Northwest (PFNW) for treatment. Once treated at PFNW, the new containers of the HEDL waste had been sent back to the WRAP for storage.



Photo # DSC01206, Container #0087221,
Hazardous Waste and Toxic

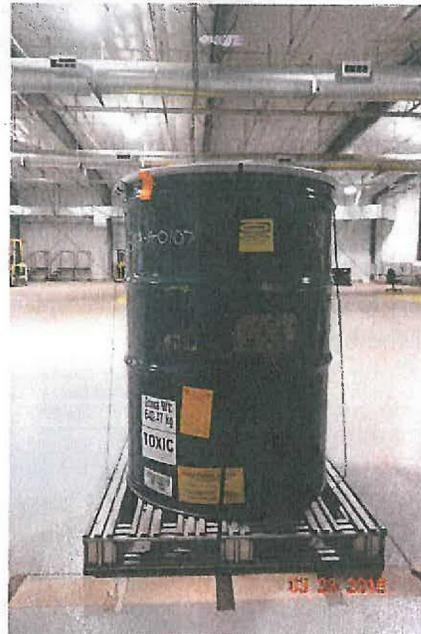


Photo # DSC01207, Container #0087223,
Hazardous Waste and Toxic

I asked Mr. Mortensen if the containers in storage at the WRAP were MLLW or TRUM. Mr. Fulton reviewed the inventory sheet he was carrying and said that all containers in storage at the WRAP were TRUM, other than the nine containers of lead-acid batteries. Mr. Fulton said that the nine containers were hazardous waste, but not radiological waste.

We walked to the 2406W Building, and Mr. Mortensen told me that this was the location where HERTR was performed. We then walked to the MO-610 Building. He said that this was the location where Super HENC activities were performed.



Photo # DSC01214, MO-610 Building SuperHENC

We walked back to the location of the emergency spill kits box, and I observed that the box was sealed when we arrived. Mr. Fulton broke the seal and opened the box. Inside the box I observed ropes, chains, absorbent, gloves, markers, shovels, spill pigs, and radiological posting signs. Mr. Fulton called an NCO to reseal the box.

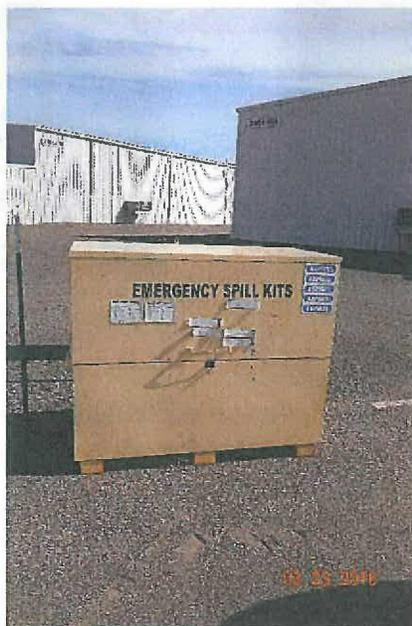


Photo # DSC01199, Emergency Spill Kits Box

We went back to the 2336W Building conference room. Ms. Conaway asked who the Building Emergency Director (BED) was today. Mr. Fulton said that he was the BED covering the CWC and the WRAP today. I asked where the contingency plan was maintained. Mr. Fulton said a copy of the building emergency plan was located in the cabinet directly behind me.

I asked if any ignitable or reactive waste streams are being stored at the WRAP. Mr. Fulton and Mr. Mortensen said that no ignitable or reactive waste streams had been stored at the WRAP for several years.

I asked if any DW treatment was currently being performed in the WRAP DWMUs. Mr. Mortensen said no. I asked if any treatment by generator was being performed in any less-than-90-day areas at the WRAP, and Mr. Fulton said no.

I asked Mr. Mortensen if there had been any changes in operational activities or types of wastes generated since the last Ecology inspection in April 2015. Mr. Mortensen said that the facility is still operating to a minimal safe status and is still performing all activities required of an operational TSD. He said no changes had occurred in the types of wastes generated.

I asked Ms. Conaway, Mr. Luttrell, and Mr. Temple if they had any further questions concerning the inspection. They said no. I thanked all personnel present for their time and for providing us with information. I said that I did not see any areas of non-compliance during the inspection today, but that I would look at documents and let them know what my inspection findings were after reviewing all documents and plans. I said that I would verify document revision numbers with Mr. Barnes and submit a document request form after the inspection.

I thanked them again for their time, and the inspection ended at ~12:30 p.m.

Records Review

Waste Designations:

I reviewed the waste designation documentation for the nine Lead-Acid Batteries and observed no problems.

Manifests:

I requested all the manifests outgoing from WRAP since the April 29, 2015, Ecology inspection. I received manifest tracking number 008857125, a shipment of dangerous waste to PSC Environmental Services Burlington Environmental, LLC, Kent, Washington.

40 CFR 262, *Standards Applicable to Generators of Hazardous Waste*, Appendix to Part 262 – *Uniform Hazardous Waste Manifest and Instructions* (EPA Forms 8700-22 and 8700-22A and Their Instructions). *Item 5. Generator's Mailing Address, Phone Number and Site Address*, states,

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

I observed that Box number 5, Generator's Name and Mailing Address listed U.S. Depart. of Energy c/o CHPRC with a mailbox location. I observed that no site address was listed.

Waste Profiles:

I requested waste profiles for incoming waste streams and received PFNW-230-0012, PFNW-230-0013, PFNW-230-0014, PFPX-230-0016, WCHT-230-0001, and PFPX-220-0007. I observed that revision dates for all profiles were over 12 months old, and no recertifications were included with the profiles.

Waste Analysis Plan:

I requested the most current revision of the facility Waste Analysis Plan (WAP), and CHPRC provided PRC-STD-EP-53090, Revision 0, Change 0, *Central Waste Complex - Waste Receiving and Processing Facility Waste Analysis Plan*.

WAC 173-303-300(2) states,

The owner or operator must obtain a detailed chemical, physical, and/or biological analysis of a dangerous waste, or nondangerous wastes if applicable under WAC 173-303-610(4)(d), before they store, treat, or dispose of it. This analysis must contain the information necessary to manage the waste in accordance with the requirements of this chapter. The analysis must include or consist of existing published or documented data on the dangerous waste, or on waste generated from similar processes, or data obtained by testing, or a combination of these.

PRC-STD-EP-53090, Section 2.2.1 details what information is required to be evaluated for acceptance. However, Sections 2.2.1 and 3.0 do not detail how this information is evaluated, and ultimately how waste is approved for acceptance.

In addition, the WAP does not include a description of how ignitable, reactive, and incompatible wastes will be evaluated for storage during the acceptance process.

WAC 173-303-300(2)(b) states,

As required in WAC 173-303-380(1)(c), records must be retained containing specific information that show compliance with this subsection for sufficient and reliable information on the waste whether the owner or operator relies on analytical testing of the waste or knowledge from the generator, or a combination of these.

PRC-STD-EP-53090, Section 2.2.3, *Waste Exempted from Profile Process*, states,

CWC-WRAP waste generated from O&M activities is exempt from the profile process. Additional information on CWC-WRAP-generated waste is provided in Section 4.2.

PRC-STD-EP-53090, Sections 2.2.3 and 4.2 do not describe documentation of acceptance for CWC-WRAP generated wastes. The WAP must describe what records will be retained for CWC-WRAP generated wastes to show that the facility has obtained sufficient and reliable information on the waste prior to accepting into the facility, whether the facility relies on analytical testing of the waste or knowledge from the generator, or a combination of these.

WAC 173-303-300(4) states,

Analysis must be repeated as necessary to ensure that it is accurate and current.

PRC-STD-EP-53090, Section B4.1, *Waste Resulting from Treatment at CWC-WRAP*, states,

Waste from onsite and offsite generators may be processed and/or treated at CWC-WRAP, resulting in a newly generated waste stream. Treatment may be performed at CWC-WRAP to change the characteristics and/or to render the waste LDR compliant. Methods for confirming the effectiveness of treatment are shown in Table 1.

PRC-STD-EP-53090, Table 1 lists methods for confirmation of treatment effectiveness. However, the WAP fails to describe any post-treatment waste analysis confirmation.

Inspections:

I requested the inspection schedules for WRAP and CHPRC provided WRP1-SV-1605, Revision 2, Change 0, *WRAP-PRO-OP-52204, WRAP Layup Surveillance* and WRP1-SV-1703, Revision 7, Change 7, *WRAP-PRO-OP-52030, Inspection of Safety/Emergency Response Equipment*.

I observed that WRP1-SV-1605, Section 4.0, *Performance*, Step 4.1.6, states,

For Appendix D, question 14:

a. IF problem is found, (i.e. free liquids are found or spill pallet is not in good condition), THEN PERFORM the following:

- 1) SWIM as appropriate*
- 2) NOTIFY DOS/FWS/RA.*
- 3) MARK Unsat on applicable column.*
- 4) RECORD problem in 'Inspection Finding' column.*
- 5) STAND BY for DOS/FWS/RA direction.*
- 6) RECORD corrective action in 'Corrective Action' column.*

I observed that Appendix D, *Weekly Waste Storage Area Inspection*, checklist does not include a question #14.

I observed that WRP1-SV-1703, Section 4.0, *Performance*, Step 4.1.3, states,

WHEN each appendix is complete, THEN PRINT, SIGN and DATE appendix, AND SUBMIT all completed appendix sheets to the DOS/SDO for review.

I observed that Step 4.1.3 did not state the requirement for including the time the inspection was performed.

I reviewed inspection records for December 2015 through March 2016. I observed the following items on inspection records.

WAC 173-303-320(2)(d) states,

The owner or operator must keep an inspection log or summary, including at least the date and time of the inspection, the printed name and the handwritten signature of the inspector, a notation of the observations made, an account of spills or discharges in accordance with WAC 173-303-145, and the date and nature of any repairs or remedial actions taken.

- RCRA Monthly Eyewash Inspection, dated 12/1/2015, failed to include the printed name of the inspector.
- RCRA Monthly Fire Extinguisher Inspection, dated 12/1/2015, failed to include the printed name of the inspector.
- RCRA Monthly Fire Suppression System Inspection, dated 12/1/2015, failed to include the printed name of the inspector.

- RCRA Quarterly First Aid Kit and CPR Kit Inventory, dated 3/23/2015, included a notation which states,

Insp. Completed on 12/2/15; original missing, however date completion tracked in historical turnover. Tim Fulton 3-23-16

WAC 173-303-320(3) states,

The owner or operator must remedy any problems revealed by the inspection, on a schedule which prevents hazards to the public health and environment. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

During the Ecology inspection on March 23, 2016, I observed stains on the floor within the 2404-WB Building as seen in photo included on page 10 of this report. I observed that the floor was marked "roof leak" and had arrows pointing to two circles of staining.

I observed that the 2404-WB Weekly Waste Storage Area Inspection log, dated 12-7-15, includes an inspection finding notation which states,

WB – Inspection notices a few roof leaks, wet on floor. Down the middle.

I observed that the 2404-WB Weekly Waste Storage Area Inspection log, dated 12-7-15, included two corrective action notations which state,

WB – Inspection notices a few roof leaks, wet on floor. Down the middle.

Updated historical turnover to note roof leak; also updated drawing to indicate leaks. Tim Fulton 12-8-15

I requested the current schedule for WRAP roof repairs. I observed the stated written response by CHPRC states,

At this time there are no scheduled roof repairs based on the results of the weekly inspections.

Note: DE10156, Agreed Order between USDOE-RL, CHPRC, and Ecology, Exhibit A, Section 1.10.2.3 requires that *Work orders or directives to correct problems resulting from malfunctions and deterioration, operator errors, and discharges (WAC 173-303-320(1)) or necessary repairs or remedial actions (WAC 173-303-320(2)(d)) will be acted upon on a schedule that reflects the risk or hazard (WAC 173-303-320(3)). Roof leaks of dangerous waste storage buildings, if observed, will be identified by required inspections. In addition to weekly inspections, ad hoc tours by operations personnel may be used to identify roof leaks and damage to/deterioration of Dangerous Waste storage buildings. All leaks will be tracked in unit operating records. Leak repair priority will be determined by the risk of the leak to stored waste containers and as allowed by weather conditions; but shall occur on at least a yearly frequency.*

Contingency Plan:

I requested the most current revision of the facility contingency plan, and CHPRC provided HNF-IP-0263-WRAP, Revision 21, *Waste and Fuels Management Project Building Emergency Plan for WRAP.*

WAC 173-303-350(3) states,

The contingency plan must contain the following:

(e) A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and the physical description of each item on the list, and a brief outline of its capabilities;

I observed that HNF-IP-0263-WRAP, Section 9.0, *Emergency Equipment*, does not state where all emergency equipment is located.

WAC 173-303-350(3) states,

The contingency plan must contain the following:

(f) An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes.

I observed that HNF-IP-0263-WRAP, Section 7.1.1, *Evacuation*, does not describe the evacuation route and the alternate evacuation route, or include these routes on a map.

Training:

I asked if the most current revision of the WRAP DW training plan was PRC-STD-TQ-40229, Revision 1, Change 0, *Central Waste Complex–Waste Receiving and Processing Facility Dangerous Waste Training Plan*, and Mr. Williams verified that it was. I requested DW training records for one Field Work Supervisor, one Nuclear Chemical Operator, and one maintenance craft personnel. I observed no problems with the records.

Closure Plans:

I requested closure plans for WRAP DWMUs. CHPRC pointed me to the Part B SWOC Application submittal of January 2016. I observed that closure plans were submitted for:

- HERTR and Super HENC Closure Plan.
- 2404-Series Buildings Closure Plan.
- 2336W DWMUs Closure Plan.

April 27, 2016, Follow-up Meeting

On Wednesday, April 27, 2016, Ms. Conaway and I followed-up on several issues from the March 23, 2016 inspection. At 9:25 a.m., we arrived at the 200 West Area, Building MO-287 conference room. We were met by USDOE-RL and CHPRC personnel.

Mitch Boyd, CHPRC, Environmental
Sasa Kosjerina, CHPRC, Environmental
Stuart Mortensen, CHPRC, Facility Manager
Marshall Myrick, CHPRC, Transportation Manager
Jim Portsmouth, CHPRC, Transportation
Kim Tarter, CHPRC, Records
Mike Waters, CHPRC, Waste Services Manager
Joel Williams, CHPRC, Environmental Inspection Lead

I said I had three areas that I would like to follow-up on, which included manifesting, annual profile recertification, and the dates of the last receipt of DW at each DWMU.

I stated that the manifest that I had been provided did not indicate anywhere in the address that the shipment had originated from WRAP. I said that it only listed a post office box for the mailing address and no generator's site address. Mr. Myrick said that this was correct. The post office box address is included on the manifest so that the signed manifest can be returned to that address, since there is no mailing address at the site. Mr. Portsmouth added that in the past CHPRC has not included the generator's site address on the manifests. He said that since January 2016, CHPRC has been including a site area description in the generator's site address block.

I asked if Burlington Environmental picked up the shipment on site, or if the DW was taken to the 2355 Stevens Center in Richland. Mr. Myrick said that the shipment was picked up by Burlington at the WRAP. Mr. Portsmouth said that in the past the 2355 Stevens Center in Richland had been used as a transfer center. However, he said that Burlington was currently picking up the DW on site.

I said that I had reviewed the waste profiles submitted to me and could not determine that the profiles had been recertified on an annual basis as was required by the WAP. I said that I observed that PFPX-230-0016 had been revised October 8, 2015. I said that I observed that the other five profiles were over 12 months old. I requested a copy of the recertification for each of these five profiles.

Ms. Tarter tried to retrieve the recertification from the WRAP electronic operating record, but was unable to locate recertifications for these profiles in the Integrated Document Management System (IDMS). She explained that the profile operating record information was maintained as a hard copy by Waste Services until the information was transferred to Records Management for scanning into the IDMS.

I asked if Waste Services could provide a copy of the hard copy records today. Mr. Williams said that he would have Mr. Waters bring me a copy of the recertification for each profile.

Mr. Kosjerina said that he had contacted Mr. John Berger to retrieve shipping information from the Solid Waste Information Tracking System (SWITS). He provided the SWITS report for 2404-WC to Ms. Tarter so she could retrieve the date of last receipt of DW or MW from 2404-WC. Ms. Tarter pulled up the shipping information. Mr. Kosjerina contacted Mr. Berger again to receive the dates for last received DW or MW at each DWMU.

Mr. Waters brought me a copy of the recertification PFPX-220-007-09, which indicated that the profile had been recertified August 13, 2015. He told me that the other four profiles had not been recertified. I asked him to explain the recertification process. Mr. Waters described the recertification process as follows.

A report is printed out of SWITS on a monthly basis by Waste Services, which lists any profiles that will be expiring during the month. Waste Acceptance personnel send a request to the generator to fill in and return indicating if the profile will be renewed or cancelled. If the profile will be renewed, a recertification form is filled out and added to the operating record.

Mr. Kosjerina received another report from Mr. Berger listing additional shipping documentation from SWITS, which he provided to Ms. Tarter. This shipping report was for a non-dangerous waste shipping. I said that it was a problem that the date that each DWMU last received waste was required to be in the operating record, and that the facility could not easily retrieve the information from the record. I said I would send Mr. Williams a document request, and he could provide the information after our meeting.

Note: During the April 29, 2015, Ecology WRAP inspection, Ms. Conaway had requested a copy of the facility closure plan. At that time, Ms. Tarter was unable to retrieve the closure plan from the operating record.

Compliance Problems

The Dangerous Waste inspection on March 23, 2016, 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 timeframe listed in the Action Required section of this compliance report. Include all supporting documentation such as photographs, records, and statements explaining the actions taken and dates completed to return to compliance.

Attention: Nancy Ware
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 Nancy Ware 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:

Nancy Ware at (509) 372-7912

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

- 1) **40 CFR 262 , Standards Applicable to Generators of Hazardous Waste, Appendix to Part 262 – Uniform Hazardous Waste Manifest and Instructions (EPA Forms 8700-22 and 8700-22A and Their Instructions), as incorporated by WAC 173-303-180. Item 5. Generator's Mailing Address, Phone Number and Site Address. Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.**

Observations: I observed that Box number 5, Generator's Name and Mailing Address listed U.S. Depart. of Energy c/o CHPRC with a mailbox location. I observed that no site address was listed.

Action Required: CHPRC initiated the inclusion of a generator site description in Box 5 of the manifest January 2016. **No further action is 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 173-303-320(2)(d), as incorporated by WAC 173-303-400(3). The owner or operator must keep an inspection log or summary, including at least the date and time of the inspection, the printed name and the handwritten signature of the inspector, a notation of the observations made, an account of spills or discharges in accordance with WAC 173-303-145, and the date and nature of any repairs or remedial actions taken.**

Observations: I reviewed inspection records for December 2015 through March 2016. I observed the following items on inspection records.

- RCRA Monthly Eyewash Inspection, dated 12/1/2015, failed to include the printed name of the inspector.
- RCRA Monthly Fire Extinguisher Inspection, dated 12/1/2015, failed to include the printed name of the inspector.
- RCRA Monthly Fire Suppression System Inspection, dated 12/1/2015, failed to include the printed name of the inspector.

Action Required: CHPRC updated inspection processes on February 25, 2016 to include the printed name of the inspector on inspection logs. **No further action is required.**

Observations: I reviewed inspection records for December 2015 through March 2016. I observed the following items on inspection records.

- RCRA Quarterly First Aid Kit and CPR Kit Inventory, dated 3/23/2015, included a notation which states,

Insp. Completed on 12/2/15; original missing, however date completion tracked in historical turnover. Tim Fulton 3-23-16

Action Required: CHPRC discovered the missing inspection log, and documented in the operating record that it was missing. **No further action is required.**

- 3) **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 173-303-320(3), as incorporated by WAC 173-303-400(3). The owner or operator must remedy any problems revealed by the inspection, on a schedule which prevents hazards to the public health and environment. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.**

Observations: During the Ecology inspection on March 23, I observed stains on the floor within the 2404-WB Building as seen in photo included on page 10 of this report. I observed that the floor was marked "roof leak" and had arrows pointing to two circles of staining. I observed that the 2404-WB Weekly Waste Storage Area Inspection log, dated 12-7-15, includes an inspection finding notation which states, *WB – Inspection notices a few roof leaks, wet on floor. Down the middle.* I observed that the 2404-WB Weekly Waste Storage Area Inspection log, dated 12-7-15, included two corrective action notations which state, *WB – Inspection notices a few roof leaks, wet on floor. Down the middle.*

*Updated historical turnover to note roof leak; also updated drawing to indicate leaks.
Tim Fulton 12-8-15. I observed a written statement by CHPRC states, at this time there are no scheduled roof repairs based on the results of the weekly inspections.*

Action Required: Within 60 days of receipt of this report, USDOE-RL and CHPRC must submit to Ecology documentation that the roof leaks in 2404-WB have been repaired or placed on a schedule for remedy, which prevents hazards to the public health and environment.

4) 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 173-303-350(3), as incorporated by WAC 173-303-400(3). The contingency plan must contain the following: (e) A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and the physical description of each item on the list, and a brief outline of its capabilities;

Observations: I observed that HNF-IP-0263-WRAP, Revision 21, *Waste and Fuels Management Project Building Emergency Plan for WRAP*, Section 9.0, *Emergency Equipment*, does not state where all emergency equipment is located.

Action Required: USDOE-RL and CHPRC submitted a Part B Application for all SWOC units, including WRAP, January 2016. This item has been referred to the Ecology Waste Management Project as part of the permitting process. **No further action is required.**

5) 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 173-303-350(3), as incorporated by WAC 173-303-400(3). The contingency plan must contain the following: (f) An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternative evacuation routes.

Observations: I observed that HNF-IP-0263-WRAP, Section 7.1.1, *Evacuation*, does not describe the evacuation route and the alternate evacuation route, or include these routes on a map.

Action Required: USDOE-RL and CHPRC submitted a Part B Application for all SWOC units, including WRAP, January 2016. This item has been referred to the Ecology Waste Management Project as part of the permitting process. **No further action is required.**

Concerns

1. PRC-STD-EP-53090, Section 2.2.1 details what information is required to be evaluated for acceptance. However, Sections 2.2.1 and 3.0 do not detail how this information is evaluated, and ultimately how waste is approved for acceptance. The WAP fails to describe the waste acceptance requirements for the unit.
2. The WAP does not include a description of how ignitable, reactive, and incompatible wastes will be evaluated for storage during the acceptance process.
3. PRC-STD-EP-53090, Sections 2.2.3 and 4.2 do not describe documentation of acceptance for CWC-WRAP generated wastes. The WAP must describe what records will be retained for CWC-WRAP generated wastes to show that the facility has obtained sufficient and reliable information on the waste prior to accepting into the facility, whether the facility relies on analytical testing of the waste or knowledge from the generator, or a combination of these.
4. The WAP also fails to describe any post-treatment waste analysis confirmation.
5. I observed that WRP1-SV-1605, Section 4.0, *Performance*, Step 4.1.6, lists requirements for Appendix D, question 14. I observed that Appendix D, *Weekly Waste Storage Area Inspection*, checklist does not include a question #14.
6. I observed that WRP1-SV-1703, Section 4.0, *Performance*, Step 4.1.3 did not state the requirement for including the time the inspection was performed.
7. I observed that the inspection record dated, December 7, 2015, listed roof leaks within the 2404-WB Building, and repairs have not yet been scheduled. The Ecology, USDOE-RL, and CHPRC, Agreed Order, DE10156, requires that roof leaks will occur on at least a yearly frequency. Repair of the roof must be placed upon the yearly schedule for roof repair.
8. During Ecology inspections of the WRAP, CHPRC personnel have not been able to retrieve information, which is required by the DW regulations to be placed into the operating record, from the operating record.

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