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**Department of Energy**
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

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Ms. J. A. Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

Dear Ms. Hedges:

DANGEROUS WASTE COMPLIANCE INSPECTION ON AUGUST 19, 2014, AT THE B PLANT COMPLEX, RESOURCE CONSERVATION AND RECOVERY ACT SITE ID: WA7890008967, NUCLEAR WASTE PROGRAM COMPLIANCE INDEX NO.: 14.502

This letter and the attached information are in response to the Washington State Department of Ecology's (Ecology) letter to S. Charboneau, RL, and J. A. Ciucci, CHPRC, 15-NWP-047, dated March 12, 2015, which provided a Compliance Report of the August 19, 2014, inspection of the B Plant Complex. The response to the observations and required actions identified in the report must be considered within the context of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement, hereinafter referred to as the TPA) and associated documents as further discussed in this letter.

Agreements regarding the approach and timing for addressing Resource Conservation and Recovery Act (RCRA) compliance at B Plant were made by the Parties almost 20 years ago in accordance with the TPA and are documented in the TPA and associated documents. Given this history and context, the B Plant inspection report requests actions that are not consistent with the TPA and documents approved under it.

In Section 8.0 of the TPA Action Plan, B Plant is identified as a key facility. B Plant was deactivated in accordance with B Plant End Points Document (WHC-SD-TPP-054). Final disposition is to be addressed through a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial action with completion schedules to be established in Remedial Investigation/Feasibility Study (RI/FS) and Remedial Design/Remedial Action (RD/RA) Work Plans in accordance with TPA Action Plan Section 11.6. B Plant is in the 200-CB-1 Operable Unit (OU). The date for completion of the RI/FS Work Plan for that OU will be established under TPA Milestone M-085-02. RCRA closure will be coordinated with the CERCLA Remedial Action. Until initiation of the CERCLA Remedial Action, Surveillance and Maintenance (S&M) is performed in accordance with the Surveillance and Maintenance Plan for the 221-B Facility (DOE/RL-99-24).

At the time of B Plant deactivation, the U.S. Department of Energy (DOE) Richland Operations Office (RL), Ecology, and U.S. Environmental Protection Agency (hereinafter referred to as the Parties) recognized that it was not feasible to bring the facility into compliance with all

Washington Administrative Code (WAC) 173-303-400 interim status standards and that there could be a lengthy period of S&M prior to final disposition of the facility and closure of the treatment, storage, disposal (TSD) unit. The version of the TPA Action Plan in effect during the deactivation phase of B Plant stated the following in Section 8.8: "In cases where physical conditions and/or unknowns prevent timely completion of closure, RL will prepare and submit to Ecology for review and approval, a Pre-closure Work Plan for implementation during the transition phase." That Pre-closure Work Plan for B Plant (DOE/RL-98-12) was prepared and subsequently approved by Ecology. (The current version, Revision 2, was approved by Ecology on September 21, 1999.) TPA Action Plan, Section 8.8 goes on to say that, "In cases where closure is not completed during the transition phase, the S&M Plan for the key facility will address RCRA compliance."

Section 7.0 of the B Plant Pre-closure Work Plan notes that the primary objective of the closure activities implemented during the transition phase was to place the B Plant Complex in a safe configuration with respect to human health and the environment. Activities to achieve final closure will be documented in a closure plan implemented during the disposition phase and in conjunction with the overall facility disposition. In support of the primary objective, treatment and/or storage tanks were emptied and isolated. As noted in Section 7.4 of the B Plant Pre-closure Work Plan, during the S&M phase, some of the waste management units within the B Plant Complex will not meet all of the requirements for interim status compliance invoked by WAC 173-303-400. The B Plant Pre-closure Work Plan further states that, "The inability of the waste management systems to meet interim status requirements was a major driver for shutdown and decommissioning. For B Plant Complex to be in compliance with the interim status requirements during decommissioning would be impractical and expensive." Subsequent discussion of specific requirements, justification for noncompliance, and compliance measures are provided in the B Plant Pre-closure Work Plan. The RCRA compliance decisions made in the B Plant Pre-closure Work Plan were addressed in the S&M Plan as stipulated by the TPA Action Plan Section 8.8 language cited above.

The attachment to this letter provides specific responses to the eight items identified in the report as "compliance problems" and the additional six "concerns and suggestions." The requested action for "compliance problem" number 8 (Land Disposal Restriction Report), has been completed. Some of the other compliance problems identified in the report are directly related to ongoing Hanford Emergency Management Plan Work Group discussions/negotiations as part of the longer term Hanford Facility RCRA permit renewal effort being led by Ecology. Examples of specific topics of the ongoing discussions/negotiations include incident reporting, contingency plans, spill response, and training. RL and the CH2M HILL Plateau Remediation Company (CHPRC) do not believe it is appropriate to impose actions as identified in the Ecology compliance report in lieu of completion of the discussions. The proposed actions conflict with and/or are not in coordination with these other efforts and RL believes that the remedies for these issues be left in the purview of the work groups to resolve.

Other observations in the report conflict with decisions made and documented in existing TPA compliance agreements. Taking actions as described in the Ecology compliance report would add significant costs without commensurate improvement in the protection of human health and

the environment. In fact, some of the actions required by the Ecology compliance report, such as an immediate resumption of tank inspections could put employees at significant new risk due to exposure to physical hazards, asbestos, beryllium, and radiological conditions. These additional costs in time, money, and schedule could also impact other activities associated with Hanford cleanup.

The circumstances associated with complex legacy nuclear facilities such as B Plant were not contemplated in the development of the regulations. Highly radioactive wastes in structures like the canyon facilities that pre-date RCRA, or integrating RCRA with CERCLA, or management of non-operating facilities that will not be dispositioned until Federal funding is available based on site and national priorities and congressional budget allocations, are examples of circumstances not addressed in the normal regulatory landscape for typical operating TSDs. DOE remains committed to implement RCRA requirements in accordance with agreements made by the Parties until the Parties reach new or revised agreements per the TPA process.

If you have any questions, please contact me, or your staff may contact Jeff Frey, Acting Assistant Manager for Safety and Environment, on (509) 376-7727.

Sincerely,

Stacy Charboneau

Stacy Charboneau
Manager

AMRP:WCW

Attachment:
DOE/CHPRC Response

cc w/attach:
D. B. Bartus, EPA
J. L. Boller, EPA
J. V. Borghese, CHPRC
J. W. Cammann, MSA
J. A. Ciucci, CHPRC
B. J. Dixon, CHPRC
D. A. Faulk, EPA
E. Holbrook, Ecology
S. Hudson, HAB
K. Niles, ODOE
C. P. Noonan, MSA
R. E. Piippo, MSA
J. B. Price, Ecology
K. Schanilec, EPA
E. R. Skinnarland, Ecology
R. T. Swenson, CHPRC
J. Temple, Ecology
M. J. Turner, MSA
J. F. Williams, CHPRC
Administrative Record: (B Plant)
Environmental Portal
HF Operating Record (J. K. Perry, MSA, A3-01)

cc w/o attach:
G. Bohnee, NPT
S. Harris, CTUIR
R. Jim, YN
NWP Reader File

DOE/CHPRC RESPONSE TO WASHINGTON STATE DEPARTMENT OF ECOLOGY LETTER 15-NWP-047 DATED MARCH 12, 2015,
"DANGEROUS WASTE COMPLIANCE INSPECTION ON AUGUST 19, 2014 AT THE B PLANT COMPLEX, RCRA SITE ID: WA7890008967, NWP COMPLIANCE INDEX NO.: 14.502"

Abbreviations, terms, and documents cited in the response include the following:
TPA – The Hanford Federal Facility Agreement and Consent Order
S&M Plan – Surveillance and Maintenance Plan for the 221-B Facility (DOE/RL-99-24)
Pre-closure Work Plan – B Plant Complex Pre-closure Work Plan (DOE/RL-98-12)
BEP or Building Emergency Plan – Building Emergency Plan for Surveillance and Maintenance (HNF-IP-0263-CP S&M)
HEMP – Hanford Emergency Management Plan (DOE/RL-94-02)

| ITEM NO | ECOLOGY QUOTED WAC 173-303 REFERENCE | ECOLOGY OBSERVATION | ECOLOGY PROPOSED ACTION | DOE/CHPRC RESPONSE |
|---|---|---|---|---|
| 1 | WAC 173-303-070(3). Designation procedures. (a) To determine whether or not a solid waste is designated as a dangerous waste a person must: (i) First, determine if the waste is a listed discarded chemical product, WAC 173-303-081; (ii) Second, determine if the waste is a listed dangerous waste source, WAC 173-303-082; (iii) Third, if the waste is not listed in WAC 173-303-081 or 173-303-082, or for the purposes of compliance with the federal land disposal restrictions as adopted by reference in WAC 173-303-140, determine if the waste exhibits any dangerous waste characteristics, WAC 173-303-090; and (iv) Fourth, if the waste is not listed in WAC 173-303-081 or 173-303-082, and does not exhibit a characteristic in WAC 173-303-090,determine if the waste meets any dangerous waste criteria, WAC 173-303-100. (b) A person must check each section, in the order set forth, until they determine whether the waste is designated as a dangerous waste. Once the waste is determined to be a dangerous waste, further designation is not required except as required by subsection (4) or (5) of this section. If a person has checked the waste against each section and the waste is not designated, then the waste is not subject to the requirements of chapter 173-303 WAC. Any person who wishes to seek an exemption for a waste which has been designated DW or EHW must comply with the requirements of WAC 173-303-072. (c) For the purpose of determining if a solid waste is a dangerous waste as identified in WAC 173-303-080 through 173-303-100, a person must either: (i) Test the waste according to the methods, or an approved equivalent method, set forth in WAC 173-303-110; or (ii) Apply knowledge of the waste in light of the materials or the process used, when: (A) Such knowledge can be demonstrated to be sufficient for determining whether or not it designated and/or designated properly; and (B) All data and records supporting this determination in accordance with WAC 173-303-210(3) are retained onsite. | The S&M Plan, Appendix A inventory documents "hazardous materials," which are identified with material safety data sheets that still remain in tanks outside of the 221-B canyon. The tanks are on the north side of the canyon buildings. The row labeled "211-B Chemical Tank Farm System" describes the contents and volumes, which range from 122.5 pounds to 2,250 pounds. According to the End Points Document, these tanks associated with 211-B are "Case 6, System - Abandoned in Place." The chemicals contents remaining have been stored in these tanks from the beginning of the S&M phase, which began in 1999. I did not observe sufficient information regarding the hazardous characteristics of the remaining chemicals. The hazardous substances stored in the tanks associated with 211-B have not been used for their intended purpose e for more than 15 years. The tanks continue to hold chemicals in possibly liquid or solid form that may designate as DW or MW. DOE and CHPRC state that the Tri-Parties agreed that the 211-B tanks and their remaining chemicals did not meet the criteria for the Part A Application and also stated that supporting documentation cannot be located.<br><br>HNF-3208 identifies Cel12 in the 221-B canyon contains tank TK-2-1 with approximately 1,975 gallons (2,500 kilograms) of Duolite ARC-359 "spent resin from T-18-2." The content in TK-2-1 is a spent resin, which could indicate that the tank is actively storing DW or MW. | **Within 60 days of receipt of this inspection report** RL and CHPRC must determine whether or not the solid waste in the 211-B Chemical Tank Farm System and TK-2-1 is designated as a dangerous waste or mixed waste in accordance with WAC 173-303-070(3). Solid waste determined to be dangerous waste or mixed waste must be managed in accordance with WAC 173-303. | The M-082 series of TPA milestones address the actions necessary to complete the B Plant facility transition phase. Milestone M-082-02 was to complete the deactivation of the B Plant 211-B Area and was accomplished on 12/23/96. Actions included removal of chemical inventory, flushing or emptying tanks and supply headers. Isolating utilities, and decontaminating/stabilizing surfaces contaminated with hazardous materials.<br><br>The S&M Plan (section 2.1) notes that completion of deactivation activities as documented in the end point criteria document, established a safe and environmentally secure configuration suitable for a long-term S&M Program. The Parties reached agreement on actions that would be conducted during S&M and those actions that would be deferred to the disposition phase. For example, the process for determining what would be included in the Part A for the TSD is explained in section 1.1 of the Pre-closure Work Plan. The parties did not include the 211-B tank farm in the Part A list. The S&M plan provides the approach agreed to by the parties for managing the 211-B Tank Farm during the S&M phase. As noted in Section 6 of the S&M plan, chemicals and wastes were removed, stabilized, excessed, or disposed to meet end point criteria. Table 6-1 makes it clear that the parties understood that residuals would remain in the tanks but that it wouldn't be considered dangerous waste since "dangerous waste generation and disposal are not expected during the B Plant S&M phase." The tanks were flushed and sampled. Residues remaining in the tanks will be addressed during the B Plant disposition phase in accordance with the TPA.<br><br>In regards to TK-2-1, it is agreed that the tank is storing dangerous or mixed waste. As noted in the response to questions on October 22, 2014, the tank is located in cell 2 of the canyon. Cell 2 is within the containment building description of the Part A. It is not listed in the vessel table in the Part A because it is not a process tank and is not connected to in-cell piping. |
| 2 | WAC 173-303-340(1). Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below: (a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel; (b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; (c) | According to HNF-IP-0263-CP S&M, *Building Emergency Plan for Surveillance and Maintenance,* the S&M personnel use portable emergency equipment on a vehicle at building M0-294. Mr. Corriell said the vehicle accompanies personnel when they visit a facility. I did not observe emergency equipment stored at the B Plant Complex or emergency equipment identified in the | **Within 90 days of receipt of this inspection report,** RL and CHPRC must place applicable emergency equipment in accordance with WAC 173-303-340(1) at the B Plant Complex. The locations and description of the emergency equipment must be included | No revision to the Building Emergency Plan is needed to address the requirements of WAC 173-303-340(1). B Plant is not an operating TSD. It is an unoccupied facility that has been decommissioned and is in the S&M phase pending closure in accordance with the TPA. It is equipped with appropriate preparedness and prevention equipment to minimize the possibility of fire, explosion, or unplanned release of dangerous waste or dangerous waste constituents. The more significant risk associated with B Plant is radiological. It is a category 2 nuclear facility and is governed by strict DOE safety basis documents. The following evaluation provides a demonstration that certain equipment is not required due to these circumstances: |

| ITEM NO | ECOLOGY QUOTED WAC 173-303 REFERENCE | ECOLOGY OBSERVATION | ECOLOGY PROPOSED ACTION | DOE/CHPRC RESPONSE |
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| | Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and (d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency. | building emergency plan located at the B Plant Complex. | in the revised building emergency plan. | (a) Alarm system – The hazards posed by the waste handled at the facility do not require an alarm system. The TSD is awaiting closure and dangerous waste handling activities are limited to management of infrequently generated S&M waste. As noted in section 1.5 of the BEP, B Plant is unoccupied and is entered infrequently. Personnel entering the facility will be part of a group that will have ability to be in radio/cell phone contact with the appropriate manager for immediate emergency instruction. Consequently there is no need for an internal communications or alarm system.<br>(b) Device for summoning emergency assistance – Table 9.3 of the BEP identifies a two-way radio or cell phone as required equipment. Such equipment will be in a nearby vehicle and/or on personnel.<br>(c) Fire and spill equipment – The hazards posed by the waste handled at the facility do not require any special fire or spill equipment. During periods when personnel are at the facility performing work activities such as annual surveillance, ventilation system maintenance, etc., fire extinguishers and spill response kits are available from project vehicles. Fire and spill hazards are minimal due to actions taken during deactivation (see S&M plan) and ongoing controls imposed by nuclear safety documents and fire permits.<br>(d) Water – B Plant is an unoccupied deactivated facility that does not need a water supply to address hazards posed by waste handling. See (a) above for additional information. |
| 3 | WAC 173-303-350(2). Contingency plan. Each owner or operator must have a contingency plan at his facility for use in emergencies or sudden or non-sudden releases which threaten human health and the environment. If the owner or operator has already prepared a spill prevention control and countermeasures (SPCC) plan in accordance with Part 112 of Title 40 C.F.R., or some other emergency or contingency plan, they need only amend that plan to incorporate dangerous waste management provisions that are sufficient to comply with the requirements of this section and WAC 173-303-360. The owner or operator may develop one contingency plan that meets all regulatory requirements. Ecology recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan") as found at www.nrt.org. When modifications are made to non-dangerous waste (non-Hazardous Waste Management Act or non-dangerous waste regulation) provisions in an integrated contingency plan, the changes do not trigger the need for a dangerous waste permit modification. | According to HNF-IP-0263-CP S&M, *Building Emergency Plan for Surveillance and Maintenance,* buildings and facilities covered by this BEP include the B Plant Complex, REDOX Complex, PUREX Complex, 224-B, 224-T, 24 2-B/BL, and less than 90-day accumulation area(s) managed by S&M personnel. This BEP is not specific to the B Plant Complex and includes multiple facilities. | **Within 90 days of receipt of this inspection report,** RL and CHPRC must revise and submit the current Building Emergency Plan or submit a Building Emergency Plan specifically for the B Plant Complex in accordance with WAC 173-303-350(2) for Ecology's review. The Building Emergency Plan must contain the applicable content in accordance with WAC 173-303- 350(3) for each facility addressed in the plan. | B Plant is a TSD unit that is part of the Hanford facility. (See definition of facility in WAC 173-303-040.) The requirement to have the contingency plan at the facility is met. More importantly, the contingency plan needs to be readily accessible to the emergency coordinator. The plan is kept at the work location of the emergency coordinator for accessibility. In regards to having separate plans for each unit, there is nothing in the regulations that would require each dangerous waste management unit or operating unit group to have a separate contingency plan. In fact the regulations indicate that one contingency plan can address multiple requirements. Although not applicable to interim status units, the Hanford Facility Permit describes an approach of using the HEMP plus unit-specific contingency documentation. Table 6-1 and Section 8 of the S&M plan call for that same approach. Nothing precludes having a unit specific contingency plan that addresses more than one facility. In this case, where multiple facilities are managed by one work group it is safer and less prone to error to have the consistency in response provided by one plan. |
| 4 | WAC 173-303-350(3)(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 alternate evacuation routes. | Evacuation or alternative evacuation routes for the B Plant Complex are not described in the HNF-IP-0263-CP S&M, *Building Emergency Plan for Surveillance and Maintenance.* | **Within 90 days of receipt of this inspection report,** RL and CHPRC must include descriptions of evacuation routes and alternative evacuation routes in the Building Emergency Plan for the B Plant Complex. The Building Emergency Plan must be submitted to Ecology for review. | B Plant is unoccupied and is entered infrequently. Personnel entering the facility will be part of a group that will have ability to be in radio/cell phone contact with the appropriate manager for immediate emergency instruction, including evacuation if necessary. Because B Plant is normally unoccupied, use of radios/cell phones for potential emergencies is appropriate. It would be inappropriate to attempt to define pre-determined evacuation routes for the infrequent entries into this building.<br><br>This topic has been identified for resolution during the current HEMP negotiations between Ecology, DOE, and Hanford contractors. Any revisions to the HEMP and unit-specific plans would be made in accordance with the schedule established in the workshops. |

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| 5 | WAC 173-303-640(5)( d). All tank systems holding dangerous waste must be marked with labels or signs to identify the waste contained in the tank. The label or sign must be legible at a distance of at least fifty feet, and must bear a legend which identifies the waste in a manner which adequately warns employees, emergency response personnel, and the public of the major risk(s) associated with the waste being stored or treated in the tank system(s). (Note-If there already is a system in use that performs this function in accordance with local, state or federal regulations, then such system will be adequate.) | RL and CHPRC has not provided documentation justifying that the five tanks (BCP, BCS, 221-BF-A, 221-BF-B, or ISO East) located outside of the 221-B canyon building cannot have signs to identify the waste contained in the tank. During the August 19, 2014, walkthrough of the B Plant Complex I observed the locked doors on the above ground structures (221-BB and 221-BF) were access points for below ground tanks BCP, BCS, 221-BF-A, and 221-BF-B. Also during the walkthrough I observed the above ground ISO-East tank is accessible through a locked gate on a chain link fence surround 276-BA. RL and CHPRC have not provided documentation that demonstrates the five tanks located at 221-BB, 221-BF, and 276-BA are not accessible and not subject to WAC 173-303-640(5)(d) requirements. | **Within 30 days of receipt of this inspection report,** RL and CHPRC must label the five tanks located at 221-BB, 221-BF, and 276-BA, in accordance with WAC 173-303-640(5)(d).<br><br>RL and CHPRC must submit to Ecology supporting photographs that labeling has been completed within the **30 days upon receipt of this report.** | Chapter 7 of the Pre-closure Work Plan (DOE/RL-98-12 revision 2) approved by Ecology addresses interim status compliance during S&M (at the end of the Transition Phase of the decommissioning process. Line 41 on page 7-3 notes that "The Transition Phase closure activities were designed to address the regulatory and environmental concerns caused by not being able to meet the interim status requirements. Therefore, during the S&M Phase, the waste management systems will be in an environmentally safe and stable condition that protects human health and the environment without meeting these interim status requirements." Labeling of tank systems is addressed in 7.4.1.7. Although this subsection only addresses inaccessible vessels in the canyon cells, section 7.4.1 indicates that the vessels in 221-BB and 221-BF are also inaccessible. This may be the reason that Table 6-1in the S&M Plan does not identify major risk marking as an applicable requirement. Under interim status requirements column in Table 6-1, it is noted that "Removal of the dangerous waste solutions ensured that the vessels will be left in a state of minimum surveillance and maintenance until subsequent closure." With the exception of the ISO EAST tank, the tanks are located in below ground vaults. The tanks have locked access controls and are inside the locked B Plant perimeter fence which has warning signs. These controls effectively communicate to the public, emergency responders and employees the major risk associated with the waste. |
| 6 | 40 CFR Part 265.112(a) as incorporated by reference in WAC 173-303-400(3)(a). Written plan. By May 19, 1981, or by six months after the effective date of the rule that first subjects a facility to provisions of this section, the owner or operator of a hazardous waste management facility must have a written closure plan. Until final closure is completed and certified in accordance with §265.115, a copy of the most current plan must be furnished to the Regional Administrator upon request, including request by mail. In addition, for facilities without approved plans, it must also be provided during site inspections, on the day of inspection, to any officer, employee, or representative of the Agency who is duly designated by the Administrator.<br><br>TPA Attachment 2, Section 8 states in part that, "Notwithstanding any other provision of Section 8.0, EPA and Ecology reserve the right to require closure in accordance with Federal and State hazardous waste law, and the Agreement, and to require response or corrective actions in accordance with RCRA and CERCLA and the Agreement, at any time. During the facility disposition process, DOE shall comply with all applicable environmental, safety and health, and security requirements." | During the B-Plant Complex site inspection on August 19, 2014, DOE and CHPRC told Ecology they did not have a closure plan for the B Plant DWMUs. Additionally the closure plan was not provided to Ecology when I requested DOE and CHPRC to provide a closure plan for the DWMUs on September 19, 2014. | **Within 365 days of receipt of this inspection report,** RL and CHPRC must submit a written closure plan for the DWMUs in the 221-B Canyon Building, in accordance with WAC 173-303-610 to Ecology; the closure plan must be maintained in the facility's operating record.<br><br>Additionally, **within 120 days of receipt of this inspection report,** RL and CHPRC must submit a separate written closure plan for tanks BCP, BCS, 221-BF-A, and 221-BF-B, ISO East and any other identified DWMUs outside the 221-B in accordance with WAC 173-303-610 to Ecology; the closure plan must be maintained in the facility's operating record. | At the time of B Plant deactivation, it was recognized by DOE, Ecology, and EPA that is was not feasible to bring the facility into compliance with all interim status standards and that there could be lengthy period of S&M prior to final disposition of the facility and closure of the treatment, storage, disposal (TSD) unit. The version of the TPA Action Plan in effect during the deactivation phase of B Plant stated the following in Section 8.8. "In cases where physical conditions and/or unknowns prevent timely completion of closure, DOE will prepare and submit to Ecology for review and approval, a Pre-closure Work Plan for implementation during the transition phase." In accordance with the TPA, the B Plant Complex Pre-closure Work Plan, (DOE/RL-98-12), was prepared and subsequently approved by Ecology. Per the pre-closure work plan, "The closure plan for the TSD unit will not be prepared until the Disposition Phase of the facility decommissioning process is initiated, which follows the long-term S&M Phase." Chapter 6.0 of the Pre-closure Work Plan provides the overall closure process that the Parties agreed to. It clearly identifies that the closure plans will be developed during the disposition phase when key decisions will have been made that will affect closure. Table 6-1 of the S&M plan does not identify closure plans as an applicable requirement during S&M.<br><br>If Ecology is invoking the provision of TPA Action Plan Section 8.0 to require closure, it should be done through the TPA process since it will require re-prioritization of work to fund the closure in lieu of other cleanup activities. |
| 7 | 40 CFR Part 265.195(a), 265.195(b)(2), and 265.195(b)(3) as incorporated by reference in WAC 173-303-400(3)(a). The owner or operator must inspect, where present, at least once each operating day, data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design. | DOE and CHPRC have not demonstrated why tanks BCP, BCS, 221-BF-A, and 221-BF-B and ISO East are not accessible (according to Table 6-1 in the S&M Plan) and not subject to 40 CFR Part 265.195 requirements. RL or CHPRC have not conducted | RL and CHPRC **must immediately upon receipt of this report,** begin to conduct inspections of tanks BCP, BCS, 221-BF-A, 221-BF-B and ISO East in accordance with 40 | At the time of B Plant deactivation, it was recognized by RL, Ecology, and EPA (hereinafter referred to as the Parties) that is was not feasible to bring the facility into compliance with all interim status standards and that there could be a lengthy period of S&M prior to final disposition of the facility and closure of the treatment, storage, disposal (TSD) unit. The version of the TPA Action Plan in effect during the deactivation phase of B Plant stated the following in |

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| | (2) Above ground portions of the tank system, if any, to detect corrosion or releases of waste; and (3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of dangerous waste (e.g., wet spots, dead vegetation). | inspections at least once each operating day for tanks BCP, BCS, 221-BF-A, 221-BF-B, and ISO East. | CFR Part 265.195(a), 265.195(b)(2), and 265.195(b)(3) as incorporated by reference in WAC 173-303 400(3)(a).<br><br>**Within 30 days of receipt of this inspection report,** the start date and two weeks of inspection logs documenting the daily inspections must be submitted to Ecology. | Section 8.8: "In cases where closure is not completed during the transition phase, the S&M plan for the key facility will address RCRA compliance." Accordingly, the requirements for tank inspections are identified under the interim status standards row in Table 6-1 of the S&M Plan. The applicability column of the Table indicates that "Removal of the dangerous waste solutions ensured that the vessels will be left in a state of minimum surveillance and maintenance until subsequent closure. Therefore, during the B Plant S&M phase, no surveillance of the dangerous waste units or ancillary equipment will be performed." This is consistent with Chapter 7 of the pre-closure work plan that states in 7.4.1.1 that "Inspection requirements will not be performed as the vessels are empty, inactive, and isolated. Also, these vessels are inaccessible to personnel during the S&M Phase." The list of vessels affected included the tanks in 221-BB and 221-BF. Section 7.4.1.2 addresses the ISO East tank by stating that "Inspection is not needed as the tank is inactive, empty and isolated."<br><br>It should be noted that 40 CFR Part 265.195 requires inspections of tank systems each operating day. The tanks is not considered to be operating since they have been emptied and isolated. |
| 8 | M-026-01, W, X And Intervening Years. Submit an annual Hanford Land Disposal Restrictions (LDR) Summary Report in accordance with the Agreement requirements to cover the period from 1/1 of the previous year through 12/31 of the reporting year. The Hanford Land Disposal Restrictions Summary report will contain the following elements:<br>• Section 1.0 Introduction<br>• Section 1.1 CY 20XX LDR Summary Report Overview (where XX will be the reporting year)<br>• Section 1.2: Summary Inventory Of Waste Treatment Groups and Forecast Generation Rates<br>• Section 1.3, Potential Mixed Waste<br>• Section 2.0: Assessments Of Mixed Waste Storage Areas And Potential Mixed Waste<br>• Section 2.1: Introduction<br>• Section 2.2: Assessment Schedules<br>• Section 3.0: Summary Of Characterization Information<br>• Section 4.0: Summary Of Treatment Information<br>• Section 5.0: Storage Volume And Container Numbers For Selected Storage Locations<br>• Section 6.0: References<br>• Table 1-1: Stored Volumes Of Mixed Waste and Generation Projections<br>• Table 1-2: Treatability Group Summary Of Storage, Characterization, and Treatment Activities<br>• Table 1-3: Explanation Of Table 1-4, Potential Mixed Waste<br>• Table 1-4: Potential Mixed Waste<br>• Table 1-5: Historical List Of Materials Deleted From Potential Mixed Waste Table, Table 2-1: Summary Of DOE-RL Assessment Results | The 2009 and 2010 LDR Reports show the B Plant Complex Containment Building inventory as storing 294,000 kilograms of mixed waste. The 2011, 2012, and 2013 LDR Reports show the B Plant Complex Containment Building inventory as storing 0 kilograms of mixed waste. | **Upon receipt of this inspection report** all future annual LDR Reports must correctly inventory and document the volume and/or weight of mixed waste stored in the B Plant Complex DWMUs, in accordance with the Hanford Federal Facility Agreement and Consent Order milestone "M-026-01, W, X And Intervening Years." | The October 22, 2014 response to questions acknowledged that a data input error was made in the compilation of the summary reports for the years cited. (The data sheets had the correct information but they are not included in the summary reports.) The error has been corrected in the CY2014 LDR Full Report (DOE/RL-2015-08) that is in the final stages of review in preparation for transmittal to Ecology. Tables 2-1, 2-2, and 14-1 of the LDR Full Report indicate the current inventory for the B Plant Containment Building is 294,000 kg. The "3" following the kg in the first two tables refers to "footnote 3" where it is explained why estimated weights are provided instead of volumes. |

| ITEM NO | ECOLOGY QUOTED WAC 173-303 REFERENCE | ECOLOGY OBSERVATION | ECOLOGY PROPOSED ACTION | DOE/CHPRC RESPONSE |
|---|---|---|---|---|
| | • Table 2-2: DOE-RL Assessments For Calendar Years 2005 Through 2007 (updated for next three years until no assessments are scheduled)<br>• Table 2-3: Summary Of DOE-RL Assessment Results<br>• Table 3-1: Summary Of Characterization Information For Each Treatability Group<br>• Table 4-1: Summary Of Treatment Information For Each Treatability Group<br>• Table 5-1: Storage Volume And Number Of Containers For Selected Hanford Locations<br><br>Table 5-1 will contain the storage volume and the number of containers reported for the following Hanford Site locations: CWC, LLBG, WRAP, PFP, T Plant Complex, WSCF, 325 HWTU, 324, 327, 200 ETF, and 222-S. | | | |

***B PLANT COMPLEX COMPLIANCE INSPECTION AUGUST 19, 2014 CONCERNS/VIOLATIONS DATED MARCH 12, 2015 – CONCERNS AND SUGGESTIONS***

| ITEM NO | ECOLOGY CONCERNS AND SUGGESTIONS | RL/CHPRC RESPONSE |
|---|---|---|
| 1 | HNF-3208, the S&M Plan, and the *2009 Land Disposal Restrictions Full Report* (DOE/RL-2010-27), have different total container counts for Cell 4's inventory. According to HNF-3208 and DOE/RL-2010-27 there is a total of 43 containers with 7 of the containers designated as MW. Appendix A of the S&M Plan identifies a total of 33 containers and does not provide information regarding which containers are MW or LLW. | HNF-3208 and the 2009 LDR are consistent in identifying 7 containers (1.4 $m^3$) of mixed waste in cell 4. (The aggregate mass of the regulated constituent for the 7 drums is estimated to be 79 grams of lead.) The 32 drums plus one crucible in the S&M plan is believed to be a typographical error and should be 42 drums plus one crucible. It is also agreed that the table in the S&M Plan appendix could be clarified to explain that there are 7 MW drums and 36 LLW containers. |
| 2 | B Plant Complex DWMUs tank system waste is documented in the *Potential Mixed Waste Table* Appendix C of the 2009 LDR Report and Table 1-4 of the 2010 through 2013 LDR Reports. The possibility of MW generated after 1987 may not be accounted for in the annual LDR report. Some of the tank system waste may not meet the criteria to remain in the *Potential Mixed Waste Table,* the waste associated with the tank systems should be reevaluated to possibly be accounted for as a current inventory of mixed waste. | A reminder to determine if any changes should be made to the LDR report based on this comment will be added to the CHPRC Condition Reporting and Resolution System. |
| 3 | S&M personnel that conducted the 2013 annual surveillance inspection for the B Plant Complex did not complete or document (Datasheet 3) for the surveillance of the DWMUs, which is dictated in the *B Plant Annual Facility and Grounds Surveillance Technical Procedure.* The *Data Sheet 3-B Plant RCRA Treatment, Storage and Disposal Facility Surveillance* should be used to inspect the DWMUs at the B Plant Complex and documented in accordance with Annual Inspection Procedures. | The inspection was completed and documented. Data Sheet 3 for the B Plant Annual Facility and Grounds Surveillance dated April 9, 2013 was reviewed. The data sheet was completed and signed off by the performer and the field work supervisor. Per the instructions comments were provided on Data Sheet 4. |
| 4 | According to the Pre-closure Work Plan and S&M Plan the B Plant Complex DWMU tank, TK-10-1 appears to be actively managing in-leakage liquid from the 221-B canyon building. RL and CHPRC have not provided documentation of secondary containment upgrades for Cell 10 to the meet requirements of §265.193; have not provided documentation regarding a integrity assessment conducted on tank TK-10-1 or alternative measures to meet tank integrity assessments under §265 .191. | Per 7.4.1.3 of pre-closure work plan, TK-10-1 is grouped with other tanks without compliant secondary containment. The noncompliance justification says "annual integrity tests will not be performed as the vessels are inactive, empty, and isolated." In regards to secondary containment and leak detection, section 7.4.1.5 noncompliance justification says "No upgrades to the secondary containment or leak detection equipment will be made as the vessels are inactive, empty, and isolated." This may need to be revisited if it is confirmed that TK-10-1 is actively managing in-leakage liquid. Investigation into potential in-leakage has been initiated by CP S&M. This item will be tracked to closure in the CHPRC Condition Reporting and Resolution System. |

| ITEM NO | ECOLOGY CONCERNS AND SUGGESTIONS | RL/CHPRC RESPONSE |
|---|---|---|
| 5 | I observed in Table 6-1 of the S&M Plan that RL and CHPRC did not identify WAC 173-303-360, *Emergencies.* This particular section of the DW regulations establishes requirements for emergency coordinators and emergency procedures. Under the DW Regulations column, I have identified WAC 173-303-280, Notice *of Intent* is incorrect; WAC 173-303-280 references *General requirements for dangerous waste management facilities.* | Although WAC 173-303-360 is not specifically listed in the table, the Hanford site protocols for implementing that section of the regulations is included in the Building Emergency Plan.<br><br>Ecology's comment regarding the title of WAC 173-303-280 is correct. WAC 173-281 is *Notice of Intent.* This error can be resolved when the S&M Plan is revised. |
| 6 | The S&M Plan Appendix A summarizes the inventories of vessels, containers and the containment building. As identified earlier in the report, the Appendix A inventory in the S&M Plan is discrepant with other documents such as the 2013 LDR Report and the Pre-closure Work Plan. Not only are the total container amounts discrepant, there appears to be vessel volumes and weight discrepancies between each document. | Many of the discrepancies were explained in the October 22, 2014 response to questions and in this response. The discrepancies often result from input errors or use of different assumptions or units. They do not affect management of dangerous waste, but could be made more consistent when documents are updated. |