



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

16-ESQ-0058

MAY 03 2016

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

Dear Ms. Smith:

DANGEROUS WASTE COMPLIANCE INSPECTION ON MARCH 12, 2015, AT THE PLUTONIUM URANIUM EXTRACTION (PUREX) PLANT AND STORAGE TUNNELS, RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) SITE ID: WA7890008967, NUCLEAR WASTE PROGRAM (NWP) COMPLIANCE INDEX NO. 15.517

This letter and the enclosed information are in response to your letter dated February 3, 2016, (16-NWP-021) regarding the compliance inspection of March 12, 2015, on the PUREX Plant and Storage Tunnels.

As noted in the response to the Washington State Department of Ecology (Ecology) Compliance Inspection of B Plant in 2014, the PUREX Plant is a key facility managed under the provisions of Section 8 of the Action Plan of the Hanford Federal Facility Agreement and Consent Order (hereinafter referred to as the Tri-Party Agreement or TPA). The responses to the PUREX Compliance Inspection Report were considered in the context of documents and agreements made under the TPA. The U.S. Department of Energy Richland Operations Office (RL) is making a good faith effort to take the actions requested by Ecology in a spirit of cooperation to the extent reasonable.

RL appreciates the willingness of Ecology staff to work collaboratively to address regulatory challenges posed by dangerous waste Treatment, Storage, and/or Disposal (TSD) units that have not received waste for many years and that will be closed on a schedule established by the TPA in conjunction with a Comprehensive Environmental Response, Compensation, and Liability Act Remedial Action. A challenge is determining which interim status RCRA requirements apply to the PUREX Plant and which standards are not applicable during the Surveillance and Maintenance (S&M) period. A pre-closure work plan was developed for PUREX, but it does not address all interim status RCRA TSD requirements. The S&M Plan was approved by the TPA Parties and describes how the facility will be managed during the S&M phase prior to final disposition, but it does not address all interim status RCRA TSD requirements.

MAY 03 2016

RL believes that revision of the PUREX S&M Plan is the best way to document the Parties' agreement on how RL will address environmental requirements during the current S&M period until final closure decisions are made in conjunction with the PUREX canyon remedial action decision. This response includes a draft TPA Change Notice to revise the PUREX S&M Plan to address issues identified by Ecology in the PUREX compliance inspection report and to address Ecology comments on the draft Revision 4 of the S&M Plan (Ecology letter 15-NWP-178).

The enclosure to this letter provides specific responses to the five compliance problems identified in the compliance inspection report transmitted via Ecology's February 3, 2016, letter including responses to the five concerns noted in the report.

RL remains committed to implement RCRA requirements in accordance with agreements made by the Parties until the Parties reach new or revised agreements in accordance with the TPA process.

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

Sincerely,



Stacy Charboneau
Manager

ESQ:DBC

Enclosures

cc w/encls:

Dave B. Bartus, EPA Seattle
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Jane V. Borghese, CHPRC
Jerry W. Cammann, MSA
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John Temple, Ecology
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Joel F. Williams, Jr., CHPRC
Administrative Record (PUREX)
Environmental Portal
HF Operating Record (J. K. Perry, MSA A3-01)

cc w/o encls:

Gabriel Bohnee, NPT
Rod Skeen, CTUIR
Russel Jim, YN
NWP Reader File

ENCLOSURE 1

U.S. DEPARTMENT OF ENERGY (DOE)/CH2M HILL PLATEAU REMEDIATION
COMPANY (CHPRC)

RESPONSE TO

WASHINGTON STATE DEPARTMENT OF ECOLOGY

LETTER 16-NWP-021

DATED FEBRUARY 3, 2016

U.S. DEPARTMENT OF ENERGY (DOE)/CH2M HILL PLATEAU REMEDIATION
COMPANY RESPONSE TO WASHINGTON STATE DEPARTMENT OF ECOLOGY
LETTER 16-NWP-021 DATED FEBRUARY 3, 2016

Requested Action 1. WAC 173-303-320(2)d): “USDOE and CHRPC must immediately start documenting the time of the inspection on the inspection records. USDOE and CHRPC must also immediately start documenting the date and nature of repairs or remedial actions taken. Within 60 days upon receipt of this compliance report, USDOE and CHRPC must note in their operating record the dates that inspection records were deficient and the description of the deficiency with WAC 173-303-320(2)(d) requirements and submit a copy of the documentation placed in the operating record to Ecology.”

DOE/CHPRC Response to Requested Action 1: DOE/CHPRC agree to perform annual inspections of tanks TK-40 and TK-P4. As background, the PUREX Surveillance and Maintenance (S&M) Plan was developed under the provisions of Section 8 of the Action Plan of the Hanford Federal Facility Agreement and Consent Order (hereinafter referred to as the TPA) and has been approved by the Parties. Table 6-1 of the Plan identifies the compliance applicability for regulatory compliance at PUREX during S&M. For Washington Administrative Code (WAC) 173-303-320 the applicability column of the table states that “Routine surveillances are performed as identified in this S&M Plan. No TSD unit inspections or surveillances are performed since all of the TSD units are in un-accessible portions of the PUREX Complex.” DOE/CHPRC recognize that this statement may be overly broad because treatment, storage, and/or disposal (TSD) Tanks TK-40 and TK-P4 are located outside the PUREX canyon and are accessible to some degree. A better basis for not performing inspections of TSD tanks and vessels is provided in the compliance applicability column for the section of the table that addresses interim status TSD standards where it states that “...TSD tanks and vessels...were flushed until the solutions no longer designated as dangerous waste. These solutions were removed leaving a non-dangerous heel per the Data Quality Objectives... Removal of the dangerous waste solutions ensured that the vessels were left in a state for minimum surveillance and maintenance until subsequent closure. Therefore, per the Tri-Party Agreement M-80-94-01 agreement, no surveillances of the dangerous waste units or ancillary equipment are performed.” Ecology’s observations in the compliance inspection report implies that accessibility should be the criterion used in deciding whether the tanks should be inspected. Table 6-1 clearly provides another basis which has been approved by the Parties for not performing inspections. If the tanks were containers, they would be considered empty per WAC 173-303-160.

Pending further consideration by Ecology, DOE/CHPRC agree to perform annual inspections of tanks TK-40 and TK-P4 to the extent that such inspections do not place workers at risks that are not commensurate with the benefit. This agreement can be formalized in a revision to the S&M Plan. A draft TPA change notice to acknowledge this agreement and to address other interim status requirements is provided as Addendum A to this response. The data sheets developed to document this inspection include the requisite information from WAC 173-303-320. Per your request, documentation regarding compliance with WAC 173-303-320 has been placed in the operating record and a copy is provided with this response as Addendum B.

Requested Action 2. WAC 173-303-340(1): “Upon receipt of this compliance report, USDOE and CHPRC must place all required spill and emergency equipment in accordance with WAC 173-303-340(1) at the PUREX Plant. The location and description of the equipment must be included in the revised S&M BEP. Within 60 days of receipt of this compliance report, provide the dates in which the spill and emergency equipment were staged at the PUREX Plant and dates the changes were made to the S&M BEP.”

DOE/CHPRC Response to Requested Action 2: Table 6-1 of the PUREX S&M Plan identifies the compliance applicability for regulatory compliance at PUREX during S&M. For WAC 173-303-340 the applicability column of the table states, “Addressed in Section 8.0, Emergency Management, of this S&M Plan.” Section 8 of the S&M Plan does not impose the specific provisions cited in the PUREX Compliance Inspection Report, but instead points to the DOE Emergency Plan, implementing procedures, and PUREX-specific emergency plan. Nevertheless, a decision has been made to maintain fire and spill equipment at the PUREX Plant and the specific location has been added to the S&M Building Emergency Plan. The effective date of those changes to the S&M BEP was December 30, 2015.

Requested Action 3. WAC 173-303-350(3): “Upon receipt of this compliance report, USDOE and CHPRC must include descriptions of evacuation routes and alternative evacuation routes in the S&M BEP for the PUREX Plant. Within 60 days of receipt of this compliance report, provide the date the changes were made to the S&M BEP.”

DOE/CHPRC Response to Requested Action 3: Table 6-1 of the PUREX S&M Plan identifies the compliance applicability for regulatory compliance at PUREX during S&M. For WAC 173-303-350 the applicability column of the table states, “Addressed in Section 8.0, Emergency Management, of this S&M Plan.” Section 8 of the S&M Plan does not impose the specific provisions cited in the PUREX Compliance Inspection Report, but instead points to the DOE Emergency Plan, implementing procedures, and PUREX-specific emergency plan. Nevertheless, a decision has been made to show evacuation routes in the S&M BEP. The maps in the BEP have been updated to show those routes. The effective date of the change to the S&M BEP was December 30, 2015.

Requested Action 4. WAC 173-303-640(5)(d): “Within 60 days of receipt of this compliance report, USDOE and CHPRC must label the two tank systems (TK-40 and TK-P4) located at 203-A and 211-A in accordance with WAC 173-303-640(5)(d). USDOE and CHPRC must submit to Ecology supporting photographs that labeling has been completed within 60 days upon receipt of this compliance report.”

DOE/CHPRC Response to Requested Action 4: Table 6-1 of the PUREX S&M Plan identifies the compliance applicability for regulatory compliance at PUREX during S&M. WAC 173-303-640(5)(d) is not included specifically in the table, but there is a section of the table that addresses interim status TSD standards. The compliance applicability column for those standards states that “...TSD tanks and vessels...were flushed until the solutions no longer designated as dangerous waste. These solutions were removed leaving a non-dangerous heel per the *Data Quality Objectives*... Removal of the dangerous waste solutions ensured that the

vessels were left in a state for minimum surveillance and maintenance until subsequent closure. Therefore, per the Tri-Party Agreement M-80-94-01 agreement, no surveillances of the dangerous waste units or ancillary equipment are performed.” As a best management practice, DOE/CHPRC agree to place major risk marking in an accessible location near tanks TK-40 and TK-P4. Since the tanks have been flushed with only a non-dangerous heel remaining, the risk marking will reflect the radiological hazard along with the chemical hazard of the waste the tanks last contained. Photographs of the risk markings are provided in Addendum C.

Requested Action 5. 40 CFR 265.195: “Within 60 days of receipt of this compliance report USDOE and CHPRC must begin to conduct inspections of tank systems TK-40 and TK-P4 in accordance with 40 CFR 265.195(b), 265.195(b)(2), 265.195(b)(3) and WAC 173-303-320. Within 60 days of receipt of this compliance report, the start date and two weeks of inspection records must be submitted to Ecology.”

DOE/CHPRC Response to Requested Action 5: Table 6-1 of the PUREX S&M Plan identifies the compliance applicability for regulatory compliance at PUREX during S&M. A discussion of the compliance applicability related to inspections is provided in the DOE/CHPRC response to requested Action 1 and is therefore not repeated here. While the Parties agreed that no inspections are required during S&M, DOE/CHPRC voluntarily agree to perform annual inspections of TK-40 and TK-P4 to confirm that risk marking is present and that there has been no significant deterioration of the tanks that would pose a threat to human health and the environment. This agreement can be formalized in a revision to the S&M Plan. See Addendum A for a proposed change notice to create this revision.

Concern 1 (Remaining Inventories In Tanks): “I did not observe current tank and vessel system inventories of DW or MW remaining in the PUREX End Point Document, PUREX Pre-closure Work Plan, PUREX S&M Plan, or PUREX Plant Part A. I did obtain an inventory titled PUREX Vessel Regulatory Status, Revision 1, dated April 19, 1994, which would not have accounted for all of the flushes completed by the end of the Transition Phase. I observed inventory volumes ranged from 0 to 81,380 gallons as of April 19, 1994. The PUREX End Point Document, Section II, states the following:

Many of the vessels containing the process and flush solutions from standby cannot be completely emptied since solutions are removed from the top using turbine pumps or jets, leaving a solution heel ranging from several liters to several hundred liters.

The PUREX Pre-closure Work Plan, Section 7, states the following:

Following the completion of all vessel system flushing, the liquid level in the vessels will be left at the lowest level possible (the residual heels vary between approximately 70 and 400 liters) using existing jets and/or pumps. All liquid feed and/or drain lines will be isolated after emptying the vessel systems and cell sumps to prevent any inadvertent backflow of liquids.

The PUREX S&M Plan, Appendix A, appears to provide material descriptions, quantity, and states of materials (lead counterweights, jumpers, shielding, etc.). The Appendix A, appears to reference the "PUREX Plant Vessel Table in the Part A Form," and not provide the quantity or state of the residual or solution heel left in place. I did not find an inventory, either current or generated at the end of the Transition Phase for DW or MW remaining in tank and vessel system DWMUs."

DOE/CHPRC Response to Concern 1: The vessel flushing process used at PUREX resulted in a minimum heel that was not designated as dangerous waste. Completion of this process was documented via TPA Milestones M-080-03 through M-080-07 which were completed in 1995 and 1996. Ecology accepted these actions as completing the TPA Milestones. A good summary of the flushing process is provided in HNF-SP-1147, *PUREX/UO₃ Facilities Deactivation Lessons Learned History*. Pages 105 and 106 of that document are provided for Ecology's convenience as Addendum D.

TPA Milestone M-080-08 required the documentation of hazardous substances/dangerous wastes remaining at completion of Phase 1 activities. It was completed in August of 1997 and the results are summarized in Appendix A of the PUREX S&M Plan. As noted previously in this response, the Parties agreed to this approach to achieve a state of minimal surveillance and maintenance. The tanks were emptied to a minimum heel that was not designated as dangerous waste. This approach was established through an intensive collaborative process involving the Parties. A week long workshop followed by regular monthly video conferences were initiated to resolve regulatory issues. These were followed by a series of face-to-face meetings. The cumulative outcome was "to build trust and ownership and to obtain the assent of all the parties to work together to find solutions, rather than imposing penalties or engaging in other confrontational actions" (HNF-SP-1147).

Concern 2 (DQO Deficiencies): Characteristic information on Tank and Vessel System: Sampling individual vessels vs sampling a series of vessels to determine a heel no longer designates. Data Quality Objective for PUREX Deactivation deficiencies. I did observe sample and analytical results taken during deactivation and flushing operations during the Transition Phase, which appear to have incorporated all DWMU Tank Systems. It is not clear whether the sample and analytical results or the Data Quality Objective document had addressed Ecology's concerns.

The PUREX Pre-closure Work Plan states the following:

The vessel systems were each identified as part of 12 loops (Figures 4-1 through 4-12) designated for flushing. Flush solutions were cascaded within each vessel. Samples were taken in a tank at the end of the flush loop. In addition to the 12 flush loops, tanks F 4, M2, P4, and U3, individually were flushed and sampled. Tanks 40, Q21, and Q22 were not sampled because the tanks have bottom drains, which left no heel.

The PUREX S&M Plan, Section 6, Table 6-1, states the following:

These solutions were removed leaving a non-dangerous heel per the Data Quality Objectives for PUREX Deactivation Flushing, WHC-SD-EN-TI-283, Revision 0. Removal of the dangerous waste solutions ensured that the vessels were left in a state for minimum surveillance and maintenance until subsequent closure. Therefore, per the TPA M-80-94-01 agreement, no surveillances of the dangerous waste units or ancillary equipment are performed.

The PUREX S&M Plan, Appendix A, states the following for 203-A and 211-A. All tanks in the 203-A area have been flushed and emptied to a minimum heel and their associated piping drained. However, there may exist the potential for residual nitric acid in these areas. Vessels located in 203-A are listed in the PUREX Plant Vessel Table in the Part A Form. Trace amounts to none.

All tanks in the 211-A Area have been flushed and emptied to a minimum heel and their associated piping drained. However, there may exist the potential for residual nitric acid, sulfuric acid, KOH, NOH, TBP, NPH, AFAN and ANN in these areas. Vessels located in 211-A are listed in the PUREX Plant Vessel Table in the Part A Form. I reviewed the Data Quality Objectives for PUREX Deactivation Flushing, WHC-SD-EN-TI-283, Revision 0, dated July 1994 and reviewed an Ecology letter titled PUREX Data Quality Objective Document Review, 0039532, dated November 14, 1994, with a receive stamp dated December 1994. The letter states, in part, the following:

I have reviewed the Data Quality Objectives for PUREX Deactivation Flushing Draft Document (WHC-SD-EN-TI-283 Draft A) and have found it deficient in a number of areas which need to be addressed. The letter outlines eight concerns regarding missing or deficient information throughout WHC-SD-EN-TI-283. The concerns address sampling methods, process knowledge verification, and the lack of sufficient explanations in certain sections.

DOE/CHPRC Response to Concern 2: Revision Operational Awareness to WHC-SD-EN-TI-283 was issued in and transmitted to Ecology in April 1995 and would have superseded Draft A. At this time, the residual heels have been managed in their current state for approximately 30 years and it would not be feasible to revise the Data Quality Objective and resample. The objective appears to have been met.

Concern 3 (Pre-closure work plan): The 40 CFR Part 265, Subpart G, describes requirements for generating and maintaining a closure plan. Previous versions of the TPA, Section 8, described requirements for generating and maintaining pre-closure work plan. The TPA, Section 8 version in affect during the Transition Phase (documented in this compliance report), outlined the requirements for the PUREX Pre-closure Work Plan. The sections included an introduction, facility description, process information, waste characteristics, groundwater monitoring, closure strategy and performance standards, closure activities, post-closure plan, and references. There appears to be discrepant or missing information from the PUREX Pre-closure Work Plan, which include the following:

- I observed in §7.2 a reference to “WHC 1995d” regarding flushes of tank and vessel systems. I did not observe “WHC 1995d” in the reference section.
- I observed in §7.2 a reference to 200-P0-2 operable unit for soil samples and analysis. Information regarding 200-P0-2 or a corrective action investigation is limited.
- The facility description and processes for 10 of the 45 Dangerous Waste Management Unit (DWMU) Tank Systems are described in detail. The facility description and processes of the 35 other DWMU Tank Systems were not described in detail.

It is unclear whether the PUREX Pre-closure Work Plan, which is in accordance with TPA Sections 8 and 9, allows DOE and CHPRC to not maintain a closure plan in accordance with 40 CFR Part 265, Subpart G. There is a difference between the obligation of USDOE and CHPRC to maintain a closure plan in the facility's operating record and the requirement to submit a closure plan during the Disposition Phase, in accordance with the TPA, Section 8. The TPA requirement to submit a final closure plan to Ecology does not preclude DOE and CHPRC from the requirement to maintain a closure plan for the PUREX Plant in the operating record.

DOE/CHPRC Response to Concern 3: This concern is addressed in the proposed changes to the S&M Plan. Developing a closure plan to meet an operating record requirement has little value for a facility that will be closed in coordination with the remedial action plan.

Concern 4 (Containment Building): The PUREX S&M Plan describes the use of differential pressure monitoring as an alternative to inspecting the containment building, which was described as satisfying the 40 CFR 265.1101(c)(4) requirement “to maintain the containment building's integrity. The plan states that no additional surveillance of the dangerous waste or ancillary equipment will be performed to satisfy this requirement.” The use of weekly differential pressure monitoring instead of inspections once every seven days does not clearly demonstrate the ability to detect a release of hazardous waste or mixed waste. Table 6-1 [referring to the 40 CFR 265.1101(c)(4)] states, the following:

“Inspect and record in the facility's operating record at least once every seven days, except for Performance Track member facilities, that must inspect up to once each month, upon approval of the director, data gathered from monitoring and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste. To apply for reduced inspection frequency, the Performance Track member facility must follow the procedures described in §265.15(b)(5).”

The PUREX S&M Plan does not specify the frequency or criteria for differential pressure monitoring of the containment building or a procedure for monitoring the containment building.

DOE/CHPRC Response to Concern 4: The proposed changes to the S&M Plan to address the alternative monitoring approach and frequency are provided in Addendum A to this response. Differential pressure is an appropriate tool to monitor potential releases from a robust canyon facility. Table 6-1 of the S&M Plan provides for the alternative frequency. The differential pressure is monitored continuously, but to account for fan outages, a provision to initiate

building surveys every 24 hours after the fans have been down for 48 hours is included in the air license.

Concern 5 (Ventilation System Maintenance): I observed the PUREX S&M Plan, §3.3, Types of Maintenance and Frequency, appears to describe ventilation system maintenance and references unspecified regulatory requirements and procedures that dictate the frequency of maintenance. It is unclear if the maintenance frequency requirements are being met.

DOE/CHPRC Response to Concern 5: Section 6.1 of the PUREX S&M Plan cites the radioactive air emissions license. Procedures have been developed to implement requirements of that license and associated regulatory requirements and as noted in Section 3.3 of the plan, those procedures identify frequencies for maintenance of the ventilation system. An automated system triggers preventive maintenance in accordance with the established schedule. Some examples:

- High-efficiency Particulate Air Filter Leak Test - Annually
- Air Flow Test - Annually

The Washington State Department of Health monitors compliance with requirements of the radioactive air emissions license and Ecology monitors compliance with terms of the Air Operating Permit.

1 **SURVEILLANCE AND MAINTENANCE PLAN FOR THE**
2 **PLUTONIUM-URANIUM EXTRACTION (PUREX) FACILITY**

3
4 **1 INTRODUCTION**

5
6 The *Hanford Federal Facility Agreement and Consent Order*, referred to as the Tri-Party Agreement
7 ensures compliance with the *Resource Conservation and Recovery Act of 1976 (RCRA)* and the
8 *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)*, as
9 amended. The Tri-Party Agreement sets forth certain requirements and milestones for cleanup
10 activities at the Hanford Site.

11 This document provides the plan for the surveillance and maintenance (S&M) phase of the
12 Plutonium-Uranium Extraction (Plant) (PUREX) Facility. This plan has been prepared in accordance
13 with the Tri-Party Agreement, Attachment 2 (Tri-Party Agreement Action Plan), Section 8.6,
14 "Surveillance and Maintenance Phase" and will remain in effect until the Remedial Design/Remedial
15 Action Work Plan has been approved. A Preclosure Work Plan (DOE/RL-95-78) was also developed in
16 accordance with Section 8.6 of the Tri-Party Agreement Action Plan. Its purpose was to describe the
17 condition of dangerous waste treatment, storage, and/or disposal (TSD) units after completion of the
18 PUREX decommissioning transition phase. Information from that Work Plan was incorporated into this
19 S&M Plan. Inasmuch as the Preclosure Work Plan is intended to be a pre-transition document, changes
20 during the S&M phase will be made in this S&M Plan with no intent to revise the Preclosure Work Plan
21 to reflect those changes.

22 In accordance with the TPA Action Plan, disposition of PUREX will follow the CERCLA response
23 action process coordinated with RCRA Closure. Completion schedules will be established with
24 Remedial Investigation/Feasibility Study (RI/FS) Work Plans and Remedial Design/Remedial Action
25 (RD/RA) Work Plans in accordance with section 11.6 of the TPA Action Plan (M-85 Milestones).
26 PUREX will be addressed in Operable Unit 200-CP-1. CERCLA removal actions may be performed in
27 advance of a remedial action decision.

28 The CERCLA remedial action process starts with the RI/FS. Existing data is assembled and evaluated
29 and a conceptual understanding of the nature, extent and location of hazardous substances present is
30 developed. Likely response scenarios are then identified and additional data is collected. Remedial
31 action objectives and remediation goals are established. A risk assessment is conducted to evaluate
32 potential impacts to humans and the environment and remedies to address the contamination are
33 evaluated. The second phase of the CERCLA remedial action process is Remedy Selection. The RI/FS
34 information results in a Proposed Plan which is subjected to public review. The lead agency evaluates
35 the public input and issues a Record of Decision. The third phase of the process is the Remedial Design.
36 In that phase the remedy selected in the Record of Decision is designed and implemented.

37 The objectives of the S&M phase are to ensure adequate containment of any contaminants left in place
38 and to provide physical safety and security controls and to maintain the facility in a manner that will
39 minimize risk to human health or the environment. S&M plans are prepared by U.S. Department of
40 Energy (DOE), Richland Operations Office (RL) and detail facility aspects and associated
41 requirements including the following: (1) surveillance, (2) maintenance, (3) quality assurance, (4)
42 radiological controls, (5) hazardous substance inventory, management and protection, (6) health and
43 safety/emergency preparedness, (7) safeguards and security, (8) cost and schedule, and (9)
44 environmental compliance. A list of the buildings managed as part of the PUREX facility S&M Plan

- 1 or a list of implementing procedures can be obtained by contacting the manager of the project
- 2 responsible for managing PUREX.
- 3 The enforceable requirements in this document are found in Table 6-1; other dialogue and
- 4 descriptions are for informational purposes only.

6.0 Environmental Compliance/Protection

This section identifies environmental compliance/protection requirements that are applicable to the S&M scope of work and has been prepared in accordance with the Tri-Party Agreement Action Plan, Section 8.6, "Surveillance and Maintenance Phase," S&M Phase for Facilities.

The S&M contractor is required to comply with all environmental laws, regulations, and procedures applicable to the work being performed under the Contract. This includes, but is not limited to, compliance with applicable federal, state and local laws and regulations, interagency agreements such as the Tri-Party Agreement, consent orders, consent decrees, and settlement agreements between DOE and federal and state regulatory agencies.

The DOE requires that the S&M contractor must establish, implement, and maintain an environmental protection program in accordance with the provisions of CRD DOE 0450.1, *Environmental Protection Program*. This CRD requires contractors to integrate numerous environmentally related requirements already placed on it by existing statutes, regulations, and policies through the use of an Environmental Management System (EMS) incorporated into an Integrated Environmental, Safety, and Health Management System (ISMS). EMS requirements must be addressed in the contractor's ISMS, which must be submitted for DOE review and approval under DEAR 970.5223-1, *Integration of Environment, Safety, and Health into Work Planning and Execution*.

During the PUEX deactivation, major radioactive sources and/or dangerous chemicals and wastes were removed, stabilized, excessed, or disposed to meet the criteria identified in WCH-SD-WM-TPP-053. This included removal of dangerous waste constituents to a minimum pumpable heel from accessible tanks and vessels identified as treatment, storage, and/or disposal (TSD) units in the B Plant Complex RCRA Part A Permit Application. Many of the interim status standards are inapplicable during the S&M Phase. The vessels have been flushed, drained, and isolated as described in Section 7.0 of the Preclosure Workplan (DOE/RL-95-78). The objective of the transition phase was to place PUREX in a safe configuration for long term S&M until disposition phase activities commence. Table 6-1 identifies how interim standards are addressed during the S&M Phase (including justification for any provisions not fully complied with and identifying compensatory compliance methods as appropriate.)

The Hazardous Material Remaining at the PUREX Facility (Appendix A) identifies and describes the material, location, and quantity of mixed waste and hazardous materials covered by the scope of this plan. Hazards associated with these materials are minimal due to their remote locations and existing form.

Dangerous waste generation and disposal are not expected during S&M. However, waste generated will be handled in compliance with the applicable regulatory, environmental, and waste management requirements. Compliance with the RCRA requirements found in WAC 173-303 and with the PUREX Part A Permit Application during the S&M phase are addressed in Table 6-1.

1 6.1 PUREX FACILITY AIR PERMITTING

2 Radioactive air emissions associated with the PUREX facility are currently managed under the U.S.
3 Department of Energy Hanford Site Radioactive Air Emissions License #FF 01. The FF 01 license is
4 issued by the State of Washington, Department of Health and is incorporated into the Hanford Site Air
5 Operating Permit. PUREX will continue to follow the requirements in the license and AOP until
6 transition to CERCLA is completed following the process described in Section 4.0 of the Statement of
7 Basis for the Hanford Air Operating Permit.

8 ~~Under the US Department of Energy Hanford Site Radioactive Air Emissions License #FF-01, the~~
9 ~~DOE Hanford Site, and B Plant specifically, are licensed for airborne radioactive emissions.~~
10 ~~The FF-01 license is issued by the State of Washington, Department of Health.~~

11 6.2 RECORDKEEPING/DOCUMENTATION

12 Records and documents are retained at the S&M contractor's records area.

13 Documentation assembled as a means of documenting completion of endpoints are located in the
14 endpoint files at the S&M records area. These records include the following:

- 15 • Canyon cell arrangement drawings
- 16 • Certified vendor information of operating and mothballed systems
- 17 • PUREX Facility Hazardous Material Remaining after Deactivation List
- 18 • Pre-Closure Work Plan
- 19 • Description of conditions or limitations applicable to criticality prevention
- 20 • Deactivation work plans
- 21 • Descriptions/photos of Case 2 spaces, internal/no access expected
- 22 • Electrical distribution drawings of new operational systems
- 23 • Index identifying drawings and corresponding titles of essential and downgraded facility drawings
- 24 • Final radiological surveys and maps
- 25 • Fire Hazard Analysis
- 26 • Radiological control surveillances and data of current postings
- 27 • Confined space program
- 28 • Resolution of remaining outstanding Tri-Party Agreement (Ecology, et al, 2003) and regulatory
- 29 commitments
- 30 • S&M safety evaluations documentation
- 31 • S&M phase updated Facility Environmental Monitoring Plan
- 32 • S&M phase updated Building Emergency Plan
- 33 • S&M phase updated Safety Equipment List
- 34 • S&M phase updated Final Safety Analysis/Safety Authorization Basis documentation
- 35 • Special nuclear material inventory
- 36 • Structural and roof evaluations
- 37 • S&M procedures
- 38 • Unusual occurrence reports considered relevant and informative for S&M
- 39 • B Plant Complex Part A Permit Application
- 40 • WDOH Radioactive Air Emissions Permit, FF-01
- 41 • Waste characterization data for egress waste, historical radiation survey data, and other
- 42 radiological records

Table 6-1. PUREX Regulatory Compliance During Surveillance and Maintenance

(NOTE: THIS TABLE IS REPLACED IN ITS ENTIRETY. Redline/strike out of the previous version is provided for convenience of the reader.)

Dangerous Waste General Requirements

Citation	Requirement	<u>S&M Compliance</u> Applicability
WAC 173-303-010 to -120	Generator Requirements	Dangerous waste generation and disposal are not expected during the PUREX S&M phase. However, wastes generated will be designated in compliance with the S&M contractor's waste management procedures managed <u>in accordance with applicable procedures.</u>
WAC 173-303-140 and 40 CFR 268	Land Disposal Restriction	N/A: No land disposal will occur during the PUREX S&M phase. However, the <u>If dangerous waste is disposed during the S&M phase, applicable land disposal requirements will be followed.</u> The Annual Report on Hanford Site Land Disposal Restrictions for Mixed Waste is updated annually as necessary.
WAC 173-303-145 and 40 CFR 302	Report and respond to spills and discharges into the environment	Notifications and responses for spills and discharges of dangerous waste or hazardous substances into the environment during the PUREX S&M phase are addressed in the S&M contractor's spill and response procedures. <u>Spill reporting and response will be managed in accordance with applicable procedures.</u>
WAC 173-303-150 to 270	Manage dangerous wastes in accordance with applicable regulatory provisions	Dangerous waste generation and disposal are not expected during the PUREX S&M phase. However, if dangerous wastes or recyclable materials are generated, they will be handled in compliance with the S&M contractor's waste management managed in accordance with applicable procedures.
WAC 173-303-280 to -282	Provide notice of intent and meet siting requirements	<u>These provisions are not applicable during the PUREX S&M phase.</u>
WAC 173-303-283	Meet performance standards for maintaining dangerous waste facilities	Compliance will be met through adherence to this S&M Plan.
WAC 173-303-290	Provide notice for receipt of new off-site waste sources	N/A: This section is not applicable. No waste sources outside Hanford are received by the PUREX Facility.
WAC 173-303-300	Have a waste analysis plan that describes waste profiling and acceptance process	The purpose of this section is to confirm knowledge about dangerous waste before treatment, storage, and/or disposal. Appendix A lists the mixed waste remaining in the PUREX Complex TSD units. Dangerous waste generation and disposal is not expected during the PUREX S&M Phase. However, waste generated will be designated in compliance with the S&M contractor's waste management procedures. A Waste Analysis Plan for the TSD units will not be maintained as long as no waste is accepted into the PUREX Complex TSD units.
WAC 173-303-310	Post signs, and have barriers and or surveillance to prevent access	<u>PUREX is a fenced and locked facility. Hanford Site access controls are considered adequate for limiting access to the general public. Security provisions are</u> addressed in the Safeguards and Security section of this S&M Plan.
WAC 173-303-320	Perform general inspection of facility, have a written schedule, log or summary of results, and remedy problems	Routine surveillances are performed as identified in this S&M Plan <u>will be deemed to satisfy the general inspection requirements. TSD units within the PUREX canyon are inaccessible. All vessels listed in the PUREX Part A application are empty, inactive, and isolated (see Section 7 of DOE/RL-95-78). No inspections of TSD units in the PUREX canyon and cells will be performed. A visual inspection of</u>

		<u>TK-40 and TK-P4 located outside the canyon will be performed annually to confirm that risk marking is in place and that the tanks appear to be sound.</u>
WAC 173-303-330	Have a training program and a training plan. Keep training records.	Training will be <u>is</u> provided to meet the dangerous waste management duties identified in this Table relating to WAC 173-303 compliance. A training plan will be maintained in accordance with WAC 173-303-330(2).
WAC 173-303-340	Have required equipment and communications devices. Maintain aisle space. Establish arrangement and agreements with response organizations.	<u>This requirement is addressed in Section 8.0, Emergency Management of this S&M Plan. No other provisions are deemed applicable due to the limited potential for emergencies involving dangerous waste.</u>
WAC 173-303-350	Have a contingency plan with required elements	Addressed in Section 8.0, Emergency Management, of this S&M Plan. <u>A contingency plan will be maintained in accordance with WAC 173-303-350(3) as described in Section 8.0 of this S&M Plan.</u>
<u>WAC 173-303-360</u>	<u>Have an emergency coordinator, follow emergency response procedures, and file a 15 day report if the contingency plan is triggered</u>	<u>This section is not applicable beyond those actions described in the contingency plan.</u>
WAC 173-303-370	Use the Manifest System	Dangerous waste will not be received from offsite sources during S&M.
WAC 173-303-380	Maintain information in the facility operating record to include a description and quantity of waste received, date of treatment, storage, or disposal, waste location within facility, waste analysis, incident reports, inspections, monitoring, testing, analytical data, closure costs, etc.	Dangerous waste generation is not expected during S&M. However, <u>Applicability of this section is limited to having</u> operating records for mixed waste generated or managed at the facility. are compliant with the S&M contractor's waste management procedures and Section 6.0 of this S&M Plan.
WAC 173-303-390	Prepare and submit unmanifested waste reports, annual reports, and other required reports	Dangerous waste from an offsite source is not expected during S&M. Therefore, unmanifested waste reports will not be applicable. Supporting information for the Hanford Site Annual Dangerous Waste, Hanford Site Land Disposal Restrictions for Mixed Waste Report, and any applicable reports will be prepared and submitted as required by the Department.
WAC 173-303-395	Take precautions for ignitable, reactive or incompatible waste. Conduct an inspection of areas where ignitable/reactive waste is stored annually. Meet other environmental requirements for air emissions, liquid discharge, etc. Design and maintain loading and	<u>This section is not applicable. Tanks and vessels have been isolated and contain only residues or tank heels. Generation and disposal of ignitable, reactive, or incompatible waste during S&M are not expected. However,</u> Waste generated <u>during S&M</u> will be managed in compliance <u>accordance</u> with the S&M contractor's waste management procedures.

	unloading areas to contain spills and wash water, etc. Comply with storage time limits, major risk labeling.	
<u>40 CFR Subpart F</u>	<u>Establish a groundwater monitoring system.</u> <u>Develop a groundwater monitoring plan, perform sampling and analysis, and respond to results.</u> <u>Maintain records.</u>	<u>This section is not applicable.</u>
<u>40CFR Subpart G</u>	<u>Meet performance standards for closure, submit a closure plan, comply with timeframes for closure, etc.</u>	<u>This section is not applicable during S&M. Closure plans will be developed during the disposition phase (see sections 1.0 and 7.0 of the preclosure work plan DOE/RL-95-78).</u>
173-303-805	Submit and maintain Part A. Revise Part A to address changes.	The only permitting obligation will be to maintain the Part A Permit Application.

Requirements for Dangerous Waste Tank Systems

Citation	Requirement	Applicability
<u>40 CFR 265.191</u>	<u>Have a ROPE complete a tank integrity assessment</u>	<u>This standard is not applicable since the tanks were emptied to the practical and reasonable extent possible with existing plant systems and are inactive and isolated.</u>
<u>40 CFR 265.193</u>	<u>Provide secondary containment for tank and ancillary equipment or get variance</u>	<u>This standard is not applicable since the tanks were emptied to the practical and reasonable extent possible with existing plant systems and are inactive and isolated.</u>
<u>40 CFR 265.194</u>	<u>Provide spill/overflow prevention controls</u>	<u>This standard is not applicable since the tanks were emptied to the practical and reasonable extent possible with existing plant systems and are inactive and isolated.</u>
<u>40 CFR 265.195</u>	<u>Perform inspections at least once each operating day</u>	<u>Tanks within the PUREX canyon are inaccessible. All vessels listed in the PUREX Part A application are empty, inactive, and isolated (see Section 7 of DOE/RL-95-78). No inspections of tanks in the PUREX canyon and cells will be performed. No inspections of TSD units in the PUREX canyon and cells will be performed. A visual inspection of TK-40 and TK-P4 located outside the canyon will be performed annually to confirm that risk marking is in place and that the tanks appear to be sound. See also TPA Agreement M-80-94-01.</u>
<u>40 CFR 265.196</u>	<u>Remove from service a tank system or containment if leak, spill, or unfit for use</u>	<u>This standard is not applicable since the tanks were emptied to the practical and reasonable extent possible with existing plant systems and are inactive and isolated.</u>
<u>40 CFR 265.197</u>	<u>Follow the tank system closure and post closure care requirements</u>	<u>This section is not applicable during S&M. Closure plans will be developed during the disposition phase (see sections 1.0 and 7.0 of the PUREX preclosure work plan DOE/RL-95-78).</u>
<u>40 CFR 265.198</u>	<u>Comply with requirements for ignitable or reactive waste</u>	<u>This standard is not applicable since the tanks were emptied to the practical and reasonable extent possible with existing plant systems and are inactive and isolated.</u>
<u>WAC 173-303-640(5)(d)</u>	<u>Mark or label tank systems holding dangerous waste to identify waste and risk</u>	<u>All vessels listed in the B Plant Part A application are empty, inactive, and isolated (see Section 7 of DOE/RL-95-78). With the exception of TK-40 and TK-P4, the vessels are inaccessible. Marking inaccessible tanks would not provide the warning intended by the regulations. Risk marking of tanks in the PUREX canyon and cells will not be performed since</u>

	<p><u>other robust controls meet the intent of this requirement. Risk marking be provided on or near TK-40 and TK-P4.</u></p>
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Requirements for Containment Buildings

Citation	Requirement	Applicability
265.1101	Meet Design and Operating Standards	<p>The PUREX Containment Building, the 202-A canyon will continue to store dangerous waste per the PUREX Part A Permit Application during the S&M phase. <u>Applicability of this section is limited to</u> monitoring the differential pressure of the canyon during S&M. <u>During periods of time when differential pressure cannot be maintained due to conditions such as fan outages, monitoring via radiological surveys of selected doors or other openings will be initiated after 48 hours. This monitoring</u> will satisfy the 40 CFR 1101(c)(4) requirement to maintain the containment building's integrity. No additional surveillance of the dangerous waste or ancillary equipment will be performed.</p>

Operating Record for Treatment, Storage, and Disposal Units

Published Date: 02/26/15

Effective Date: 02/26/15

Appendix B - TSD-Unit Specific Operating Record Information

Record Date: February 23, 2016Record Title: Note to the fileDangerous Waste Operating Record for PUREX Plant

Document No. (if applicable): _____

TSD Unit:

Note: if this cover sheet applies to more than one TSD-Unit please check all appropriate boxes.

- Nonradioactive Dangerous Waste Landfill
- 216-B-3 main Pond
- 216-B-3-3 ditch
- 216-A-29 Ditch
- 216-A-36B Crib
- 216-A-37-1 Crib
- 216-B-63 Trench
- 216-S-10 Pond and Ditch
- 241-CX Tank System
- B Plant
- Central Waste Complex (CWC)
- Hexone Storage & Treatment Facility
- Integrated Disposal Facility (IDF)
- Liquid Effluent Retention Facility & 200 Area Effluent Treatment Facility (LERF/ETF)
- Low-Level Burial Grounds (Trenches 31-34-94)
- Low-Level Burial Grounds (Other Locations)
- PUREX Plant
- PUREX Storage Tunnels
- T-Plant Complex
- Waste Encapsulation and Storage Facility (WESF)
- Waste Receiving and Processing Facility (WRAP)
- 207-A South Retention Basin
- 400 Area Waste Management Unit
- 600 Area Purgewater Storage and Treatment Facility

Submitted By (print/sign/date): Brian J Dixon 

- Electronic submittal: Submit Completed Appendix B and attached Operating Record information electronically to ^WSS Records Management.
- Hard Copy submittal: Submit Completed Appendix B and attached Operating Record information to DWF&RS Records, MSIN T1-41, using Site Form A-6005-152, *CHPRC Active Records Transmittal*.

DANGEROUS WASTE OPERATING RECORD FOR PUREX PLANT

Background. PUREX is identified as a Tier 1 key facility in Section 8 of the Tri-Party Agreement (TPA) Action Plan. As identified in Table 8-1 of the TPA Action Plan, it is being managed in accordance with DOE/RL-98-35 [Surveillance and Maintenance (S&M) Plan for the PUREX Facility]. The PUREX S&M Plan was approved by EPA and Ecology in correspondence dated March 11, 2008.

Portions of the PUREX facility are TSD units from which dangerous waste was removed to the extent practicable using means, such as flushing, that could be implemented without undue worker exposure to radiation. New dangerous waste has not been placed into those TSD units since then. Completing closure of these units will require complex and costly procedures in light of the radiation hazard, which is the predominant risk in those units. As established in Section 8.1.3 of the TPA Action Plan, as a Tier 1 facility, the PUREX facility will be dispositioned under a CERCLA action that will be coordinated with closure of the RCRA TSD units. The schedule has yet to be determined by the Tri-Parties in accordance with the Tri-Party Agreement.

Surveillances of the PUREX Plant are performed annually in accordance with the Surveillance and Maintenance Plan. A compliance inspection report dated February 2, 2016, noted that the inspection records for the 2014 Annual Surveillance of the PUREX Plant did not identify the time of inspection nor were the date and nature of repairs clearly documented, or that if actions were not completed, no schedule for completion of the actions was identified. The Ecology compliance inspection report cites WAC 173-303-320(2) as the standard that was not being met. The regulation states that the owner or operator of a TSD must develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that help prevent, detect, or respond to hazards to the public health or the environment. In addition:

- (d) 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. The log or summary must be kept at the facility for at least five years from the date of inspection.

Table 6-1 of the PUREX Surveillance and Maintenance Plan states that "No TSD unit inspections or surveillances are performed since all of the TSD units are in un-accessible portions of the PUREX Complex." This Note to the File does not attempt to resolve the apparent discrepancy, but does acknowledge that the annual surveillances completed prior to the date of this Note to the File may not have the time of the inspection or the date and nature of any repairs or remedial actions taken.



Figure 1: Major Risk Marking for PUREX Tank TK-P4 (203-A)(2016)



Figure 2: Major Risk Marking for PUREX Tank TK-40 (211-A)(2016)

Two solid matrix accumulations were found under tanks L2 and L8; subsequent assay determined an overall cell floor accumulation of between 3,718 to 6,168 grams of plutonium. Criticality analyses of the form, amount, and configuration of the plutonium in L-Cell showed that the material was not conducive to a criticality event. Therefore, it was decided in the deactivation project to leave the cell in its current condition. Removing the plutonium, it was believed, would not appreciably reduce the risk to the public, the environment, onsite workers, or future D&D workers. Furthermore, it was estimated that such removal would extend the deactivation schedule by 6 months and increase project costs by approximately \$15 million.¹³⁶

LESSONS LEARNED

Lesson No. 86. Careful planning with input from many knowledgeable plant people, as well as practice dry runs, are key elements in achieving smooth, efficient, and low-exposure results when work must be done in high-radiation areas.

8.8 CANYON/VESSEL FLUSHING

Following the completion of the PUREX stabilization campaign in 1990, the operating process was shut down in accordance with routine procedures. These procedures involved conducting vessel integrity tests where process vessels were filled with water and then emptied. Essentially a flushing activity, these actions removed much of the SNM and fission product waste from the process piping and equipment. During subsequent activities performed in preparation for potential restart of the plant, including tank calibration and tank integrity assessments, most of the equipment underwent additional water flushes. Therefore, it was decided in the PUREX Deactivation Project to limit further internal flushing of the canyon equipment to that required to ensure that any residual heels did not exhibit dangerous waste characteristics (pH of between 2 and 12.5), and to remove any suspected high-potential "pockets" of SNM or fission products. The decision to flush only to these levels and criteria was based on waste minimization considerations and on the belief that future D&D decisions should and would determine the necessary levels of "cleanliness" for the process vessels.

At the start of deactivation planning, several alternatives for flushing the canyon equipment were considered. The first was to transfer all solutions in the canyon vessels to the Hanford Site's tank farms and to document the holdup of SNM or hazardous constituents within each vessel. Regulations governing the Hanford Site require that all hazardous material from vessels in a TSD unit or system be removed before the unit is turned over to D&D. This eliminated the option of leaving holdup material. The second alternative was to conduct chemical and water flushes of the process equipment to remove SNM and hazardous material. Because of the large volume of waste water that would be produced, this alternative also was eliminated.

The method selected to flush the canyon equipment was to transfer all remaining solutions in the PUREX canyon vessels to the tank farms, then conduct a cascading heel flush of the process equipment using raw water. This method of flushing not only eliminated hazardous constituents remaining in the tank heels, but minimized waste water volume transferred to tank farms

(Figure 35). In addition to minimizing the use of raw water, excess water from the PUREX slug storage basin and steam condensate were used to flush specific canyon vessels.

Seventy-four PUREX canyon vessels were flushed, including vessels named as part of the TSD system. These vessels and associated systems were flushed (cascaded) to ensure that dangerous waste constituents were removed from the corresponding piping and tanks. Significant waste volume minimization was achieved using this approach. To support the cascading of flush solution through the individual systems of canyon vessels, canyon routes were installed or reconfigured.

Flush solutions were cascaded from one vessel in a system to the next with samples obtained at a predetermined point (See Appendix E for an example chart from K-Cell). Each system was flushed until the sample of the rinsate in the vessel heel no longer exhibited dangerous waste characteristics. Once the process sample exhibited no dangerous waste characteristics, a RCRA protocol sample was collected. This sample was the final item needed to designate the solution as non-dangerous waste.

Strict compliance with federal regulation required analysis for every constituent listed by the EPA in 40 CFR 261. In lieu of sampling and analyzing for each constituent, the DQO process was used to determine an appropriate degree of analysis. The DQO process involved discussions among personnel from DOE, WHC, and Ecology, and yielded an agreement to sample for only 20 analytes. The basis for the agreement consisted of past RCRA sample results from PUREX waste and past process knowledge. Although the review of past sample analyses indicated that corrosivity (pH), cadmium, and chromium were the only constituents of concern, it was agreed that the additional analyses would be performed to ensure that no dangerous waste characteristics remain in the canyon vessels.¹³⁷

Approximately 500,000 gallons of waste water were transferred to the Hanford Site's tank farms on completion of canyon vessel flushing in April of 1996. A total waste volume of 1.5 million gallons was projected and allotted for PUREX deactivation activities before the canyon vessel flushing project began. Recycling waste water from other sources as flush water for the canyon vessels contributed to successfully minimizing the waste. In addition, the cascading method of flushing vessels allowed significant waste minimization by adding water to one vessel and cascading it through the system of vessels. The cascaded approach resulted in significant cost savings and waste volume reductions.¹³⁸

LESSONS LEARNED

Lesson No. 87. Establishing effective, early, and ongoing communication between facility and regulatory personnel is essential. Regulatory support and communication were essential in determining the extent of flushing needed at PUREX, the sample analysis required, and the methods of flushing. Although interaction with regulators often costs time, ultimately it results in completing the project safely and ahead of schedule.

Summary of Proposed Changes to Revision 3 of the PUREX S&M Plan

I

Section	Description of Change	Justification
1.0 Introduction	Explanation of relationship between S&M Plan and Preclosure Work Plan and provides clarification about how changes to conditions and requirements are documented.	Adds clarity by stating explicitly that the S&M Plan will be the document to address changes in how PUREX will be managed during the S&M Phase.
1.0 Introduction	TPA requirements for PUREX are noted and additional descriptions of the CERCLA process are provided.	Points to TPA requirements and provides information about the CERCLA process and schedule. Per Ecology request in letter NWP-15-065, dated April 1, 2015.
6.0 Environmental Compliance	An overview of the approach for addressing interim status requirements for TSD units at PUREX is provided.	Clarify applicable standards for inactive TSD units until closure is completed in conjunction with CERCLA remediation. Requested per letter NWP-15-065.
6.1 Air Permitting	An explanation of how air emission units will be managed is provided.	Clarification of requirements per request in letter NWP-15-065.
Table 6-1	The table is replaced in its entirety to address dangerous waste requirements during S&M.	Clarification of requirements per request in letter NWP-15-065.
Table 6-1 WAC-173-303-320	Provides compensatory measures for inspection of TSD tanks that are not in the PUREX canyon.	Compliance Inspection Report letter 16-NWP-021
Table 6-1 WAC 173-303-640(5)(d)	Provides compensatory measures for major risk marking of TSD tanks that are not in the B Plant Canyon	Compliance Inspection Report letter 16-NWP-021