Unit 27 277-T Building Comments

1.

Addendum Section: Unit 27 277-T Building Permit Conditions

Comment Text: Addenda H “Closure Plan”

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

2.

Addendum Section: Unit 27 277-T Building Permit Conditions

Comment Text: The permittees will notify Department of Ecology (Ecology) within 24 hours of any deviations from the approved Addendum H, “Closure Plan.”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

3.

Addendum Section: Unit 27 277-T Building Permit Conditions

Comment Text: The Permittees will notify Ecology in advance of conducting the visual inspection in the Addendum H, “Closure Plan,” that will take place following removal of stored equipment, in order for Ecology to witness the inspection.

Basis Text: This requirement is too restrictive. The Permittees only have a limited number of days to do this inspection before it starts to impact the schedule for closure.

Recommendation Text: The Permittees will notify Ecology at least five (5) working days before the scheduled inspection.

4.

Addendum Section: Unit 27 277-T Building Permit Conditions

Comment Text: For statistical grid sampling

Basis Text: There is no statistical grid sampling in the building. All grid sampling is directly compared to the closure performance standards.

Recommendation Text: Delete permit condition V.27.b.4.a since only non-statistically grid sampling is part of the closure plan.

5.

Addendum Section: Unit 27 277-T Building Permit Conditions

Comment Text: If the closure performance standards have been exceeded, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work and/or sampling that would need to be done to achieve clean closure.

Basis Text: Resolving Contamination Identified During Focused Soil Sampling and Grid (Non-Statistical) Concrete Chip Sampling is already addressed in Section H.4.4.3. Identify what additional information is needed for this permit modification.

Recommendation Provide details on what additional information is required for the permit modification.

6.

Addendum Section: Unit 27 277-T Building Permit Conditions

Comment Text: Within sixty days of completion of closure for the 277-T Building, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 277-T Building has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610 (6)].

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 277-T Building, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 277-T Building has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610(6)].

7.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-..

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document.

8.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO is not defined in this plan.

Recommendation Text: Add HMWA, RCW to and; and remove BCSO from terms table.

9.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 277-T Building Dangerous Waste Management Unit (DWMU), hereinafter called the 277-T Building.

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 277-T Building Dangerous Waste Management Unit (DWMU), hereinafter termed the “277-T Building,” as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington’s Hazardous Waste Management Act (HWMA)

10.

Addendum Section: H.1 Introduction

Comment Text: The U. S. Department of Energy (DOE) and CH2M HILL Plateau Remediation Company (CHPRC), hereinafter called Permittees, have agreed with the U. S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) through a Consent Agreement and Final Order (EPA Docket No. RCRA-110-2013-0113) to close this DWMU.

Basis Text: This DWMU is not identified in the CAFO. It was independently identified for closure by DOE and CHPRC.

Recommendation Text: "The U.S. Department of Energy (DOE) and CH2M HILL Plateau Remediation Company (CHPRC), hereinafter called the Permittees, along with the Washington State Department of Ecology (Ecology), have agreed to close this DWMU."

11.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WAC 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-3003-610(6), *Closure and Post-Closure,* and in WAC 173-303-630(10), *Use and Management of Containers.*

12.

Addendum Section: H.1 Introduction

Comment Text: Sampling of underlying soil to ensure closure performance standards are met.

Basis Text: Section H.1.2, Maximum Waste Inventory, identifies there was one 27 m^3 waste container of solid metal and organic material stored in the 277-T Building. The waste information combined with the information from the records review and visual inspection indicate no logical pathway for waste to reach the underlying soil of the building.

Recommendation Text: Provide technical justification on the pathway for contamination from the 27 m^3 box containing solid material to reach the underlying soil.

13.

Addendum Section: H.1 Introduction

Comment Text: Addendum H.6

Basis Text: The page numbering should start at H.1.

Recommendation Text: Renumber pages beginning with H.1.

14.

Addendum Section: Figure H-1 T Plant Complex Overview 277-T Building Dangerous Waste Management Unit

Comment Text: Figure H-1 T Plant Complex Overview 277-T Building Dangerous Waste Management Unit

Basis Text: Image should be dated

Recommendation Text: Provide date for Figure H-1.

15.

Addendum Section: H.1.1 Unit Description

Comment Text: The 277-T Building (Figure H-2 and Figure H-3) is located west of the 221-T Canyon Building and adjacent to the 277-T Outside Storage Area.

Basis Text: Incorrect DWMU name for the 277-T Outdoor Storage Area

Recommendation Text: Replace “Outside” with “Outdoor”.

16.

Addendum Section: H.1.1 Unit Description

Comment Text: Therefore, the surface of the sump floor, and the surface of the building floor are designated as the boundary of the 277-T Building DWMU.

Basis Text: Based on this definition of the DWMU, the surface of the sump and the building floor are the boundaries of the DWMU. The underlying soil is not included in the DWMU boundary.

Recommendation Text: Provide the justification for soil sampling under the building since the underlying soil is not within the DWMU boundary.

17.

Addendum Section: Table H-1 Training Matrix for the 277-T Building Dangerous Waste Management Unit

Comment Text: The “X” in the FS column for Building Emergency Training Category Course Description

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the “X” for the FS column for Building Emergency Training Category Course Description.

18.

Addendum Section: Table H-1 Training Matrix for the 277-T Building Dangerous Waste Management Unit

Comment Text: Superscript c. The Facility Health and Safety training is required only if workers are unescorted in the facility.

Basis Text: There is no c superscript in Table H-1 for the FS column for Facility Health and Safety Training Category Course Description.

Recommendation Text: Apply superscript c to the FS column for the Facility Health and Safety Training Category Course Description within the H-1 table.

19.

Addendum Section: H.1.2 Maximum Waste Inventory

Comment Text: Waste management records indicate the maximum inventory of the dangerous or mixed waste stored in the 277-T Building over its operational period included one container of mixed waste with a total volume of 27 m^3 (35 yd^3). The waste was generated from canyon cleanout, and included metal and organic material.

Basis Text: Based on the waste inventory of the building, there is no release pathway to the underlying soil. The visual inspection in Section H.3.2, Operating Records Review and Visual Inspection, does not indicate a potential crack, gap, or opening that would allow containerized solid waste to reach the underlying soil.

Recommendation Text: Provide technical justification for performing sampling of the underlying soil.

20.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

21.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

22.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Decontaminate the concrete surface and perform concrete chip sampling to ensure concrete meets standard Model Toxics Control Act (MTCA) cleanup levels, or remove any concrete that cannot be so decontaminated.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities.

Recommendation Text: Delete text.

23.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils at the 277-T Building meet standard MTCA cleanup levels, and remove any soils contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

24.

Addendum Section: H.3 Closure Activities

Comment Text: Perform soil sampling beneath the 277-T Building concrete flooring and sump (Section H.4.4).

Basis Text: If chip sampling does not determine contamination of the surface of the concrete areas, provide the technical justification for sampling under the concrete. In addition, the records review did not identify any releases to the DWMU. The visual inspection did not identify any waste related staining or potential pathways for contamination of the underlying soil. Provide justification for additional sampling.

Recommendation Text: Provide technical justification and supporting documentation for sampling of soil below concrete foundation or delete text.

25.

Addendum Section: H.3.1 Removal of Wastes and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining, therefore dangerous or mixed waste residues are not anticipated at this unit.

26.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: The records review indicated no releases of dangerous or mixed waste in the 277-T Building.

Basis Text: If there is no record of waste being released, there is no physical exposure pathway for waste migrating to the soil under the building.

Recommendation Text: Provide technical justification and supporting documentation for sampling of soil below concrete foundation or delete text.

27.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: For the purposes of focused sampling, visual inspections were performed by the Permittees in September 2013 and June 2015, to identify any dangerous or mixed waste related staining, major cracks, crevices, pits, low area, or joints/seams that would allow liquid to migrate to the underlying soil.

Basis Text: If the waste did not contain free liquids, it is impossible for liquid to migrate to the underlying soil therefore, there is no possible exposure pathway.

Recommendation Text: Provide technical justification for solid waste to migrate through the concrete foundation to the underlying soil.

28.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walk down and inspection of the DWMU.

Basis Text: WAC 173-303-840(2)(e) states, “All draft permits must be accompanied by a fact sheet that is supported by administrative record and made available for public comment.” The walkdown and inspection are part of the administrative record. Ecology should attach this information to the closure plan, making the information available for Permittee and public comments.

Recommendation Text: Provide all documentation from this inspection so the Permittees and the public can review and comment.

29.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology identified five additional focused soil sample locations including three low point samples, and two construction joint/seam samples. Ecology also identified one focused concrete chip sample for the sump based on professional judgement.

Basis Text: If the waste did not contain free liquids, it is impossible for liquid to migrate to the underlying soil therefore, there is no possible exposure pathway.

Recommendation Text: Provide technical justification for solid waste to migrate through the concrete foundation to the underlying soil.

30.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Once all stored equipment and materials have been removed from the277-T Building to supporting sampling and decontamination activities, an additional visual inspection will be performed by the Permittees and Ecology (Section H.3.4).

Basis Text: Clarify by using the term “final”.

Recommendation Text: Change “additional” to “final”.

31.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Supporting documentation for the visual inspection is included in Attachment A, T Plant Complex 277-T Building Visual Inspection Supporting Documentation.

Basis Text: There is no documentation in Attachment A for the inspection conducted by Ecology.

Recommendation Text: Provide documentation (notes, photos, etc.) from Ecology for this inspection.

32.

Addendum Section: H.3.3 Unit Components, Parts, and Ancillary Equipment

Comment Text: The sampling locations will be sealed after sampling, and the 277-T Building will remain in place pending confirmation and acceptance of clean closure.

Basis Text: Provide the regulatory driver to seal the sampling locations. This should be at the discretion of the facility and not part of closure activities.

Recommendation Text: Delete this text. If Ecology does not delete the language, clarification is required to only apply to the concrete samples, not soil samples. Suggested language: The concrete sampling locations may be sealed after sampling at the discretion of the Permittees. The 277-T Building will remain in place pending..

33.

Addendum Section: H.3.4.1 Inspection of Unit Before Decontamination

Comment Text: A visual inspection of the floor surface by the Permittees and Ecology will be conducted to identify any additional dangerous waste or mixed waste related staining, low points, joints/seams, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

Basis Text: If only solid waste in a large container was stored in the 277-T Building, low points, joints/seams, cracks, etc. would need to be significant enough allow contamination from solid material to reach underlying soil.

Recommendation Text: Delete text related to underlying soil.

34.

Addendum Section: H.3.4.2 Decontamination

Comment Text: Equipment used during decontamination and sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.6.

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue require removal or decontamination. With the absent of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent possible, and will be performed within the area where the closure activity has taken place. Solid waste debris generated by decontamination of equipment (e.g., rags and personal protective equipment) will be collected and disposed at an approved disposal facility. Dangerous waste generated will be managed in accordance with WAC 173-303, "Dangerous Waste Regulations." Contaminated equipment that cannot be decontaminated for re-use will be discarded and managed as dangerous waste in accordance with generator accumulation standards of WAC 173-303-170 and -200.

35.

Addendum Section: H.3.4.2 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established near the 277-T Building.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective.

Recommendation Text: A small temporary decontamination area may be established near the 277-T Building.

36.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

37.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at CAAs in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at central accumulation areas in accordance with standards in WAC 173-303-200, “Accumulating Dangerous Waste On-site.” Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268, “Land Disposal Restrictions”) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

38.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

39.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste based on characterization results, provide the regulatory driver for requiring disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

40.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

41.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900), which includes closure performance standards for human health based on unrestricted land use.

Basis Text: Include the title of this WAC 173-340-900, *Tables.*

Recommendation Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900, *Tables*), which includes closure performance standards for human health based on unrestricted land use.

42.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: The waste container in the 277-T Building contained physically solid waste and inspections indicate no releases (Section H.3.2). Therefore, there is no known waste-related source of contaminated media and the inhalation exposure pathway has been excluded.

Basis Text: This excludes a pathway to underlying soil therefore focused soil samples should be eliminated from closure activities.

Recommendation Text: Remove focused soil samples from closure activities.

43.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: The sump at 277-T Building was designed to direct water from the sump to a WIDS draining pipe that is outside of this DWMU. With no indication of cracks or joints/seams that would allow water to penetrate beneath the sump and into the soil, the soil concentration protective of groundwater pathway was excluded when calculating closure performance standards.

Basis Text: Based on closure plan text, the sump does not pose a potential for soil contamination. Provide the technical justification for a pathway to underlying soil in other parts of the building.

Recommendation Text: Provide technical justification for a pathway to underlying soil in other parts of the 277-T Building.

44.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: If target analytes are found above closure performance standards, then the contaminated soil will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3 to ensure the closure performance standards are met for remaining soil. If failed constituents of concern do not meet closure performance standards for soil remediation, then the Permittees will meet with Ecology to determine a path forward.

Basis Text: Repetitive with Section H.4.4.3.

Recommendation Text: Target analytes found above closure standards will be addressed as in Section H.4.4.3.

45.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The closure performance standard for concrete is treatment using a site-specific decontamination method as discussed in Section H.3.4, followed by confirmatory concrete chip sampling to ensure analytical results meet closure performance standards and that decontamination was successful.

Basis Text: There are no facts provided supporting the collection of chip samples as "necessary to achieve compliance with the Hazardous Waste Management Act." The records review and inspection showed no evidence of spills or leaks, thus the additional sampling provides no benefit. Closure performance standards must be supported by facts and a cogent explanation in the administrative record. Provide a reasonable basis based on the description of this facility for the need of chip sampling.

Recommendation Text: Provide documentation of the basis to support the necessity for chip sampling of the concrete.

46.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The viable exposure pathways considered for concrete are the same as for soil (Section H.3.7).

Basis Text: Soil levels protective of groundwater is identified in the closure plan as a complete pathway. However, as evidence by the visual inspections, there are no cracks or breaches in the concrete surface significant enough to allow for contamination to percolate through to the soil and into the groundwater. Provide documentation of the avenue for percolation in Attachment A for visual inspections.

Recommendation Text: Provide documentation of the avenue for percolation through the concrete to the soil.

47.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Concrete chip sampling and analysis will be conducted in accordance with the closure plan SAP located in Section H.4.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

48.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Analytical results of the concrete chip samples will be individually compared to the soil closure performance standards consistent with closure requirements. [WAC 173-303-610(2)(b)(i)]

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

49.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3.

Basis Text: The closure plan does not provide activities detailing what is required for remediation of the concrete.

Recommendation Text: Provide text indicating acceptable remediation for clean closure.

50.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

51.

Addendum Section H.4 Sampling and Analysis Plan

Comment Text: Sampling includes six focused soil samples, one focused concrete chip sample at the sump, and six non-statistical concrete chip samples (Figure H-5).

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical grid samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focused and non-statistical grid samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

52.

Addendum Section: H.4.1 Sampling and Analysis Plan Requirements

Comment Text: Sampling and analysis activities were designed using the EPA guidance document EPA/240/R-02/005, *Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan (EPA QA/G-5S)*…

Basis Text: In EPA/240/R-02/005, Section 4.1, first sentence states "Judgmental sampling refers to the selection of sample locations based on professional judgment alone, without any type of randomization." No basis is provided for why the six samples have been randomized if they are based on professional judgment.

Recommendation Text: Provide the basis for randomizing the six focused samples.

53.

Addendum Section: H.4.3.3 Sampling Documents and Records

Comment Text: Records may be stored in either electronic or hard copy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrieveability of stored records. Records required by the Tri-Party Agreement (Ecology et al., 1989, *Hanford Federal Facility Agreement and Consent Order)* will be managed in accordance with the requirements therein.

Basis Text: This replicates language in Section H.1.4.4.

Recommendation Text: Replace language with reference to Section H.1.4.4.

54.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused (Judgmental) Sampling

Basis Text: Based on the information in this Section and on Ecology Publication #94-111, there is no justification for sampling the underlying soil. None of the criteria for focused samples are met for this DWMU:

Likely areas for focused sampling include, but are not limited to:

- Containers, tanks, waste piles, or any other units (such as ancillary pipes) in contact with soil;
- Below any sumps or valves;
- Load or unload areas;
- Storage units with underlying pavements or concrete that appears to be cracked or broken; and
- Areas receiving runoff or discharge from DWMUs, such as a ditch, a swale, or the discharge point down gradient from a pipe.

Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred;
- Length of time the unit has been in existence;
- Entries into the unit operating record; and
- Soil gas surveys or soil borings.

Recommendation Text: Delete text regarding focused sampling.

55.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused sampling should be conducted in addition to grid sampling where there is evidence of leaks or spills or potential for a dangerous waste constituent to migrate.

Basis Text: Based on the records review and visual inspection, there are no evidence of leaks or spills in 277-T Building therefore focused sampling is not appropriate.

Recommendation Text: Delete text.

56.

Addendum Section H.4.4.1 Sampling Design Process

Comment Text: Per the visual inspections (Section H.3.2) and additional professional judgement, six focused soil sample locations and one focused concrete chip sample location are identified.

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical gird samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focused and non-statistical grid samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

57.

Addendum Section: H.4.4.1 Sampling Design Process

Comment Text: Any spill within the 277-T Building would likely drain and collect in the sump, therefore a focused concrete sample is identified.

Basis Text: No free liquids were contained in the waste container. Solid waste with no free liquids does not provide an avenue for waste to drain and collect in the sump.

Recommendation Text: Delete text.

58.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: As an evaluation criteria, concrete chip sampling results will be directly compared to the closure performance standards for soil (Section H.3.9).

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-5 of Addendum H.

59.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Concrete chip samples are collected at regularly-spaced intervals over an areas.

Basis Text: In EPA/240/R-02/005, Section 4.1, first sentence states "Judgmental sampling refers to the selection of sample locations based on professional judgment alone, without any type of randomization." No basis is provided for why the six samples have been randomized if they are based on professional judgment.

Recommendation Text: Provide the basis for randomizing the six focused samples.

60.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Concrete chip samples are collected at regularly-spaced intervals over an area.

Basis Text: This statement is contradictory. Samples are either focused (judgmental) or grid (area). Focused are non-statistical and do not need to be randomized. The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of collecting random chip samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

61.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Professional judgement determined that six chip samples would provide sufficient coverage to demonstrate successful decontamination (Figure H-5).

Basis Text: WAC 173-303-840(2)(e) states, “All draft permits must be accompanied by a fact sheet that is supported by administrative record and made available for public comment.” The walkdown and inspection which led to the professional judgement addition of six chip samples are part of the administrative record. Ecology should attach this information to the closure plan, making the information available for Permittee and public comments.

Recommendation Text: Provide all documentation from this inspection that supports the professional judgement so the Permittees and the public can review and comment.

62.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: For the purpose of this SAP, ground surface is defined as the exposed surface layer once concrete or loose gravel has been removed.

Basis Text: There is no loose gravel in the building.

Recommendation Text: Delete text as soil sampling is inappropriate for this DWMU.

63.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The sampling device will be laboratory cleaned and wrapped in cleaned, autoclaved aluminum foil until ready for use.

Basis Text: Sampling devices do not have to be sterile to collect a representative sample. This does not allow for the use of disposable and properly decontaminated devices.

Recommendation Text: Delete text

64.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Donning a new pair of disposable gloves, the concrete surface will be broken and sampled.

Basis Text: The PPE required to perform a specific task is developed based on multiple factors including safely of the worker. Listing specific PPE may interfere with the safety of the worker based on the hazards present.

Recommendation Text: Individuals will don appropriate PPE prior to breaking and sampling the concrete surface.

65.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: An effort will be made to avoid scattering pieces out of the sampling area boundary.

Basis Text: Area not defined.

Recommendation Text: Define sampling boundary area

66.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The area will be chipped to less than one-quarter inch (preferably 1/8 in.).

Basis Text: Based on the depth limit of 1/4 in (preferably 1/8 in), calculate the area to ensure the volume of concrete generated meets the minimum quantity of sample media required to run all analysis.

Recommendation Text: Provide calculation or supporting documentation to ensure adequate sample media.

67.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Chipped pieces will be collected using a dedicated, decontaminated dustpan and natural bristle brush and transferred directly into the sampling bottle.

Basis Text: This detail may conflict with proceduralized sample collection processes and equipment. This level of detail is not necessary.

Recommendation Text: Delete text.

68.

Addendum Section: H.4.4.3 Sampling and Analysis Requirements to Address Removal of Contaminated Soil and Concrete

Comment Text: If focused or chip sample results based on direct comparison (Section H.4.4.1) indicate contamination above closure performance standards, then sample location(s) will be remediated to remove contaminated soil or concrete.

Basis Text: Details for remediation of contaminated soil are presented in Section H.3.5, however details of concrete surface remediation are not provided.

Recommendation Text: Provide details on remediation of concrete.

69.

Addendum Section: H.4.4.3 Sampling and Analysis Requirements to Address Removal of Contaminated Soil and Concrete

Comment Text: If focused or chip sample results based on direct comparison (Section H.4.4.1) indicate contamination above closure performance standards, then sample location(s) will be remediated to remove contaminated soil or concrete.

Basis Text: Remediation of the soil under the 277-T Building sump requires disturbance of the WIDS site. Consider coordination with CERCLA for remediation of the existing WIDS site. It seems remediation of the WIDS is outside the scope of this closure plan.

Recommendation Text: If sampling and analysis of the soil under the sump indicates contamination above closure performance standards, then Permittees will meet with Ecology to determine a path forward for closure.

70.

Addendum Section: H.4.6 Revisions to the Sampling and Analysis Plan and Constituents to be Analyzed

Comment Text: Changes to the SAP may be necessary due to unexpected events during closure. An unexpected event would be an event outside the scope of the SAP or a condition that inhibits implementation of the SAP as written. Revisions to the SAP will be submitted no later than 30 days after the unexpected event as a permit modification request.

Basis Text: Approval of a permit modification will likely adversely affect meeting the 180-day closure period.

Recommendation Text: Provide clarification on whether the permit modification request approval is required to continue with closure activities or if activities can continue uninterrupted after the unexpected event occurs.

71.

Addendum Section: H.5.1 Confirmation of Clean Closure

Comment Text: The 277-T Building will be clean closed through confirmation of successful decontamination determined by chip sampling of the concrete surfaces, and through sampling of soil beneath asphalt and concrete.

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-5 of Addendum H.

72.

Addendum Section: H.5.1.1 Confirmation of Site-Specific Decontamination

Comment Text: Once it has been determined that analytical results from chip sampling are below the closure performance standards that portion of the 277-T Building DWMU will be considered clean.

Basis Text: This indicates that only the portion of the DWMU that was chip sampled is clean closed. The chip samples be indicative of the entire DWMU.

Recommendation Text: Provide clarification that the entire DWMU is considered clean closed.

73.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 277-T Building DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also, include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 277-T Building DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

74.

Addendum Section: Table H-8 277-T Building Dangerous Waste Management Unit Closure Schedule

Comment Text: 180 days

Basis Text: Per the WAC 173-303-610 requirement, the total duration of closure activities is limited to 180 days. The 180 day duration of this activity indicates closure will take 360 days. I

Recommendation Text: Delete Activity.

75.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

76.

Addendum Section: Attachment B T Plant 277-T Building Visual Sample Plan Supporting Documentation

Comment Text: Table: Summary of Sampling Design User specified number of samples

Basis Text: Provide justification for the 6 samples. If this is for judgmental (focused) samples, then the randomization of the locations is unnecessary.

Recommendation Text: Recommendation Text: Provide justification and additional details to support the determination of the number of samples.

Unit 28 277-T Outdoor Storage Area Comments

1.

Addendum Section: Unit 28 277-T OSA Permit Conditions

Comment Text: Addenda H

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

2.

Addendum Section: Unit 28 277-T OSA Permit Conditions

Comment Text: The Permittees will notify the Department of Ecology (Ecology) within 24 hours of any deviations from the Approved Addendum H, “Closure Plan”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

3.

Addendum Section: Unit 28 277-T OSA Permit Conditions

Comment Text: If sampling assumptions/closure performance standards were not met, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work that would need to be done to achieve clean closure.

Basis Text: Resolving Contamination Identified During Grid (Area-Wide) Soil Sampling is already addressed in Section H.4.3.3.1. Identify what additional information is needed for this permit modification.

Recommendation Text: Provide details on what additional information is required for the permit modification.

4.

Addendum Section: Unit 28 277-T OSA Permit Conditions

Comment Text: If the closure performance standards have been exceeded, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work and/or sampling that would need to be done to achieve clean closure.

Basis Text: Resolving Contamination Identified During Focused Soil Sampling and Grid (Non-Statistical) Concrete Chip Sampling is already addressed in Section H.4.4.3.1. Identify what additional information is needed for this permit modification.

Recommendation Provide details on what additional information is required for the permit modification.

5.

Addendum Section: Unit 28 277-T OSA Permit Conditions

Comment Text: Within sixty days of completion of closure for the 277-T OSA, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 277-T OSA has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610 (6)].

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 277-T OSA, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 277-T OSA has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610(6)].

6.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-..

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document.

7.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO is not defined in this plan.

Recommendation Text: Add HMWA, RCW and remove BCSO to terms table.

8.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 277-T Outdoor Storage Area Dangerous Waste Management Unit (DWMU), hereinafter called the 277-T Outdoor Storage Area.

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 277-T Outdoor Storage Area Dangerous Waste Management Unit (DWMU), hereinafter termed the "277-T OSA" as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington's Hazardous Waste Management Act (HWMA)

9.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WAC 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-3003-610(6), *Closure and Post-Closure,* and in WAC 173-303-630(10), *Use and Management of Containers.*

10.

Addendum Section: H.1 Introduction

Comment Text: Addendum H.9

Basis Text: Numbering should begin at H-1.

Recommendation Text: Renumber pages beginning with H-1.

11.

Addendum Section: Figure H-1 T Plant Complex Overview, 277-T Outdoor Storage Area Dangerous Waste Management Unit

Comment Text: Figure H-1 T Plant Complex Overview, 277-T Outdoor Storage Area Dangerous Waste Management Unit

Basis Text: Image should be dated

Recommendation Text: Provide date for Figure H-1.

12.

Addendum Section: H.1.1 Unit Description

Comment Text: Figure H-5 shows the blow-down drain on the northeast side of 277-T Building, which drained water from 277-T Building condensate blowdown lines to the 216-T-1 drainage ditch located north of the 277-T Building.

Basis Text: This is not correct. This is a steam condensate blow-down line. This line does not drain water from the building to the drainage ditch.

Recommendation Text: Figure H-5 shows the blow-down drain on the northeast side of 277-T Building, which is also a focused sample location.

13.

Addendum Section: H.1.1 Unit Description

Comment Text: The drainage ditch was backfilled and stabilized in 1995 and permanently isolated by filling the manholes with concrete. The discharge pipes have been cut and capped. The drainage ditch and pipelines are currently Waste Information Data System (WIDS) sites and are being tracked in the WIDS database and will not be covered under the closure plan.

Basis Text: The drainage ditch is not associated with any portion of this DWMU.

Recommendation Text: Delete this text.

14.

Addendum Section: Table H-1 Training Matrix for the 277-T OSA Pad Dangerous Waste Management Unit

Comment Text: The “X” in the FS column for Building Emergency Training Category Course Description

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the “X” for the FS column for Building Emergency Training Category Course Description.

15.

Addendum Section: Table H-1 Training Matrix for the 277-T Outdoor Storage Area Dangerous Waste Management Unit

Comment Text: Superscript c. The Facility Health and Safety training is required only if workers are unescorted in the facility.

Basis Text: There is no c superscript in Table H-1. Superscript c is associated with the X in the Non-T Plant Personnel or Visitor, SPOC, and FS columns for Facility Health and Safety Training Category Course Description.

Recommendation Text: Apply superscript c to Non T Plant Personnel or Visitor, SPOC, and FS columns for the Facility Health and Safety Training Category Course Description within the H-1 table.

16.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

17.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities.

Recommendation Text: Delete text.

18.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Decontaminate the concrete surface and perform concrete chip sampling to ensure concrete meets standard Model Toxics Control Act (MTCA) cleanup levels, or remove any concrete that cannot be so decontaminated.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities.

Recommendation Text: Delete text.

19.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils in the 277-T Outdoor Storage Area meet standard MTCA cleanup levels, and remove any soils (and adjacent asphalt associated with the contaminated soil) contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

20.

Addendum Section: H.3 Closure Activities

Comment Text: Perform soil sampling below concrete pads and blow down drain (Section H.4.4).

Basis Text: If chip sampling does not determine contamination of the surface of the concrete areas, provide the technical justification for sampling under the concrete. In addition, the records review did not identify any releases to the DWMU. The visual inspection did not identify any waste related staining. Provide justification for additional sampling.

Recommendation Text: Provide justification and supporting documentation to justify sampling of soil below concrete pads or delete text.

21.

Addendum Section: H.3.1 Removal of Wastes and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining therefore dangerous or mixed waste residues are not anticipated at this unit.

22.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walkdown and inspection of the DWMU on 9 November of 2018. Ecology relocated the soil samples for the concrete expansion joints on the 277-T Building front concrete pad to the corners, and added two focused soil samples where each expansion joint meets up with the 277-T Building. Ecology added two focused soil samples to the front concrete pad, at points where remaining metal posts penetrate the concrete (Figure H-4). Ecology added three focused soil samples to the 277-T Building back concrete pad at the low end of the concrete pad, and at an existing manhole cover (Figure H-3).

Basis Text: If no dangerous or mixed waste related staining was identified during the visual inspection, and no releases identified during the records review, provide justification for the number and locations of samples under the concrete. Identify the release pathway for soil contamination.

Recommendation Text: Two expansion joints and a steam condensate blow-down line drain were identified for focused sampling of the underlying soil.

23.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walkdown and inspection of the DWMU on 9 November of 2018.

Basis Text: WAC 173-303-840(2)(e) states, “All draft permits must be accompanied by a fact sheet that is supported by administrative record and made available for public comment.” The walkdown and inspection are part of the administrative record. Ecology should attach this information to the closure plan, making the information available for Permittee and public comments.

Recommendation Text: Provide all documentation from this inspection so the Permittees and the public can review and comment.

24.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Supporting documentation for the visual inspection is included in Attachment A, T Plant 277-T Outdoor Storage Area Visual Inspection Supporting Documentation.

Basis Text: There is no documentation in Attachment A for the 2018 inspection conducted by Ecology.

Recommendation Text: Provide documentation (notes, photos, etc.) from Ecology for this inspection.

25.

Addendum Section: H.3.3 Unit Components, Parts, and Ancillary Equipment

Comment Text: The sampling locations will be sealed after sampling, and the 277-T Outdoor Storage Area will remain in place pending confirmation and acceptance of clean closure.

Basis Text: Provide the regulatory driver to seal the sampling locations. This should be at the discretion of the facility and not part of closure activities. Suggested language: Delete.

Recommendation Text: Delete this text. If Ecology does not delete the language, clarification is required to only apply to the concrete samples, not soil samples. Suggested language: The concrete sampling

locations may be sealed after sampling at the discretion of the Permittees. The 277-T Outdoor Storage Area will remain in place pending..."

26.

Addendum Section: H.3.4 Decontamination

Comment Text: Equipment used during decontamination and sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.6.

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue require removal or decontamination. With the absent of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent possible, and will be performed within the area where the closure activity has taken place. Solid waste debris generated by decontamination of equipment (e.g., rags and personal protective equipment) will be collected and disposed at an approved disposal facility. Dangerous waste generated will be managed in accordance with WAC 173-303, "Dangerous Waste Regulations." Contaminated equipment that cannot be decontaminated for re-use will be discarded and managed as dangerous waste in accordance with generator accumulation standards of WAC 173-303-170 and -200.

27.

Addendum Section: H.3.4 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established near the 277-T Outdoor Storage Area.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective. If the purpose is to limit the size of the decontamination area, provide a maximum size.

Recommendation Text: A small temporary decontamination area may be established near the 277-T Outdoor Storage Area.

28.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

29.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at CAAs in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at a central accumulation area in accordance with standards in WAC 173-303-200, “Accumulating Dangerous Waste On-site.” Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268, “Land Disposal Restrictions”) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

30.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

31.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste based on characterization results, provide the regulatory driver for requiring disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

32.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

33.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900), which includes closure performance standards for human health based on unrestricted land use.

Basis Text: Include the title of this WAC 173-340-900, *Tables.*

Recommendation Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900, *Tables*), which includes closure performance standards for human health based on unrestricted land use.

34.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: If target analytes are found above closure performance standards, then the contaminated soil will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3 to ensure the closure performance standards are met for the remaining soil If failed constituents of concern do not meet closure performance standards after soil remediation, then Permittees will meet with Ecology to determine a path forward for closure.

Basis Text: Repetitive with Section H.4.4.3.1.

Recommendation Text: Replace with "Target analytes found above closure standards will be addressed as in Section H. 4.4.3.1.

35.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The closure performance standard for concrete is treatment using a site-specific decontamination method as discussed in Section H.3.4, followed by confirmatory concrete chip sampling to ensure analytical results meet closure performance standards and that decontamination was successful.

Basis Text: There are no facts provided supporting the collection of chip samples as "necessary to achieve compliance with the Hazardous Waste Management Act." The records review and inspection showed no evidence of spills or leaks, thus the additional sampling provides no benefit. Closure performance standards must be supported by facts and a cogent explanation in the administrative record. Provide a reasonable basis based on the description of this facility for the need of chip sampling.

Recommendation Text: Provide documentation of the basis to support the necessity for chip sampling of the concrete.

36.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The viable exposure pathways considered for concrete are the same as for soil (Section H.3.7)

Basis Text: The exposure pathway for soil protective of groundwater assumes that water or rainwater on a surface has an avenue to percolate through the surface and underlying soil to groundwater.

Basis Text: Soil levels protective of groundwater is identified in the closure plan as a complete pathway. However, as evidence by the visual inspections, there are no cracks or breaches in the concrete surface significant enough to allow for contamination to percolate through to the soil and into the groundwater. Provide documentation of the avenue for percolation in Attachment A for visual inspections.

Recommendation Text: Provide documentation of the avenue for percolation through the concrete to the soil.

37.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Concrete chip sampling and analysis will be conducted in accordance with the closure plan SAP located in Section H.4.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

38.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Analytical results of concrete chip samples will be individually compared to the soil closure performance standards consistent with closure requirements.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

39.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H4.4.3.

Basis Text: The closure plan does not provide activities detailing what is required for remediation of the concrete.

Recommendation Text: Provide text indicating acceptable remediation for clean closure.

40.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H4.4.3.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

41.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Comment Text: Table H-4 Barium Groundwater Protection

Basis Text: Soil levels protective of groundwater is identified in the closure plan as a complete pathway. However, as evidence by the visual inspections, there are no cracks or breaches in the concrete surface significant enough to allow for contamination to percolate through to the soil and into the groundwater.

Recommendation Text: Provide documentation of the avenue for percolation in Attachment A for visual inspections.

42.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

43.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Comment Text: Table H-4 Tetrahydrofuran 1.00E+1

Basis Text: For tetrahydrofuran, Permittees agree with the value of 3.00E+01 mg/kg for groundwater protection. The PQL should be 5.00E-02 mg/kg.

Recommendation Text: Update Table H-4 with PQL of 5.00E-02 mg/kg and groundwater protection with 3.00E+01 mg/kg

44.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Comment Text: Table H-4 MEK peroxide[i] , Acetyl chloride[i], and Phosphorus pentasulfide[i]

Basis Text: Acetyl chloride, MEK peroxide, and phosphorus pentasulfide are addressed in footnote j. These appears to reference footnote i.

Recommendation Text: Change superscripts to footnote j.

45.

Addendum Section: H.4 Sampling and Analysis Plan

Comment Text: Sampling includes 10 focused soil samples, 9 grid (non-statistical) concrete chip samples, and 21 grid (area-wide) soil samples (Figures H-7).

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical grid samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focused and non-statistical grid samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

46.

Addendum Section: H.4.3.3 Sampling Documents and Records

Comment Text: Records may be stored in either electronic or hard copy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrieveability of stored records. Records required by the Tri-Party Agreement (Ecology et al., 1989, *Hanford Federal Facility Agreement and Consent Order)* will be managed in accordance with the requirements therein.

Basis Text: This replicates language in Section H.1.4.4.

Recommendation Text: Replace language with reference to Section H.1.4.4.

47.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused sampling should be conducted in addition to grid sampling where there is evidence of leaks or spills or potential for a dangerous waste constituent to migrate.

Basis Text: Based on the records review and visual inspection, there are no evidence of leaks or spills in 277-T OSA therefore focused sampling is not appropriate.

Recommendation Text: Delete text.

48.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Per the visual inspections (Section H.3.2) and additional professional judgement, nine focused soil sample locations are identified for both concrete pads (six for the concrete pad located at the front of the 277-T Building, and three for the concrete pad located at the back of the 277-T Building).

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical gird samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focused and non-statistical grid samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

49.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: For the blow-down line drain, any waste from the 277-T Building DWMU (Closing Unit Group 28) sump would have drained through this line, which is in direct contact with the soil. Therefore, these locations were identified for focused soil sampling.

Basis Text: This is not correct. Waste from the building would have drained into the sump and out to the crib through the WIDS pipeline identified in the 277-T Building closure plan. This is a steam condensate blow-down line. No waste would have ever gone through this line.

Recommendation Text: Delete text

50.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: As an evaluation criteria, concrete chip sampling results will be directly compared to the closure performance standards for soil (Section H.3.7).

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-4 of Addendum H.

51.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Concrete chip samples are collected at regularly-spaced intervals over an area.

Basis Text: This statement is contradictory. Samples are either focused (judgmental) or grid (area). Focused are non-statistical and do not need to be randomized. The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of collecting random chip samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

52.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Professional judgement determined that nine chip samples would provide sufficient coverage to demonstrate successful decontamination (Figure H-7).

Basis Text: The basis for requiring nine samples is not provided as support for the professional judgement.

Recommendation Text: Provide the basis for the professional judgement determining the number of samples.

53.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The sampling device will be laboratory cleaned and wrapped in a clean, autoclaved aluminum foil until ready for use.

Basis Text: Sampling devices do not have to be sterile to collect a representative sample. This does not allow for the use of disposable and properly decontaminated devices.

Recommendation Text: Delete text

54.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Donning a new pair of disposable gloves, the concrete surface will be broken and sampled.

Basis Text: The PPE required to perform a specific task is developed based on multiple factors including safety of the worker. Listing specific PPE may interfere with the safety of the worker based on the hazards present.

Recommendation Text: Individuals will don appropriate PPE prior to breaking and sampling the concrete surface..

55.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: An effort will be made to avoid scattering pieces out of the sampling boundary area.

Basis Text: Sampling boundary area is not defined.

Recommendation Text: Define sampling boundary area

56.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Any pieces that fall outside the sampling area will not be used.

Basis Text: Sampling boundary area is not defined.

Recommendation Text: Define sampling boundary area.

57.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Chipped pieces will be collected using a dedicated, decontaminated dustpan and natural bristle brush and transferred directly into the sampling bottle.

Basis Text: This detail may conflict with proceduralized sample collection processes and equipment. This level of detail is not necessary.

Recommendation Text: Delete text.

58.

Addendum Section: H.4.4.3.2 Resolving Contamination Identified During Focused Soil Sampling and Grid (Non-Statistical) Concrete Chip Sampling

Comment Text: If focused soil or concrete chip sample results based on direct comparison (Section H.4.4.1) indicate contamination above closure performance standards, then sample location(s) will be remediated to removed contaminated soil or concrete.

Basis Text: Details for remediation of contaminated soil are presented in Section H.3.5, however details of concrete surface remediation are not provided.

Recommendation Text: Provide details on remediation of concrete.

59.

Addendum Section: H.4.6 Revisions to the Sampling and Analysis Plan and Constituents to be Analyzed

Comment Text: Changes to the SAP may be necessary due to unexpected events during closure. An unexpected event would be an event outside the scope of the SAP or a condition that inhibits implementation of the SAP as written. Revisions to the SAP will be submitted no later than 30 days after the unexpected event as a permit modification request.

Basis Text: Approval of a permit modification will likely adversely affect meeting the 180-day closure period.

Recommendation Text: Provide clarification on whether the permit modification request approval is required to continue with closure activities or if activities can continue uninterrupted after the unexpected event occurs.

60.

Addendum Section: H.5.1 Confirmation of Clean Closure

Comment Text: The 277-T Outdoor Storage Area will be clean closed through confirmation of successful decontamination determined by chip sampling of the concrete surfaces, and through sampling of soil beneath asphalt and concrete.

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-5 of Addendum H.

61.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 277-T OSA DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also, include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 277-T OSA DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

62.

Addendum Section: Table H-8 277-T Outdoor Storage Area Dangerous Waste Management Unit Closure Schedule

Comment Text: 180 days

Basis Text: Per the WAC 173-303-610 requirement, the total duration of closure activities is limited to 180 days. The 180 day duration of this activity indicates closure will take 360 days. I

Recommendation Text: Delete Activity.

63.

Addendum Section: Table H-8 277-T Outdoor Storage Area Dangerous Waste Management Unit Closure Schedule

64.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

65.

Addendum Section: H.8 References

Comment Text: WAC 173-340, *Model Toxics Control Act- Cleanup,* Washington Administrative Code, Olympia, Washington.

Basis Text: Add WAC 173-340-900. It was referenced in section H.3.7.

Recommendation Text: Add reference to WAC 173-340-0900 to Section H.8.

66.

Addendum Section: Attachment B T Plant 277-T Outdoor Storage Area Visual Sample Plan Supporting Documentation

Comment Text: Table: Summary of Sampling Design User specified number of Samples

Basis Text: Provide justification for 4 samples. If this is for judgmental (focused) samples, then the randomization of the locations is unnecessary. If it is statistically based, then provide VSP input.

Recommendation Text: Provide justification and additional details to support the determination of the number of samples.

Unit 29 271-T Cage Comments

1.

Addendum Section: Unit 29 271-T Cage Permit Conditions

Comment Text: The 271-T Cage managed dangerous and mixed waste as a less-than-90 day storage area or satellite accumulation area.

Basis Text: less-than-90 day area is an outdated term

Recommendation Text: The 271-T Cage managed dangerous and mixed waste as a *central accumulation area* or a satellite accumulation area.

2.

Addendum Section: Unit 29 271-T Cage Permit Conditions

Comment Text: Addenda H

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

3.

Addendum Section: Unit 29 271-T Cage Permit Conditions

Comment Text: The Permittee will notify the Department of Ecology (Ecology) within 24 hours of any deviations from the approved Addendum H, “Closure Plan.”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

4.

Addendum Section: Unit 29 271-T Cage Permit Conditions

Comment Text: The Permittees will notify Ecology in advance of conducting decontamination in the Addendum H, “Closure Plan,” that will take place following removal of stored equipment, in order for Ecology to conduct a final visual inspection.

Basis Text: This requirement is too restrictive. The Permittees only have a limited number of days to do this inspection before it starts to impact the schedule for closure.

Recommendation Text: The Permittees will notify Ecology at least five (5) working days before the scheduled inspection

5.

Addendum Section: Unit 29 271-T Cage Permit Conditions

Comment Text: For Statistical Grid Sampling

Basis Text: There is no statistical grid sampling in the cage. All grid sampling is directly compared to the closure performance standards.

Recommendation Text: Delete permit condition V.29.B.4.a since only non-statistically grid sampling is part of the closure plan.

6.

Addendum Section: Unit 29 271-T Cage Permit Conditions

Comment Text: Within sixty days of completion of closure for the 271-T Cage, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 271-T Cage has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610 (6)].

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 271-T Cage, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 271-T Cage has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610(6)].

7.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-..

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document.

8.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO is not defined in this plan.

Recommendation Text: Add HMWA, RCW and remove BCSO to terms table.

9.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 271-T Cage Dangerous Waste Management Unit (DWMU), hereinafter called the 271-T Cage.

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 271-T Cage Dangerous Waste Management Unit (DWMU), hereinafter termed the “271-T Cage,” as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington’s Hazardous Waste Management Act (HWMA)

10.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WA 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-3003-610(6), *Closure and Post-Closure,* and in WAC 173-303-630(10), *Use and Management of Containers.*

11.

Addendum Section: H.1 Introduction

Comment Text: Addendum H.7

Basis Text: Page numbering should re-start at H.1.

Recommendation Text: Renumber pages beginning with H.1.

12.

Addendum Section: Figure H-1 T Plant Complex Overview, 271-T Cage Dangerous Waste Management Unit

Comment Text: Figure H-1 T Plant Complex Overview, 271-T Cage Dangerous Waste Management Unit

Basis Text: Image should be dated.

Recommendation Text: Provide date for Figure H-1.

13.

Addendum Section: Table H-1 Training Matrix for the 2401-W Building Dangerous Waste Management Unit

Comment Text: The “X” in the FS column for the Building Emergency Training Category Course Description.

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the “X” for the FS column for Building Emergency Training Category Course Description.

14.

Addendum Section: Table H-1 Training Matrix for the 271-T Cage Dangerous Waste Management Unit

Comment Text: Table H-1, superscript c. This training is required only if workers are unescorted in the facility.

Basis Text: There is no c superscript in Table H-1.

Recommendation Text: Add c superscript to Non- T Plant Personnel or Visitor and SPOC columns for Facility Health and Safety Training Category Course Description.

15.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

16.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

17.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Decontaminate the concrete surface and perform concrete chip sampling to ensure concrete meets standard Model Toxics Control Act (MTCA) cleanup levels, or remove any concrete that cannot be so decontaminated.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities.

Recommendation Text: Delete text.

18.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils at the 271-T Cage meet standard MTCA cleanup levels, and remove any soils contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

19.

Addendum Section: H.3.1 Removal of Wastes and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of dangerous waste related spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining therefore dangerous or mixed waste residues are not anticipated at this unit.

20.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walk down and inspection of the DWMU in November of 2018.

Basis Text: WAC 173-303-840(2)(e) states, “All draft permits must be accompanied by a fact sheet that is supported by administrative record and made available for public comment.” The walkdown and inspection are part of the administrative record. Ecology should attach this information to the closure plan, making the information available for Permittee and public comments.

Recommendation Text: Provide all documentation from this inspection so the Permittees and the public can review and comment.

21.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology identified six focused samples based on professional judgement.

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical grid samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focused and non-statistical grid samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

22.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Supporting documentation for the visual inspections is included in Attachment A, T Plant 271-T Cage Visual Inspection Supporting Documentation.

Basis Text: There is no documentation in Attachment A for the 2018 inspection conducted by Ecology.

Recommendation Text: Provide documentation (notes, photos, etc.) from Ecology for this inspection.

23.

Addendum Section: H.3.3 Unit Components, Parts, and Ancillary Equipment

Comment Text: The sampling locations will be sealed after sampling, and the 271-T Cage will remain in place pending confirmation and acceptance of clean closure.

Basis Text: Provide the regulatory driver to seal the sampling locations. This should be at the discretion of the facility and not part of closure activities. Suggested language: Delete.

Recommendation Text: Delete this text. If Ecology does not delete the language, clarification is required to only apply to the concrete samples, not soil samples. Suggested language: The concrete sampling locations may be sealed after sampling at the discretion of the Permittees. The 271-T Cage will remain in place pending..."

24.

Addendum Section: H.3.4 Decontamination

Comment Text: Equipment used during sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.6

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue requires removal or decontamination. With the absence of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent possible, and will be performed within the area where the closure activity has taken place. Solid waste debris generated by decontamination of equipment (e.g., rags and personal protective equipment) will be collected and disposed at an approved disposal facility. Dangerous waste generated will be managed in accordance with WAC 173-303, "Dangerous Waste Regulations." Contaminated equipment that cannot be decontaminated for re-use will be discarded and managed as dangerous waste in accordance with generator accumulation standards of WAC 173-303-170 and -200.

25.

Addendum Section: H.3.4 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established neat the 271-T Cage.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective.

Recommendation Text: A small temporary decontamination area may be established near the 271-T Cage.

26.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

27.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at CAAs in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at a central accumulation area in accordance with standards in WAC 173-303-200, "Accumulating Dangerous Waste On-site." Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268, "Land Disposal Restrictions") will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

28.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

29.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

30.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

31.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: WAC 173-340-740(2), Table 740-1, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900), which includes closure performance standards for human health based on unrestricted land use.

Basis Text: Include the title of this WAC 173-340-900, *Tables.*

Recommendation Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900, *Tables*), which includes closure performance standards for human health based on unrestricted land use.

32.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: If target analytes are found above closure performance standards, then the contaminated soil will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3 to ensure the closure performance standards are met for the remaining soil. If failed constituents of concern do not meet closure performance standards after soil remediation, then the Permittees will meet with Ecology to determine a path forward.

Basis Text: Repetitive with Section H.4.4.3.

Recommendation Text: Replace with "Target analytes found above closure standards will be addressed as in Section H.4.4.3.

33.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The closure performance standard for concrete is treatment using a site-specific decontamination method as discussed in Section H.3.4, followed by confirmatory concrete chip sampling to ensure analytical results meet closure performance standards and that decontamination was successful.

Basis Text: There are no facts provided supporting the collection of chip samples as "necessary to achieve compliance with the Hazardous Waste Management Act." The records review and inspection showed no evidence of spills or leaks, thus the additional sampling provides no benefit. Closure performance standards must be supported by facts and a cogent explanation in the administrative record. Provide a reasonable basis based on the description of this facility for the need of chip sampling.

Recommendation Text: Provide documentation of the basis to support the necessity for chip sampling of the concrete.

34.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The viable exposure pathways considered for concrete are the same as for soil (Section H.3.7)

Basis Text: The exposure pathway for soil protective of groundwater assumes that water or rainwater on a surface has an avenue to percolate through the surface and underlying soil to groundwater.

Basis Text: Soil levels protective of groundwater is identified in the closure plan as a complete pathway. However, as evidence by the visual inspections, there are no cracks or breaches in the concrete surface significant enough to allow for contamination to percolate through to the soil and into the groundwater. In addition, the 271-T Cage is elevated with no documentation of dangerous waste spills or staining. Provide documentation of the avenue for percolation in Attachment A for visual inspections.

Recommendation Text: Provide documentation of the avenue for percolation through the concrete to the soil.

35.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Concrete chip sampling and analysis will be conducted in accordance with the closure plan SAP located in Section H.4.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-4 of Addendum H.

36.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Analytical results of concrete chip samples will be individually compared to the soil closure performance standards consistent with closure requirements.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-4 of Addendum H.

37.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3. If failed constituent of concern do not meet closure performance standards after remediation, then the Permittees will meet with Ecology to determine a path forward for closure.

Basis Text: The closure plan does not provide activities detailing what is required for remediation of the concrete.

Recommendation Text: Provide text indicating acceptable remediation for clean closure.

38.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-4 of Addendum H.

39.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Comment Text: Table H-4 Tetrahydrofuran 1.00E+1

Basis Text: For tetrahydrofuran, Permittees agree with the value of 3.00E+01 mg/kg for groundwater protection. The PQL should be 5.00E-02 mg/kg.

Recommendation Text: Update Table H-4 with PQL of 5.00E-02 mg/kg and groundwater protection with 3.00E+01 mg/kg

40.

Addendum Section H.4 Sampling and Analysis Plan

Comment Text: Sampling includes six focused soil samples, and five concrete non-statistical chip samples (Figure H-5).

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical grid samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc) that support the decision of additional focused. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

41.

Addendum Section: H.4.3.3 Sampling Documents and Records

Comment Text: Records may be stored in either electronic or hard copy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrieveability of stored records. Records required by the Tri-Party Agreement (Ecology et al., 1989, *Hanford Federal Facility Agreement and Consent Order)* will be managed in accordance with the requirements therein.

Basis Text: This replicates language in Section H.1.4.4 Facility Recordkeeping.

Recommendation Text: Replace language with a reference to Section H.1.4.4

42.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused (Judgmental) Sampling

Basis Text: Based on the information in this Section and on Ecology Publication #94-111, there is no justification for sampling the underlying soil. None of the criteria for focused samples are met for this DWMU:

Likely areas for focused sampling include, but are not limited to:

- Containers, tanks, waste piles, or any other units (such as ancillary pipes) in contact with soil;
- Below any sumps or valves;
- Load or unload areas;
- Storage units with underlying pavements or concrete that appears to be cracked or broken; and
- Areas receiving runoff or discharge from DWMUs, such as a ditch, a swale, or the discharge point down gradient from a pipe.

Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred;
- Length of time the unit has been in existence;
- Entries into the unit operating record; and
- Soil gas surveys or soil borings.

Recommendation Text: Delete text regarding focused sampling.

43.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused sampling should be conducted in addition to grid sampling where there is evidence of leaks or spills or potential for a dangerous waste constituent to migrate.

Basis Text: Based on the records review and visual inspection, there are no evidence of leaks or spills in 271-T Cage therefore focused sampling is not appropriate.

Recommendation Text: Delete text.

44.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Per Ecology's visual inspection (Section H.3.2) and additional professional judgement, focused sample locations are identified for the soil beneath the 271-T Cage platform.

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provide in the closure plan for the addition of these focus samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focus samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

45.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Six soil sample locations beneath the cage have been selected to demonstrate clean closure of the soil. Three sample locations are directly below the front edge of the 271-T Cage and an additional three are located near the middle of the 271-T Cage (Figure H-5).

Basis Text: The records review and inspection showed no evidence of dangerous waste related spills or leaks, thus the additional sampling provides no benefit in the demonstration of clean closure. Closure performance standards must be supported by facts and a cogent explanation in the administrative record. Provide a reasonable basis based on the description of this facility for the need of soil sampling. In addition, the defined boundary of the DWMU includes only the elevated concrete surface as identified in Section H.1.1 Unit Description, it does not include the soil. Sampling of the soil does not provide demonstration of clean closure for the elevated concrete surface.

Recommendation Text: Provide documentation of the basis to support the necessity for focused sampling of the soil.

46.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: As an evaluation criteria, concrete chip sampling results will be directly compared to the closure performance standards for soil (Section H.3.7).

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-4 of Addendum H.

47.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Chip samples are collected at regularly-spaced intervals over an area.

Basis Text: This statement is contradictory. Samples are either focused (judgmental) or grid (area). Focused are non-statistical and do not need to be randomized. The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc) that support the decision of collecting random chip samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

48.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Concrete chip samples are collected at regularly-spaced intervals over an areas.

Basis Text: In EPA/240/R-02/005, Section 4.1, first sentence states "Judgmental sampling refers to the selection of sample locations based on professional judgment alone, without any type of randomization." No basis is provided for why the six samples have been randomized if they are based on professional judgment.

Recommendation Text: Provide the basis for randomizing the six focused samples.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Professional judgement determined that five chip samples would provide sufficient coverage to demonstrate successful decontamination (Figure H-5)

Basis Text: The basis for requiring five samples is not provided as support for the professional judgement.

Recommendation Text: Provide the basis for the number of samples.

49.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The sampling device will be laboratory cleaned and wrapped in a clean, autoclaved aluminum foil until ready for use.

Basis Text: Sampling devices do not have to be sterile to collect a representative sample. This does not allow for the use of disposable and properly decontaminated devices.

Recommendation Text: Delete text

50.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Donning a new pair of disposable gloves, the concrete surface will be broken and sampled.

Basis Text: The PPE required to perform a specific task is developed based on multiple factors including safety of the worker. Listing specific PPE may interfere with the safety of the worker based on the hazards present.

Recommendation Text: Individuals will don the appropriate PPE prior to breaking and sampling the concrete surface.

51.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: An effort will be made to avoid scattering pieces out of the sampling boundary area.

Basis Text: Sampling boundary area not defined.

Recommendation Text: Define sampling boundary area

52.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Any pieces that fall outside the sampling area will not be used.

Basis Text: Sampling boundary area not defined.

Recommendation Text: Define sampling boundary area.

53.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The area will be chipped to less than one-quarter inch (preferably 1/8 in.).

Basis Text: Based on the depth limit of 1/4 in (preferably 1/8 in), calculate the area to ensure the volume of concrete generated meets the minimum quantity of sample media required to run all analysis.

Recommendation Text: Provide calculation or supporting documentation to ensure adequate sample media.

54.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Chipped pieces will be collected using a dedicated, decontaminated dustpan and natural bristle brush and transferred directly into the sampling bottle.

Basis Text: This detail may conflict with proceduralized sample collection processes and equipment. This level of detail is not necessary.

Recommendation Text: Delete text.

55.

Addendum Section: H.4.4.3 Sampling and Analysis Requirements to Address Removal of Contaminated Soil and Concrete

Comment Text: If focused soil or chip sample results based on direct comparison (Section H.4.4.1) indicate contamination above closure performance standards, then sample location(s) will be remediated to remove contaminated soil or concrete.

Basis Text: Details for remediation of contaminated soil are presented in Section H.3.5, however details of concrete surface remediation are not provided.

Recommendation Text: Provide details on remediation of concrete.

56.

Addendum Section: H.4.6 Revisions to the Sampling and Analysis Plan and Constituents to be Analyzed

Comment Text: Changes to the SAP may be necessary due to unexpected events during closure. An unexpected event would be an event outside the scope of the SAP or a condition that inhibits implementation of the SAP as written. Revisions to the SAP will be submitted no later than 30 days after the unexpected event as a permit modification request.

Basis Text: Approval of a permit modification will likely adversely affect meeting the 180-day closure period.

Recommendation Text: Provide clarification on whether the permit modification request approval is required to continue with closure activities or if activities can continue uninterrupted after the unexpected event occurs.

57.

Addendum Section: H.5.1 Confirmation of Clean Closure

Comment Text: The 271-T Cage will be clean closed through confirmation of successful decontamination determined by chip sampling of the concrete surface, and sampling of soil beneath the 271-T Cage.

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-4 of Addendum H.

58.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 271-T Cage DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 271-T Cage DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

59.

Addendum Section: Table H-7 271-T Cage Dangerous Waste Management Unit Closure Schedule

Comment Text: 180 days

Basis Text: The duration for the activity “Complete Closure of the 271-T Cage DWMU” is identified as 180 days. Having an additional duration of 180 days for this activity allows 360 days for closure activities.

Recommendation Text :Delete Activity.

60.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

61.

Addendum Section: H.8 References

Comment Text: WAC 173-340, *Model Toxics Control Act –Cleanup,* Washington Administrative Code, Olympia, Washington.

Basis Text: Add WAC 173-340-900. It was referenced in section H.3.7.

Recommendation Text: Addition of WAC 173-340-900 in references.

62.

Addendum Section: Attachment B T Plant 271-T Cage Visual Sample Plan Supporting Documentation

Comment Text: Table: Summary of Sampling Design User specified number of Samples

Basis Text: Provide justification for 5 samples. If this is for judgmental (focused) samples, then the randomization of the locations is unnecessary. If it is statistically based, then provide VSP input.

Recommendation Text: Provide justification and additional details to support the determination of the number of samples.

Unit 30 211-T Pad Comments

1.

Addendum Section: Unit 30 211-T Pad Permit Conditions

Comment Text: Addenda H

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

2.

Addendum Section: Unit 30 211-T Pad Permit Conditions

Comment Text: The Permittees will notify the Department of Ecology (Ecology) within 24 hours of any deviations from the approved Addendum H, “Closure Plan.”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

3.

Addendum Section Unit 30 211-T Pad Permit Conditions

Comment Text: If sampling assumptions/closure performance standards were not met, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work that would need to be done to achieve clean closure.

Basis Text: Sampling and Analysis Requirements to Address Removal of Contaminated Soil and Concrete is already addressed in Section H.4.4.3. Identify what additional information is needed for the permit modification.

Recommendation Text: Provide details on what additional information is required for the permit modification.

4.

Addendum Section: Unit 30 211-T Pad Permit Conditions

Comment Text: For Statistical Grid Sampling

Basis Text: There is no statistical grid sampling identified within Addendum H, “Closure Plan”

Recommendation Text: Delete text related to statistical grid sampling.

5.

Addendum Section: Unit 30 211-T Pad Permit Conditions

Comment Text: Within sixty days of completion of closure for the 211-T Pad, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 211-T pad has been closed in accordance with the specifications of the Addendum H, “Closure Plan” [WAC 173-303-610(6).

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 211-T Pad, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 211-T pad has been closed in accordance with the specifications of the Addendum H, “Closure Plan” [WAC 173-303-610(6)].

6.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-..

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document.

7.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO is not defined in this plan.

Recommendation Text: Add HMWA, RCW to; and remove BCSO from terms table.

8.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 211-T Pad Dangerous Waste Management Unit (DWMU), hereinafter called the 211-T Pad.

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 211-T Pad Dangerous Waste Management Unit (DWMU), hereinafter termed the “211-T Pad,” as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington’s Hazardous Waste Management Act (HWMA)

9.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WAC 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-3003-610(6), *Closure and Post-Closure,* and WAC 173-303-630(10), *Use and Management of Containers.*

10.

Addendum Section: H.1 Introduction Page Numbering

Comment Text: Addendum H.7

Basis Text: Page numbering should re-start at H.1.

Recommendation Text: Restart page numbering with H.1.

11.

Addendum Section: H.1 Introduction

Comment Text: Figure H-1 T Plant Complex Overview, 211-T Pad Dangerous Waste Management Unit

Basis Text: Photo requires a date.

Recommendation Text: Add date to Figure H-1 T Plant Complex Overview.

12.

Addendum Section: Table H-1 Training Matrix for the 211-T Pad Dangerous Waste Management Unit

Comment Text: The “X” in the FS column for Building Emergency Training Category Course Description

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the “X” for the FS column for Building Emergency Training Category Course Description.

13.

Addendum Section: Table H-1 Training Matrix for the 211-T Pad Dangerous Waste Management Unit

Comment Text: Superscript c. The Facility Health and Safety training is required only if workers are unescorted in the facility.

Basis Text: There is no c superscript in Table H-1 in the FS columns for Facility Health and Safety Training Category Course Description.

Recommendation Text: Apply superscript c to the FS column for Facility Health and Safety Training Category Course Description.

14.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

15.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

16.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Decontaminate the concrete surface and perform concrete chip sampling to ensure concrete meets standard Model Toxics Control Act (MTCA) cleanup levels, or remove any concrete that cannot be so decontaminated.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities.

Recommendation Text: Delete text.

17.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils under the 211-T Pad meet standard MTCA cleanup levels, and remove any soils contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

18.

Addendum Section: H.3.1 Removal of Wastes and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining therefore dangerous or mixed waste residues are not anticipated at this unit.

19.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walk down and inspection of the DWMU in November of 2018.

Basis Text: WAC 173-303-840(2)(e) states, “All draft permits must be accompanied by a fact sheet that is supported by administrative record and made available for public comment.” The walkdown and inspection are part of the administrative record. Ecology should attach this information to the closure plan, making the information available for Permittee and public comments.

Recommendation Text: Provide all documentation from this inspection so the Permittees and the public can review and comment.

20.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology identified eleven additional soil sample locations, including eight guard posts, and three concrete cold joints (Figure H-2).

Basis Text: The mere presence of construction joints or guard posts does not validate the need for additional sampling. The criteria for focus samples outlined in the closure plan is any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil. Despite not meeting the criteria, the State included additional samples at these locations. The State has failed to articulate specific facts that these samples are "necessary to achieve compliance with the Hazardous Waste Management Act." The State should provide documentation (descriptions, dimensions, photos, etc.) that would support the decision of additional focus samples.

Recommendation Text: Present any evidence of cracks, holes, pits or breaches that are significant enough that would allow water to penetrate beneath the pad to the soil.

21.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology also identified one focused concrete chip sample for the sump based on professional judgement (Figure H-3).

Basis Text: The records review did not identify any releases of dangerous or mixed waste and the visual inspections did not identify the presence of staining that could be related to dangerous or mixed waste. The State also identified a focused soil sample at the sump location. There is no justification provided for the additional chip sampling and no clear benefit since the concrete in the sump will be destroyed during the focused soil sampling event.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of adding this focus sample.

22.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Supporting documentation for the visual inspection is included in Attachment A, T Plant Complex 211-T Pad Visual Inspection Supporting Documentation.

Basis Text: There is no documentation in Attachment A for the 2018 inspection conducted by Ecology.

Recommendation Text: Provide documentation (notes, photos, etc.) from Ecology for this inspection.

23.

Addendum Section: H.3.3 Unit Components, Parts, and Ancillary Equipment

Comment Text: The sampling locations will be sealed after sampling, and the 211-T Pad will remain in place pending confirmation and acceptance of clean closure.

Basis Text: Provide the regulatory driver to seal the sampling locations. This should be at the discretion of the facility and not part of closure activities.

Recommendation Text: Delete this text. If Ecology does not delete the language suggested language: The concrete sampling locations may be sealed after sampling at the discretion of the Permittees. The 211-T Pad will remain in place pending..."

24.

Addendum Section: H.3.4 Decontamination

Comment Text: Equipment used during sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.6

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue require removal or decontamination. With the absence of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent possible, and will be performed within the area where the closure activity has taken place. Solid waste debris generated by decontamination of equipment (e.g., rags and personal protective equipment) will be collected and disposed at an approved disposal facility. Dangerous waste generated will be managed in accordance with WAC 173-303, "Dangerous Waste Regulations." Contaminated equipment that cannot be decontaminated for re-use will be discarded and managed as dangerous waste in accordance with generator accumulation standards of WAC 173-303-170 and -200.

25.

Addendum Section: H.3.4 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established near the 211-T Pad.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective. If the purpose is to limit the size of the decontamination area, provide a maximum size.

Recommendation Text: A small temporary decontamination area may be established near the 211-T Pad.

26.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

27.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at central accumulation areas in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at a central accumulation area in accordance with standards in WAC 173-303-200, "Accumulating Dangerous Waste On-site." Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268, "Land Disposal Restrictions") will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

28.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

29.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste based on characterization results, provide the regulatory driver for requiring disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

30.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: If the waste does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

31.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900), which includes closure performance standards for human health based on unrestricted land use.

Basis Text: Include the title of this WAC 173-340-900, *Tables.*

Recommendation Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900, *Tables*), which includes closure performance standards for human health based on unrestricted land use.

32.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: The exposure pathway for soil protective of groundwater assumes that water or rainwater on a surface has an avenue to percolate through the surface and underlying soil to groundwater.

Basis Text: Soil levels protective of groundwater is identified in the closure plan as a complete pathway. However, as evidence by the visual inspections, there are no cracks or breaches in the concrete surface significant enough to allow for contamination to percolate through to the soil and into the groundwater. Provide documentation of the avenue for percolation in Attachment A for visual inspections.

Recommendation Text: Provide documentation of avenue for percolation.

33.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: If target analytes are found above closure performance standards, then the contaminated soil will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3 to ensure the closure performance standards are met for the remaining soil. If failed constituents of concern do not meet closure performance standards after soil remediation, then the Permittees will meet with Ecology to determine a path forward for closure.

Basis Text: Repetitive with Section H.4.4.3.

Recommendation Text: Target analytes found above closure standards will be addressed as in Section H.4.4.3.

34.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The closure performance standard for concrete is treatment using a site-specific decontamination method as discussed in Section H.3.4, followed by confirmatory concrete chip sampling to ensure analytical results meet closure performance standards and that decontamination was successful.

Basis Text: There are no facts provided supporting the collection of chip samples as "necessary to achieve compliance with the Hazardous Waste Management Act." The records review and inspection showed no evidence of spills or leaks, thus the additional sampling provides no benefit. Closure performance standards must be supported by facts and a cogent explanation in the administrative record. Provide a reasonable basis based on the description of this facility for the need of chip sampling

Recommendation Text: Provide documentation of the basis to support the necessity of chip sampling of the concrete.

35.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: The viable exposure pathways considered for concrete are the same as for soil (Section H.3.7)

Basis Text: The exposure pathway for soil protective of groundwater assumes that water or rainwater on a surface has an avenue to percolate through the surface and underlying soil to groundwater.

Basis Text: Soil levels protective of groundwater is identified in the closure plan as a complete pathway. However, as evidence by the visual inspections, there are no cracks or breaches in the concrete surface significant enough to allow for contamination to percolate through to the soil and into the groundwater. Provide documentation of the avenue for percolation in Attachment A for visual inspections.

Recommendation Text: Provide documentation of avenue for percolation.

36.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Concrete chip sampling and analysis will be conducted in accordance with the closure plan SAP located in Section H.4.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

37.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: Analytical results of concrete chip samples will be individually compared to the soil closure performance standards consistent with closure requirements.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

38.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3. If failed constituent of concern do not meet closure performance standards after remediation, then the Permittees will meet with Ecology to determine a path forward for closure.

Basis Text: The closure plan does not provide activities detailing what is required for remediation of the concrete.

Recommendation Text: Provide text indicating acceptable remediation for clean closure.

39.

Addendum Section: H.3.8 Closure Performance Standards for Concrete

Comment Text: If target analytes are found above closure performance standards, the contaminated concrete will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3. If failed constituent of concern do not meet closure performance standards after remediation, then the Permittees will meet with Ecology to determine a path forward for closure.

Basis Text: The equation in WAC 173-340-740, Unrestricted Land Use Soil Cleanup Standards, (3)(b)(iii)(B) for Soil Direct Contact uses Equation 740-1. One of the variables in this equation is "SIR" which is soil ingestion rate. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document concrete values in Table H-5 of Addendum H.

40.

Addendum Section: Table H-5 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Comment Text: Table H-5 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Basis Text: Section H.3.7 identifies soil protective of groundwater as a viable pathway. The values in Table H-5 only address the exposure pathway for direct contact.

Recommendation Text: If soil protective of groundwater is not excluded, revise Table H-5 values to include groundwater.

41.

Addendum Section: Table H-5 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Comment Text: Table H-5 Closure Performance Standards for Soil and Concrete and Analytical Performance Requirements

Basis Text: Footnotes and superscripts within the Table H-5 are not associated with the correct target analytes.

Recommendation Text: Correct footnotes and superscripts.

42.

Addendum Section: H.4 Sampling and Analysis Plan

Comment Text: Sampling includes twelve focused soil samples, one focused concrete chip sample, and six non-statistical grid concrete chip samples (Figure H-5).

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provided in the closure plan for the addition of the focused and non-statistical grid samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focused and non-statistical grid samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

43.

Addendum Section: H.4.3.3 Sampling Documents and Records

Comment Text: Records may be stored in either electronic or hard copy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrieveability of stored records. Records required by the Tri-Party Agreement (Ecology et al.,1989 *Hanford Federal Facility Agreement and Consent Order* will be managed in accordance with the requirements therein.

Basis Text: This replicates language in Section H.1.4.4 Facility Record Keeping.

Recommendation Text: Replace language with a reference to Section H.1.4.4

44.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused (Judgmental) Sampling

Basis Text: Based on the information in this Section and on Ecology Publication #94-111, there is no justification for sampling the underlying soil. With the exception of one sample below the sump, none of the criteria for the additional focused samples are met for this DWMU:

Likely areas for focused sampling include, but are not limited to:

- Containers, tanks, waste piles, or any other units (such as ancillary pipes) in contact with soil;
- Below any sumps or valves;
- Load or unload areas;
- Storage units with underlying pavements or concrete that appears to be cracked or broken; and
- Areas receiving runoff or discharge from DWMUs, such as a ditch, a swale, or the discharge point down gradient from a pipe.

Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred;
- Length of time the unit has been in existence;
- Entries into the unit operating record; and
- Soil gas surveys or soil borings.

Recommendation Text: Delete text regarding focused sampling other than the one sample under the sump.

45.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Focused sampling should be conducted in addition to grid sampling where there is evidence of leaks or spills or potential for a dangerous waste constituent to migrate.

Basis Text: Based on the records review and visual inspection, there are no evidence of leaks or spills in 211-T Pad. With the exception of one focused sample below the sump, focused sampling is not appropriate.

Recommendation Text: Delete text.

46.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Per the visual inspections (Section H.3.2) and additional professional judgement, twelve focused soil sample locations and one focused concrete chip sample location are identified.

Basis Text: The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling beyond the one focused sample below the sump is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

No evidence was provide in the closure plan for the addition of these focus samples.

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of additional focus samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

47.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: The guard posts and cold joints are considered possible avenues for waste to migrate to the soil below the concrete; therefore, these locations were identified for focused soil sampling.

Basis Text: The mere presence of guard posts or joints does not validate the need for additional sampling. Section 3 states, "Perform initial visual inspection of the concrete surface to identify dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil." There were no areas identified in the closure plan. Despite not meeting the criteria outlined, the State included additional samples at these guard posts/joints.

The State has failed to articulate specific facts that these focus samples are "necessary to achieve compliance with the Hazardous Waste Management Act."

Recommendation Text: Present any documentation that these locations would allow water to penetrate to the soil beneath.

48.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: As an evaluation criteria, concrete chip sampling results will be directly compared to the closure performance standards for soil (Section H.3.7).

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-5 of Addendum H.

49.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Concrete chip samples are collected at regularly-spaced intervals over an area.

Basis Text: This statement is contradictory. Samples are either focused (judgmental) or grid (area). Focused are non-statistical and do not need to be randomized. The visual inspections did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste. Focused sampling beyond the one focused sample below the sump is not appropriate based on the description given in Section H.4.4.1 that states:

"Evidence for additional areas of focused sampling could include:

- Visual or olfactory evidence of contamination including evidence based on direct reading field instrumentation or field test kits;
- Knowledge, such as reports by employees, inspectors, or others that releases have or may have occurred
- Length of time the unit has been in existence
- Entries into the unit operating record; and
- Soil gas surveys or soil borings. "

Recommendation Text: Provide documentation (descriptions, dimensions, photos, etc.) that support the decision of collecting random chip samples. Present evidence of any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil.

50.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Concrete chip samples are collected at regularly-spaced intervals over an areas.

Basis Text: In EPA/240/R-02/005, Section 4.1, first sentence states, "Judgmental sampling refers to the selection of sample locations based on professional judgment alone, without any type of randomization." No basis is provided for why the six samples have been randomized if they are based on professional judgment.

Recommendation Text: Provide the basis for randomizing the six focused samples.

51.

Addendum Section: H.4.4.1 Sampling Process Design

Comment Text: Professional judgement determined that six chip samples would provide sufficient coverage to demonstrate successful decontamination (Figure H-5).

Basis Text: The basis for requiring six samples is not provided as support for the professional judgement.

Recommendation Text: Provide the basis for the number of samples.

52.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The sampling device will be laboratory cleaned and wrapped in a clean, autoclaved aluminum foil until ready for use.

Basis Text: Sampling devices do not have to be sterile to collect a representative sample. This does not allow for the use of disposable and properly decontaminated devices.

Recommendation Text: Delete text

53.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Donning a new pair of disposable gloves, the concrete surface will be broken and sampled.

Basis Text: The PPE required to perform a specific task is developed based on multiple factors including safety of the worker. Listing specific PPE may interfere with the safety of the worker based on the hazards present.

Recommendation Text: Individuals will don appropriate PPE prior to breaking and sampling the concrete surface.

54.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: An effort will be made to avoid scattering pieces out of the sampling boundary area.

Basis Text: Area not defined.

Recommendation Text: Define sampling boundary area

55.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Any pieces that fall outside the sampling area will not be used.

Basis Text: Area not defined.

Recommendation Text: Define sampling boundary area.

56.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: The area will be chipped to less than one-quarter inch (preferably 1/8 in.).

Basis Text: Based on the depth limit of 1/4 in (preferably 1/8 in), calculate the area to ensure the volume of concrete generated meets the minimum quantity of sample media required to run all analysis.

Recommendation Text: Provide calculation or supporting documentation to ensure adequate sample media.

57.

Addendum Section: H.4.4.2 Sampling Methods and Handling

Comment Text: Chipped pieces will be collected using a dedicated, decontaminated dustpan and natural bristle brush and transferred directly into the sampling bottle.

Basis Text: This detail may conflict with proceduralized sample collection processes and equipment. This level of detail is not necessary.

Recommendation Text: Delete text.

58.

Addendum Section: H.4.4.3 Sampling and Analysis Requirements to Address Removal of Contaminated Soil and Concrete

Comment Text: If focused soil or chip sample results based on direct comparison (Section H.4.4.1) indicate contamination above closure performance standards, then sample location(s) will be remediated to remove contaminated soil or concrete.

Basis Text: Details for remediation of contaminated soil are presented in Section H.3.5, however details of concrete surface remediation are not provided.

Recommendation Text: Provide details on remediation of concrete.

59.

Addendum Section: H.4.6 Revisions to the Sampling and Analysis Plan and Constituents to be Analyzed

Comment Text: Changes to the SAP may be necessary due to unexpected events during closure. An unexpected event would be an event outside the scope of the SAP or a condition that inhibits implementation of the SAP as written. Revisions to the SAP will be submitted no later than 30 days after the unexpected event as a permit modification request.

Basis Text: Approval of a permit modification will likely adversely affect meeting the 180-day closure period.

Recommendation Text: Provide clarification on whether the permit modification request approval is required to continue with closure activities or if activities can continue uninterrupted after the unexpected event occurs.

60.

Addendum Section: H.5.1 Confirmation of Clean Closure

Comment Text: The 211-T Pad will be clean closed through confirmation of successful decontamination determined by chip sampling of the concrete surface, and sampling of soil beneath the concrete and blind sump.

Basis Text: Values listed in CLARC tables are for soil. The natural composition of the Hanford soil and the composition of concrete are not the same. Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil.

Recommendation Text: Provide an explanation on how the difference in composition is accounted for in the CLARC table values for soil and document values in Table H-5 of Addendum H.

61.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 211-T Pad DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also, include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 211-T Pad DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

62.

Addendum Section: Table H-8 211-T Pad Dangerous Waste Management Unit Closure Schedule

Comment Text: 180 days

Basis Text: Per the WAC 173-303-610 requirement, the total duration of closure activities is limited to 180 days. The 180 day duration of this activity indicates closure will take 360 days.

Recommendation Text: Delete Activity.

63.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

64.

Addendum Section: H.8 References

Comment Text: WAC 173-340, *Model Toxics Control Act-Cleanup,* Washington Administrative Code, Olympia, Washington.

Basis Text: WAC 173-340-900 as referenced in Section H.3.7 is missing.

Recommendation Text: Add WAC 173-340-900 to Section H.8.

65.

Addendum Section: Attachment B Summary of Sampling Design Table

Comment Text: User specified number of samples

Basis Text: Provide justification for the 6 samples. If this is for judgmental (focused) samples, then the randomization of the locations is unnecessary. If it is statistically based, then provide VSP input.

Recommendation Text: Provide justification and additional details to support the determination of the number of samples.

Unit 37 221-T Sand Filter Pad Comments

1.

Addendum Section: Unit 37 221-T Sand Filter Pad Permit Conditions

Comment Text: Addenda

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

2.

Addendum Section: Unit 37 221-T Sand Filter Pad Permit Conditions

Comment Text: The Permittees will notify Department of Ecology (Ecology) within 24 hours of any deviations from the approved Addendum H, “Closure Plan.”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

3.

Addendum Section: Unit 37 221-T Sand Filter Pad Permit Conditions

Comment Text: If sampling assumptions/closure performance standards were not met, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work that would need to be done to achieve clean closure.

Basis Text: Resolving Contamination Identified During Grid Soil Sampling is already addressed in Section H.4.3.3.2. Identify what additional information is needed for the permit modification.

Recommendation Text: Provide details on what additional information is required for the permit modification.

4.

Addendum Section: Unit 37 221-T Sand Filter Pad Permit Conditions

Comment Text: <u>For Non-Statistical Grid Sampling and/or Focused Sampling:</u> The Permittees will conduct a review of the non-statistical grid and/or focused sampling data for purposes of verifying the closure performance standards specified in the sampling plan in Addendum H, “Closure Plan, “ have not been exceeded.

Basis Text: The closure plan does not identify non-statistical or focused sampling.

Recommendation Text: Delete section.

5.

Addendum Section: Unit 37 221-T Sand Filter Pad Permit Conditions

Comment Text: Within sixty days of completion of closure for the 221-T Sand Filter Pad, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 221-T Sand Filter Pad has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610 (6)].

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 221-T Sand Filter Pad, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 221-T Sand Filter Pad has been closed in accordance with the specifications of the Addendum H, "Closure Plan" [WAC 173-303-610(6)].

6.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-..

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document.

7.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO and WIDS are not defined in this plan.

Recommendation Text: Add HMWA, RCW to; and remove BCSO and WIDS from terms table.

8.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 221-T Sand Filter Pad Dangerous Waste Management Unit (DWMU), hereinafter called the 221-T Sand Filter Pad.

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 221-T Sand Filter Pad Dangerous Waste Management Unit (DWMU), hereinafter termed the "221-T Sand Filter Pad," as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington's Hazardous Waste Management Act (HWMA).

9.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WAC 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with the closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), *Closure and Post Closure,* and in WAC 173-303-630(10), *Use of Management of Containers.*

10.

Addendum Section: H.1 Introduction

Comment Text: Addendum H.7

Basis Text: Page numbering should re-start at H.1.

Recommendation Text: Renumber pages beginning with H.1.

11.

Addendum Section: Figure H-1 T Plant Complex Overview, 221-T Sand Filter Pad Dangerous Waste Management Unit

Comment Text: Figure H-1 T Plant Complex Overview, 221-T Sand Filter Pad Dangerous Waste Management Unit

Basis Text: Image should be dated

Recommendation Text: Provide date for Figure H-1.

12.

Addendum Section: Table H-1 Training Matrix for the 221-T Sand Filter Pad Dangerous Waste Management Unit

Comment Text: The “X” in the FS column for the Building Emergency Training Category Course Description.

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the “X” for the FS column for Building Emergency Training Category Course Description.

13.

Addendum Section: Table H-1 Training Matrix for the 221-T Sand Filter Pad Dangerous Waste Management Unit

Comment Text: c. Facility Health and Safety training is required only if workers are unescorted in the facility

Basis Text: There is no c superscript in Table H-1.

Recommendation Text: Add superscript c to columns for Non-T Plant Personnel or Visitor, SPOC, and FS for Facility Health and Safety Training Category Course Description.

14.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

15.

Addendum Section: H.2 Unit 37 221-T Sand Filter Pad Closure Plan

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

16.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils in the 221-T Sand Filter Pad meet standard Model Toxics Control Act (MTCA) cleanup levels, and remove any soils contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

17.

Addendum Section: H.3.1 Removal of Waste and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining, therefore dangerous or mixed waste residues are not anticipated at this unit.

18.

Addendum Section: H.3.4 Decontamination

Comment Text: Equipment used during sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.6

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue require removal or decontamination. With the absent of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent possible, and will be performed within the area where the closure activity has taken place. Solid waste debris generated by decontamination of equipment (e.g., rags and personal protective equipment) will be collected and disposed at an approved disposal facility. Dangerous waste generated will be managed in accordance with WAC 173-303, "Dangerous Waste Regulations." Contaminated equipment that cannot be decontaminated for re-use will be discarded and managed as dangerous waste in accordance with generator accumulation standards of WAC 173-303-170 and -200.

19.

Addendum Section: H.3.4 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established near the 221-T Sand Filter Pad.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective.

Recommendation Text: A small temporary decontamination area may be established near the 221-T Sand Filter Pad.

20.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

21.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at central accumulation areas in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at central accumulation areas in accordance with standards in WAC 173-303-200, “Accumulating Dangerous Waste On-site.” Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268, “Land Disposal Restrictions”) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

22.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

23.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

24.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

25.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: WAC 173-340-740(2), Table 740-1, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900), which includes closure performance standards for human health based on unrestricted land use.

Basis Text: Include the title of this WAC 173-340-900, *Tables.*

Recommendation Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900, *Tables*), which includes closure performance standards for human health based on unrestricted land use.

26.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: The ecological indicator pathway and the inhalation exposure pathway were excluded when determining 221-T Sand Filter Pad closure performance standards.

Basis Text: This says that the ecological indicator pathway and inhalation exposure pathway were excluded.

Recommendation Text: Revise Table H-4 to remove ecological indicator and inhalation values.

27.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: If target analytes are found above closure performance standards, then the contaminated soil will be remediated and confirmatory sampling will be conducted in accordance with Section H.4.4.3 to ensure the closure performance standards are met for the remaining soil. If failed constituents of concern do not meet closure performance standards after soil remediation, then Permittees will meet with Ecology to determine a path forward for closure.

Basis Text: Repetitive with Section H.4.4.3.

Recommendation Text: Replace with "Target analytes found above closure standards will be addressed as in Section H.4.4.3.

28.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: VSP Data Analysis Report is to be provided to Ecology within 30 days of receipt of the final laboratory analytical report.

Basis Text: The VSP data analysis report is to be provided to Ecology within 30 days after all data verification activities.

Recommendation Text: VSP Data Analysis Report is to be provided to Ecology within 30 days after all data verification activities are complete.

29.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Analytical Performance Requirements

Comment Text: Closure Performance Standards for Soil and Analytical Performance Requirements.

Basis Text: Ecological and inhalation pathways were determined to be not viable.

Recommendation Text: Update Table H-4 to remove ecological and inhalation pathway values.

30.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Analytical Performance Requirements

Comment Text: Tetrahydrofuran 1.00E+1

Basis Text: For tetrahydrofuran, Permittees agree with the value of 3.00E+01 mg/kg for groundwater protection. The PQL should be 5.00E-02 mg/kg.

Recommendation Text: Update Table H-4 with PQL of 5.00E-02 mg/kg and groundwater protection with 3.00E+01 mg/kg

31.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Analytical Performance Requirements

Comment Text: Trichlorofluoromethane 2.82+E01

Basis Text: Should read "2.82E+01"

Recommendation Text: 2.82E+01

32.

Addendum Section: H.4 Closure Performance Standards for Soil and Analytical Performance Requirements

Comment Text: Sampling includes 21 grid (area-wide) soil samples (Section H.4.4.1).

Basis Text: Section H.4.4.1 says 25

Recommendation Text: Sampling includes 25 grid (area-wide) soil samples (Section H.4.4.1)

33.

Addendum Section: H.4.3.1 Project/Task Organization

Comment Text: The roles described above make up the project organization structure (regarding sampling and analysis) and interact in a manner shown graphically in Figure H-4. Error! Reference source not found.

Basis Text: Error in linking Figure H-4.

Recommendation Text: Correctly link Figure H-4.

34.

Addendum Section: H.4.3.3 Sampling Documents and Records

Comment Text: Records may be stored in either electronic or hard copy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrieveability of stored records. Records required by the Tri-Party Agreement (Ecology et al., 1989, *Hanford Federal Facility Agreement and Consent Order)* will be managed in accordance with the requirements therein.

Basis Text: This replicates language in Section H.1.4.4 Facility Recordkeeping.

Recommendation Text: Replace language with a reference to Section H.1.4.4

35.

Addendum Section: H.4.5 Data Review, Verification, Validation, and Usability Requirements

Comment Text: Grid soil sample results will be evaluated to ensure VSP model assumptions were correct (Section H.4.5.3) and a data quality assessment (DQA) will be conducted to ensure the output of the DQO process provided appropriate values (Section Error! Reference source not found).

Basis Text: Should be Section H.4.5.3

Recommendation Text: Properly link to Section H.4.5.3.

36.

Addendum Section: H.4.6 Revisions to the Sampling and Analysis Plan and Constituents to be Analyzed

Comment Text: Changes to the SAP may be necessary due to unexpected events during closure. An unexpected event would be an event outside the scope of the SAP or a condition that inhibits implementation of the SAP as written. Revisions to the SAP will be submitted no later than 30 days after the unexpected event as a permit modification request.

Basis Text: Approval of a permit modification will likely adversely affect meeting the 180-day closure period.

Recommendation Text: Provide clarification on whether the permit modification request approval is required to continue with closure activities or if activities can continue uninterrupted after the unexpected event occurs.

37.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 221-T Sand Filter Pad DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 221-T Sand Filter Pad DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

38.

Addendum Section: Table H-8 221-T Sand Filter Pad Dangerous Waste Management Unit Closure Schedule

Comment Text: 180 days

Basis Text: The duration for the activity “Complete Closure of the 221-T Sand Filter Pad” is identified as 180 days. Having an additional duration of 180 days for this activity allows 360 days for closure activities.

Recommendation Text: Delete Activity.

39.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

40.

Addendum Section: H.8 References

Comment Text: WAC 173-340, *Model Toxics Control Act- Cleanup,* Washington Administrative Code, Olympia, Washington.

Basis Text: Add WAC 173-340-900. It was referenced in section H.3.7.

Recommendation Text: Add reference to WAC 173-340-0900 to Section H.8.

Unit 39 2401-W Waste Storage Building Comments

1.

Addendum Section: Unit 39 2401-W Waste Storage Building Permit Conditions

Comment Text: Addenda H

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

2.

Addendum Section: Unit 39 2401-W Waste Storage Building Permit Conditions

Comment Text: The Permittee will notify the Department of Ecology (Ecology) within 24 hours of any deviations from the approved Addendum H, “Closure Plan.”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

3.

Addendum Section: Unit 39 2401-W Waste Storage Building Permit Conditions

Comment Text: The Permittees will notify Ecology in advance of conducting the visual inspection in the Addendum H, “Closure Plan,” that will take place following removal of stored equipment, in order for Ecology to witness the inspection.

Basis Text: This requirement is too restrictive. The Permittees only have a limited number of days to do this inspection before it starts to impact the schedule for closure.

Recommendation Text: The Permittees will notify Ecology at least five (5) working days before the scheduled inspection.

4.

Addendum Section: Unit 39 2401-W Waste Storage Building Permit Conditions

Comment Text: If the closure performance standards have been exceeded, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work and/or sampling that would need to be done to achieve clean closure.

Basis Text: Resolving Contamination Identified During Grid (Area-Wide) Soil Sampling is already addressed in Section H.4.4.3. Identify what additional information is needed for this permit modification.

Basis Text: Resolving contamination identified during focused soil sampling and grid (non-statistical) is already addressed in Section H.4.4.3. and built into the schedule.

Recommendation Text: Provide details on what additional information is required for the permit modification.

5.

Addendum Section: Unit 39 2401-W Waste Storage Building Permit Conditions

Comment Text: Within sixty days of completion of closure for the 2401-W Waste Storage Building, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 2401-W Waste Storage Building has been closed in accordance with the specifications of the Addendum H, “Closure Plan” [WAC 173-303-610 (6)].

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 2401-W Waste Storage Building, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 2401-W Waste Storage Building has been closed in accordance with the specifications of the Addendum H, “Closure Plan” [WAC 173-303-610(6)].

6.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-.. Table H-5 is missing

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document and adding Table H-5.

7.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO is not defined in this plan.

Recommendation Text: Add HMWA, RCW to and; remove BCSO from terms table.

8.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 2401-W Waste Storage Building Dangerous Waste Management Unit (DWMU), hereinafter called the 2401-W Building..

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 2401-W Waste Storage Building Dangerous Waste Management Unit (DWMU), hereinafter termed the “2401-W Waste Storage Building ,” as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington’s Hazardous Waste Management Act (HWMA)

9.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WA 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-3003-610(6), *Closure and Post-Closure,* and in WAC 173-303-630(10), *Use and Management of Containers.*

10.

Addendum Section: H.1 Introduction

Comment Text: Sampling of underlying soil to ensure closure performance standards are met.

Basis Text: The Unit Description (Section H.1.1) identifies epoxy coated flooring. The coated flooring acts as an impermeable surface. The records review and visual inspection (Section H.3.2) did not identify any releases within the DWMU, which is reiterated throughout the closure plan. Section H.3.8.1 identifies the compliance point for closure as the surface of the concrete. Section H.3.8.2 specifically states, "The records review of waste stored in the 2401-W Waste Storage Building indicate no releases (Section H.3.2). Therefore, there is no known waste-related source of contaminated media." Based on the information provided throughout the closure plan, sampling of the soil under the building is inappropriate and unjustified.

Recommendation Text: Delete all references to soil sampling within the closure plan.

11.

Addendum Section: H-1 Introduction

Comment Text: H.7

Basis Text: Page numbering should re-start at H.1.

Recommendation Text: Renumber pages beginning with H.1.

12.

Addendum Section: Figure H-1 Central Waste Complex-Waste Receiving and Processing Complex Overview, 2401-W Building Dangerous Waste Management Unit

Comment Text: Figure H-1 Central Waste Complex-Waste Receiving and Processing Complex Overview

Basis Text: There should be a date for this photo.

Recommendation Text: Provide date for Figure H-1

13.

Addendum Section: Table H-1 Training Matrix for the 2401-W Building Dangerous Waste Management Unit

Comment Text: The "X" in the FS column for the Building Emergency Training Category Course Description.

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the "X" for the FS column for Building Emergency Training Category Course Description.

14.

Addendum Section: Table H-1 Training Matrix for the 2401-W Waste Storage Building Dangerous Waste Management Unit

Comment Text: Superscript c. The Facility Health and Safety training is required only if workers are unescorted in the facility.

Basis Text: There is no c superscript in Table H-1 for the FS column.

Recommendation Text: Apply superscript c to the FS column for the Facility Health and Safety Training Category Course Description within the H-1 table.

15.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

16.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

17.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Decontaminate the concrete surface to meet the Alternative Treatment Standards for Hazardous Debris (i.e., removal of at least 0.6 cm of the surface layer; treatment to clean debris surface)

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities.

Recommendation Text: Delete text.

18.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils under the 2401-W Building meet standard Model Toxics Control Act (MTCA) cleanup levels, and remove any soils contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

19.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils under the 2401-W Building meet standard Model Toxics Control Act (MTCA) cleanup levels, and remove any soils contaminated above these levels.

Basis Text: The Unit Description (Section H.1.1) identifies epoxy coated flooring. The coated flooring acts as an impermeable surface. The records review and visual inspection (Section H3.2) did not identify any releases within the DWMU, which is reiterated throughout the closure plan. Section H.3.8.1 identifies the compliance point for closure as the surface of the concrete. Section H.3.8.2 specifically states, "The records review of waste stored in the 2401-W Waste Storage Building indicate no releases (Section H.3.2). Therefore, there is no known waste-related source of contaminated media." Based on the information provided throughout the closure plan, sampling of the soil under the building is inappropriate and unjustified.

Recommendation Text: Delete all references to soil sampling within the closure plan.

20.

Addendum Section: H.3 Closure Activities

Comment Text: Perform focused soil sampling below the 2401-W Building (Section H.4.4)

Basis Text: Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

21.

Addendum Section: H.3 Closure Activities

Comment Text: Confirm analytical results from soil samples meet closure performance standards (Section H.3.9).

Basis Text: Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

22.

Addendum Section: H.3 Closure Activities

Comment Text: Identify and manage contaminated environmental media (Section H.3.6).

Basis Text: Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

23.

Addendum Section: H.3.1 Removal of Wastes and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining therefore dangerous or mixed waste residues are not anticipated at this unit.

24.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: There was no sign of dangerous or mixed waste contamination found from the records review.

Basis Text: This text supports no release pathway to soil. Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

25.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: The records review indicated no releases of dangerous or mixed waste in the 2401-W Building.

Basis Text: This text supports no release pathway to soil. Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

26.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: No dangerous or mixed waste related staining, major cracks, crevices, pits, low areas, or joints/seams were identified during the visual inspection.

Basis Text: This text supports no release pathway to soil. Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

27.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walkdown and inspection of the DWMU in November of 2018. Ecology added six focused soil samples at locations where construction joints/seams of the concrete floor intersect. Sample locations are identified in Figure H-7.

Basis Text: WAC 173-303-840(2)(e) states, “All draft permits must be accompanied by a fact sheet that is supported by administrative record and made available for public comment.” The walkdown and inspection are part of the administrative record. Ecology should attach this information to the closure plan, making the information available for Permittee and public comments.

Recommendation Text: Provide all documentation from this inspection so the Permittees and the public can review and comment.

28.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Ecology and the Permittees performed an additional walkdown and inspection of the DWMU in November of 2018. Ecology added six focused soil samples at locations where construction joints/seams of the concrete floor intersect. Sample locations are identified in Figure H-7.

Basis Text: The mere presence of construction joints not validate the need for additional sampling. The criteria for focused samples outlined in the closure plan is any dangerous or mixed waste related staining, low points, cracks, holes, pits, or breaches significant enough to allow contamination to reach underlying soil. Despite not meeting the criteria, the State included addition samples at these locations. The State has failed to articulate specific facts that these samples are "necessary to achieve compliance with the Hazardous Waste Management Act." The State should provide documentation (descriptions, dimensions, photos, etc.) that would support the decision of additional focus samples.

Recommendation Text: Present any evidence of cracks, holes, pits or breaches that are significant enough that would allow water to penetrate beneath the pad to the soil.

29.

Addendum Section: H.3.2 Operating Records Review and Visual Inspection

Comment Text: Supporting documentation for the visual inspection is included in Attachment A, CWC 2401-W Building Visual Inspection Documentation.

Basis Text: There is no documentation in Attachment A for the 2018 inspection conducted by Ecology.

Recommendation Text: Provide documentation (notes, photos, etc.) from Ecology for this inspection.

30.

Addendum Section: H.3.5 Decontamination

Comment Text: 2. Seal all significant cracks including expansion joints identified during the visual inspection (Section H.3.4) using an appropriate sealant material.

Basis Text: It is unclear why sealing of the cracks including expansion joints is required prior to removing the top 0.6 cm of the concrete surface. The sealant would be at a minimum significantly damaged if not removed during the decontamination process.

Recommendation Text: Provide justification for sealing cracks including expansion joints prior to removing the top 0.6 cm of the surface.

31.

Addendum Section: H.3.5 Decontamination

Comment Text: Equipment used during decontamination and sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.7.

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue require removal or decontamination. With the absent of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent

32.

Addendum Section: H.3.5 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established near the 2041-W Building.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective.

Recommendation Text: A small temporary decontamination area may be established near the 2401-W Building.

33.

Addendum Section: H.3.6 Identifying and Managing Contaminated Environmental Media

Comment Text: The records review and visual inspection outlined in H.3.2 did not identify any releases of dangerous or mixed waste or the presence of staining that could be related to dangerous or mixed waste.

Basis Text: This text supports no release pathway to soil. Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

34.

Addendum Section: H.3.6 Identifying and Managing Contaminated Environmental Media

Comment Text: However, contaminated soil will be remediated at the focused sample location(s) where analytical results indicate contamination.

Basis Text: Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

35.

Addendum Section: H.3.6 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

36.

Addendum Section H.3.6 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at CAAs in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis Text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at a central accumulation area in accordance with standards in WAC 173-303-200, “Accumulating Dangerous Waste On-site.” Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268, “Land Disposal Restrictions”) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

37.

Addendum Section: H.3.6 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

38.

Addendum Section: H.3.7 Identifying and Managing Waste Generated During Closure

Comment Text: A vacuum-equipped system will remove dust and chips during scarification, grinding, and planning to prevent release of possible contamination.

Basis Text: Misspelling of planing.

Recommendation Text: A vacuum-equipped system will remove dust and chips during scarification, grinding, and *planing* to prevent release of possible contamination.

39.

Addendum Section: H.3.7 Identifying and Managing Waste Generated During Closure

Comment Text: Decontamination will be performed during calm, dry weather to prevent possible releases.

Basis Text: Calm weather is not defined. The decontamination activities are not weather-contingent as they take place inside a building.

Recommendation Text: Delete text

40.

Addendum Section: H.3.7 Identifying and Managing Waste Generated During Closure

Comment Text: When decontamination activities are performed near the edge of the concrete, tarps or similar material will be placed adjacent to the concrete to catch any additional waste materials.

Basis Text: Decontamination activities occur inside a building, the walls and door of the building will catch additional waste materials.

Recommendation Text: Delete text.

41.

Addendum Section: H.3.7 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, "Land Disposal Restrictions" (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

42.

Addendum Section: H.3.7 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste based on characterization results, provide the regulatory driver for requiring disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

43.

Addendum Section: H.3.8.2 Closure Performance Standards for Soil

Comment Text: The records review of waste stored in the 2401-W Waste Storage Building indicate no releases (Section H.3.2). Therefore, there is no known waste-related source of contaminated media and the inhalation exposure pathway has been excluded.

Basis Text: This text supports no release pathway to soil. Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete all references to soil sampling within the closure plan.

44.

Addendum Section: H.3.8.2 Closure Performance Standards for Soil

Comment Text: During operations, the floors (including joints/seams) were coated with an epoxy resin floor surfacing system that was compatible with the stored waste. The visual inspections (Section H.3.2) did not identify dangerous or mixed waste related staining, major cracks, crevices, pits, or low areas. With no indication of a route of exposure from water or rainwater to the underlying soil, the soil concentration protective of groundwater pathway was excluded when calculating closure performance standards.

Basis Text: If there is no pathway for rainwater based on the condition of the flooring, there is no release pathway for containerized waste.

Recommendation Text: Delete all references to focused soil sampling.

45.

Addendum Section: H.3.10 Conditions that will be Achieved when Closure is Complete

Comment Text: Upon completion of the closure activities, the 2401-W Building will remain in an “as-is” state with the building remaining in place, and the focused soil sampling locations capped after sampling.

Basis Text: No basis for focused soil samples.

Recommendation Text: Upon completion of the closure activities, the 2401-W Building will remain in an “as-is” state with the building remaining in place.

46.

Addendum Section: H.4 Sampling and Analysis Plan

Comment Text: Sampling and analysis of the soil below the 2401-W Building will be conducted to confirm whether closure performance standards have been met.

Basis Text: The defined boundary of the DWMU is the surface of the concrete floor. Information throughout the closure supports a lack of exposure pathway to the underlying soil. Meeting the requirements in 40 CFR 268.45 Table 1 – Alternative Treatment Standards for Hazardous Debris requires a visual inspection for meeting the clean debris surface. If the concrete flooring meets clean debris surface standards, there is no justification for coring through the building to take soil samples. Further, no evidence was provided in the closure plan to support the addition of the focused and non-statistical grid samples. Soil sampling below the 2401-W Building is inappropriate and unjustified based on information provided throughout the closure plan.

Recommendation Text: Delete Section H.4 Sampling and Analysis Plan

47.

Addendum Section: H.5.1 Confirmation of Clean Closure

Comment Text: The 2401-W Building will be clean closed through confirmation of successful decontamination of the concrete by removing at least 0.6 cm (~1/4 in.) of the surface to a clean debris surface (Section H.5.1.1); and confirmation that samples of the underlying soil meet soil closure performance standards (Table H-5).

Basis Text: No pathway to underlying soil. Delete text regarding soil closure performance standards.

Recommendation Text: The 2401-W Building will be clean closed through confirmation of successful decontamination of the concrete by removing at least 0.6 cm (~1/4 in.) of the surface to a clean debris surface (Section H.5.1.1).

48.

Addendum Section: H.5.1.2 Confirmation of Soil Sample Results

Comment Text: Soil sample results from the contract analytical laboratory will be reviewed to confirm that target analytes have met closure performance standards (Table H-5).

Basis Text: No pathway to underlying soil.

Recommendation Text: Delete section

49.

Addendum Section: H.5.2 Role of the Independent Qualified Registered Professional Engineer

Comment Text: Verify the locations of soil samples are as specified in the SAP.

Basis Text: No pathway to underlying soil.

Recommendation Text: Delete text regarding soil samples.

50.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 2401-W Building DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also, include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 2401-W Building DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

51.

Addendum Section: Table H-8 2401-W Waste Storage Building Dangerous Waste Management Unit Closure Schedule

Basis Text: The duration for the activity “Complete Closure of the 2401-W Building DWMU” is identified as 180 days. Having an additional duration of 180 days for this activity allows 360 days for closure activities.

Recommendation Text: Delete Activity.

52.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

53.

Addendum Section: H.8 References

Comment Text: WAC 173-340, *Model Toxics Control Act-Cleanup,* Washington Administrative Code, Olympia, Washington.

Basis Text: WAC 173-340-900 as referenced in Section H.3.7 is missing.

Recommendation Text: Add WAC 173-340-900 to Section H.8.

Unit 41 221-T Railroad Cut Comments

1.

Addendum Section: Unit 41 221-T Railroad Cut Permit Conditions

Comment Text: Addenda

Basis Text: Erroneous use of the plural form of Addendum.

Recommendation Text: Change “Addenda” to “Addendum”.

2.

Addendum Section: Unit 41 221-T Railroad Cut Permit Conditions

Comment Text: The Permittees will notify Department of Ecology (Ecology) within 24 hours of any deviations from the approved Addendum H, “Closure Plan.”

Basis Text: This permit condition lacks regulatory basis and is contradictory to Permit Condition II.K.6 which states:

"Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection."

While field sampling plans are designed to be able to be implemented as written, field conditions arise that may require minor deviation. These circumstances are addressed in permit condition II.K.6.

Recommendation Text: Minor deviations from this closure plan must be addressed in accordance with Permit Condition II.K.6.

3.

Addendum Section: Unit 41 221-T Railroad Cut Permit Conditions

Comment Text: If sampling assumptions/closure performance standards were not met, the Permittees will submit a permit modification request in accordance with Permit Condition I.C.3 to amend the Closure Plan to reflect the additional work that would need to be done to achieve clean closure.

Basis Text: Resolving Contamination Identified During Grid Soil Sampling is already addressed in Section H.4.3.3.2. Identify what additional information is needed for the permit modification.

Recommendation Text: Provide details on what additional information is required for the permit modification.

4.

Addendum Section: Unit 41 221-T Railroad Cut Permit Conditions

Comment Text: <u>For Non-Statistical Grid Sampling and/or Focused Sampling:</u> The Permittees will conduct a review of the non-statistical grid and/or focused sampling data for purposes of verifying the closure performance standards specified in the sampling plan in Addendum H, “Closure Plan, “ have not been exceeded.

Basis Text: The closure plan does not identify non-statistical or focused sampling.

Recommendation Text: Delete section.

5.

Addendum Section: Unit 41 221-T Railroad Cut Permit Conditions

Comment Text: Within sixty days of completion of closure for the 221-T Railroad Cut, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 221-T Railroad Cut has been closed in accordance with the specifications of the Addendum H, “Closure Plan” [WAC 173-303-610 (6)].

Basis Text: The IQRPE certification is submitted after closure activities are complete but as part of the overall closure process. Suggest specifying the IQRPE certification is submitted after closure activities are complete.

Recommendation Text: Within sixty days of completion of closure activities for the 221-T Railroad Cut, the Permittees must submit to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means), a certification that the 211-T Railroad Cut has been closed in accordance with the specifications of the Addendum H, “Closure Plan” [WAC 173-303-610(6)].

6.

Addendum Section: Table of Contents

Comment Text: Table of Contents

Basis Text: Page numbers are missing the H-..

Recommendation Text: Suggest reformatting TOC for consistency with page numbering throughout document.

7.

Addendum Section: Terms

Comment Text: Terms

Basis Text: HWMA and RCW are not included in table. See first paragraph in Intro. BCSO and WIDS are not defined in this plan.

Recommendation Text: Add HMWA, RCW to; and remove BCSO and WIDS from terms table.

8.

Addendum Section: H.1 Introduction

Comment Text: The purpose of this plan is to describe the Resource Conservation and Recovery Act (RCRA)/Hazardous Waste Management Act (HWMA), Chapter 70.105 Revised Code of Washington (RCW) closure process for the 221-T Railroad Cut Dangerous Waste Management Unit (DWMU), hereinafter called the 221-T Railroad Cut.

Basis Text: Should be defined as "Resource Conservation and Recovery Act of 1976."

Recommendation Text: The purpose of this plan is to describe the closure process for the 221-T Railroad Cut Dangerous Waste Management Unit (DWMU), hereinafter termed the “Railroad Cut”, as required by and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) and Washington’s Hazardous Waste Management Act (HWMA).

9.

Addendum Section: H.1 Introduction

Comment Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), and WAC 173-303-630(10).

Basis Text: Should define WAC 173-303-610 and WA 173-303-630 the first time they are used. -610 is "Closure and Post-Closure;" and -630, "Use and Management of Containers."

Recommendation Text: This closure plan complies with closure requirements in Washington Administrative Code (WAC) 173-303-610(2) through WAC 173-303-610(6), *Closure and Post-Closure,* and in WAC 173-303-630(10), *Use and Management of Containers.*

10.

Addendum Section: H-1 Introduction

Comment Text: H.9

Basis Text: Page numbering should re-start at H.1.

Recommendation Text: Begin page numbering at H.1.

11.

Addendum Section: Figure H-1 T Plant Complex Overview, 221-T Railroad Cut Dangerous Waste Management Unit

Comment Text: Figure H-1 T Plant Complex Overview

Basis Text: There should be a date for this photo

Recommendation Text: Add date to Figure H-1 T Plant Complex Overview.

12.

Addendum Section: Table H-1 Training Matrix for the 221-T Railroad Cut Dangerous Waste Management Units

Comment Text: c. Facility Health and Safety training is required only if workers are unescorted in the facility

Basis Text: There is no c superscript in Table H-1.

Recommendation Text: Add superscript c to columns for Non-T Plant Personnel or Visitor, SPOC, and FS for Facility Health and Safety Training Category Course Description.

13.

Addendum Section: Table H-1 Training Matrix for the 221-T Railroad Cut Dangerous Waste Management Units

Comment Text: The “X” in the FS column for the Building Emergency Training Category Course Description.

Basis Text: This "X" is in error. There is no requirement for Building Emergency training for the Field Sampler.

Recommendation Text: Remove the “X” for the FS column for Building Emergency Training Category Course Description.

14.

Addendum Section: H.1.5 Facility Contact Information

Comment Text: Doug S. Shoop

Basis Text: Contact information should be in the Part A only. If the contact information changes, it will require a permit modification to the closure plan. In addition, the DOE contact is no longer Doug Shoop.

Recommendation Text: Remove facility contact information from closure plan.

15.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Remove all waste and waste residues and properly dispose of them in a RCRA permitted disposal facility.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

16.

Addendum Section: H.2 Closure Performance Standards

Comment Text: Perform soil sampling and analysis to ensure soils in the 221-T Railroad Cut meet standard Model Toxics Control Act (MTCA) cleanup levels, and remove any soils contaminated above these levels.

Basis Text: This is an activity, not an objective. This action should be covered under Section H.3, Closure Activities

Recommendation Text: Delete text.

17.

Addendum Section: H.3.1 Removal of Wastes and Waste Residues

Comment Text: It is unknown if dangerous or mixed waste residues are present at this DWMU.

Basis Text: As identified in the records review, facility inspections were completed in this storage area to monitor for spills. No documentation of spills were found during the records reviewed. Provide supporting documentation indicating the potential for dangerous or mixed waste residue to be present at the DWMU.

Recommendation Text: The records review and visual inspection did not identify any releases of dangerous waste or waste related staining therefore dangerous or mixed waste residues are not anticipated at this unit.

18.

Addendum Section: H.3.4 Decontamination

Comment Text: Equipment used during sampling will be decontaminated for re-use or disposed of and managed as newly generated waste in accordance with Section H.3.6

Basis Text: Per WAC 173-303-610, only equipment containing or contaminated with dangerous wastes or waste residue require removal or decontamination. With the absence of contamination, decontamination of equipment is not necessary.

Recommended Text: Any equipment used to remove material contaminated with hazardous or mixed waste will be decontaminated in accordance with WAC 173-303-610. Decontamination of equipment will generally be performed using dry methods (such as wiping) to the extent possible, and will be performed within the area where the closure activity has taken place. Solid waste debris generated by decontamination of equipment (e.g., rags and personal protective equipment) will be collected and disposed at an approved disposal facility. Dangerous waste generated will be managed in accordance with WAC 173-303, "Dangerous Waste Regulations." Contaminated equipment that cannot be decontaminated for re-use will be discarded and managed as dangerous waste in accordance with generator accumulation standards of WAC 173-303-170 and -200.

19.

Addendum Section: H.3.4 Decontamination

Comment Text: A small temporary decontamination area (approximately 10 by 20 feet) may be established near the 221-T Railroad Cut.

Basis Text: Providing approximate dimensions requires Permittees to establish that size of area when a smaller area may be effective.

Recommendation Text: A small temporary decontamination area may be established near the 221-T Railroad Cut.

20.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: The contaminated soil will be containerized, labeled, and sampled for waste characterization.

Basis Text: The soil has already been sampled and analyzed through the closure plan SAP. Provide the regulatory justification for requiring sampling of the soil for purposes of characterization. The soil can be characterized using the existing data.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized.

21.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil will be placed in U. S. Department of Transportation-compliant containers and sent to a RCRA permitted disposal facility or staged at CAAs in accordance with all applicable requirements of WAC 173-303-200, *Conditions for exemption for a large quantity generator that accumulate dangerous waste.*

Basis text: All waste and waste residues must properly be designated as RCRA waste before the waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste, there is no regulatory driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: The contaminated soil will be containerized, labeled, and characterized. Contaminated soil will be placed in U.S. Department of Transportation compliant containers and sent to an approved disposal facility or staged at central accumulation areas in accordance with standards in WAC 173-303-200, “Accumulating Dangerous Waste On-site.” Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268, “Land Disposal Restrictions”) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an approved disposal facility.

22.

Addendum Section: H.3.5 Identifying and Managing Contaminated Environmental Media

Comment Text: Contaminated soil subject to the requirements of WAC 173-30-140, *Land Disposal Restrictions* (which incorporates by reference 40 Code of Federal Regulations [CFR] 268, *Land Disposal Restriction*) will be characterized, designated, and stored or treated, as applicable, prior to disposal in a RCRA permitted disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

23.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste based on characterization results, provide the regulatory driver for requiring disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

24.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Dangerous and mixed waste will be treated, if necessary, to meet land disposal restrictions in WAC 173-303-140 (which incorporates by reference 40 CFR 268) then ultimately disposed in a RCRA permitted waste disposal facility.

Basis Text: For waste that does not designate as a dangerous waste, provide the driver for disposal in a RCRA permitted disposal facility.

Recommendation Text: Waste subject to requirements of WAC 173-303-140, “Land Disposal Restrictions” (which includes by reference 40 CFR 268) will be characterized, designated, stored, or treated, as applicable, prior to disposal in an appropriate waste disposal facility.

25.

Addendum Section: H.3.6 Identifying and Managing Waste Generated During Closure

Comment Text: Once waste characterization results are received, all waste will be designated and shipped to a RCRA permitted facility for treatment, storage, or disposal.

Basis Text: All waste and waste residues must properly be designated as RCRA waste before waste is required to be disposed of in a RCRA facility. If it does not designate as RCRA waste, then no disposal requirements should be enforced within this closure plan. If the waste does not designate as a dangerous waste based on characterization results, provide the regulatory driver for requiring disposal in a RCRA permitted disposal facility.

Recommendation Text: If any waste is identified as hazardous waste it must be properly disposed or decontaminated in accordance with WAC 173-303-610(5). All hazardous waste will be handled in accordance with all applicable requirements of WAC 173-303-170 through WAC 173-303-230.

26.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: WAC 173-340-740(2), Table 740-1, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900), which includes closure performance standards for human health based on unrestricted land use.

Basis Text: Include the title of this WAC 173-340-900, *Tables.*

Recommendation Text: WAC 173-340-740(2), Table 740-I, *Method A Soil Cleanup Levels for Unrestricted Land Uses* (WAC 173-340-900, *Tables*), which includes closure performance standards for human health based on unrestricted land use.

27.

Addendum Section: H.3.7 Closure Performance Standards for Soil

Comment Text: VSP Data Analysis Report is to be provided to Ecology within 30 days of receipt of the final laboratory analytical report.

Basis Text: The VSP data analysis report is to be provided to Ecology within 30 days after all data verification activities.

Recommendation Text: VSP Data Analysis Report is to be provided to Ecology within 30 days after all data verification activities are complete.

28.

Addendum Section: Table H-4 Closure Performance Standards for Soil and Analytical Performance Requirements

Comment Text: Tetrahydrofuran 1.00E+1

Basis Text: For tetrahydrofuran, Permittees agree with the value of 3.00E+01 mg/kg for groundwater protection. The PQL should be 5.00E-02 mg/kg.

Recommendation Text: Update Table H-4 with PQL of 5.00E-02 mg/kg and groundwater protection with 3.00E+01 mg/kg

29.

Addendum Section: H.4.3.3 Sampling Documents and Records

Comment Text: Records may be stored in either electronic or hard copy format. Documentation and records, regardless of medium or format, are controlled in accordance with internal work requirements and processes to ensure the accuracy and retrieveability of stored records. Records required by the Tri-Party Agreement (Ecology et al., 1989, *Hanford Federal Facility Agreement and Consent Order)* will be managed in accordance with the requirements therein.

Basis Text: This replicates language in Section H.1.4.4 Facility Recordkeeping.

Recommendation Text: Replace language with a reference to Section H.1.4.4

30.

Addendum Section: H.4.6 Revisions to the Sampling and Analysis Plan and Constituents to be Analyzed

Comment Text: Changes to the SAP may be necessary due to unexpected events during closure. An unexpected event would be an event outside the scope of the SAP or a condition that inhibits implementation of the SAP as written. Revisions to the SAP will be submitted no later than 30 days after the unexpected event as a permit modification request.

Basis Text: Approval of a permit modification will likely adversely affect meeting the 180-day closure period.

Recommendation Text: Provide clarification on whether the permit modification request approval is required to continue with closure activities or if activities can continue uninterrupted after the unexpected event occurs.

31.

Addendum Section: H.5.3 Closure Certification

Comment Text: Within 60 days of completion of closure of the 221-T Railroad Cut DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail.

Basis Text: Suggest "closure activities". Closure is not complete until Ecology acknowledges the clean closure certification. Also, include language consistent with regulations for delivery of closure certification means.

Recommendation Text: Within 60 days of completion of *closure activities* of the 221-T Railroad Cut DWMU, a certification that the DWMU has been closed in accordance with the specifications in this closure plan will be submitted to Ecology by registered mail or other means that establish proof of receipt (including applicable electronic means).

32.

Addendum Section: Table H-8 221-T Railroad Cut Dangerous Waste Management Unit Closure Schedule

Comment Text: 180 days

Basis Text: The duration for the activity “Complete Closure of the 221-T Railroad Cut DWMU” is identified as 180 days. Having an additional duration of 180 days for this activity allows 360 days for closure activities.

Recommendation Text: Delete Activity

33.

Addendum Section: H.8 References

Comment Text: (Dangerous Waste Permit Application Part A Form, Closure Unit 19, Hexone Storage & Treatment Facility, Revision 7, October 1)

Basis Text: This appears to be an incorrect reference.

Recommendation Text: Provide appropriate reference.

34.

Addendum Section: H.8 References

Comment Text: WAC 173-340, *Model Toxics Control Act-Cleanup,* Washington Administrative Code, Olympia, Washington.

Basis Text: WAC 173-340-900 as referenced in Section H.3.7 is missing.

Recommendation Text: Add WAC 173-340-900 to Section H.8.