

**Meeting Minutes - Approval
Closure Plan Approval Workshop
For
Hanford Facility Dangerous Waste Closure Plan,
241-Z Treatment and Storage Tanks, Revision 1**

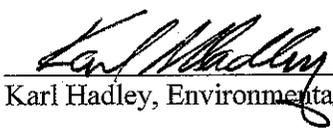
**Meeting Held December 17, 2003
From 9:30 to 11:30 PM
Federal Building, Room 590-A, Richland, Washington**

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated meeting.

 Date: 1/22/04
Ellen Mattlin, Project Manager Representative, RL/Central Plateau

 Date: 1/22/04
Jeff Ayres, Unit Manager/Permit Writer, Washington State Department of Ecology

241-Z TSD unit and PFP Facility – Contractor Concurrence

 Date: 1/22/04
Karl Hadley, Environmental Compliance Officer, PFP Facility, FH/NMD

Not Present

Date: _____
Andrea Hopkins, Nuclear Materials Disposition Project Office, FH/NMD

 Date: 1/15/04
Scott Luke, Permitting Representative, FH/EP

Purpose: Facilitate Ecology approval of the 241-Z Closure Plan, DOE/RL-96-82, Revision 1
The attached minutes are comprised of the following:
Attachment 1 - Meeting Agenda
Attachment 2 - Summary of Discussion (Commitments/Agreements)
Attachment 3 - Attendance List
Attachment 4 - Response to Ecology Closure Plan Comments

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Distribution:

J. M. Ayres	Ecology	B5-18
R.W. Bloom	FH	T5-57
Rick Bond	Ecology	B5-18
K. A. Hadley	FH	T5-57
A. M. Hopkins	FH	H8-25
J. A. Johnston	FFS	T1-40
S. N. Luke	FH	G1-30
E. M. Mattlin	RL	A5-15

ADMINISTRATIVE RECORD (H6-08): 241-Z Treatment and Storage Tanks, T-2-5

Please send comments on distribution list to Scott Luke (H8-40), (509) 372-1667.

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Attachment 1

Agenda

- 1. Workshop Process**
 - Purpose
 - Introduce workshop participants
 - Workshop records
 - 241-Z closure document submittals and exchanges to date

- 2. Closure Plan Approval Activities and Status**
 - Closure plan approval and processing steps
 - Resolve Ecology closure plan comments

- 3. Workshop Action Items**

- 4. Date of Next Workshop**

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Attachment 2

1. Workshop Process

- **Purpose of workshop(s)**

The workshop process for the 241-Z Treatment and Storage Tanks closure plan was begun to facilitate Ecology closure plan approval. This process generally follows the closure plan review and approval process for a primary document under TPA Section 9.0, as laid out in Figure 9-2. The workshop process may require multiple workshops.

- **Introduce Workshop Participants**

Primary workshop participants were Rick Bond and Jeff Ayres (Ecology); Ellen Mattlin (DOE/RL); Karl Hadley, Richard Bloom, and Scott Luke (FH); and, Jerry Johnston (FFS). All workshop attendees will be identified on Attachment 3, Attendance List.

- **Workshop records**

Minutes will be generated to document discussions and agreements reached during workshop(s). The approval (front) page of the minutes will be signed by responsible Ecology, DOE/RL, and FH personnel approving the content of the minutes. The minutes will be added to the administrative record (AR) for this unit either by being sent directly to the unit AR or by attachment to PFP PMM minutes that will go into the AR.

- **241-1 Z closure document submittals and exchanges to date**

The 241-Z Closure Plan, DOE/RL 96-82, Revision 0, was first submitted to Ecology in 1996. Approval discussions did not occur and revision 0 was never approved. Since then, TPA milestones for 241-Z closure were negotiated (M-83-30, M-83-31, and M-83-32). M-83-30 required submittal of a certified closure plan to Ecology by July 31, 2003. Pursuant to this, Revision 1 of the closure plan was certified and submitted to Ecology July 28, 2003. This milestone required the closure plan to be processed as a primary document in accordance with TPA section 9.0, Table 9-2, for incorporation into the Hanford Facility RCRA Permit (HF RCRA Permit). Ecology responded to the July submittal with comments attached to a letter dated October 16, 2003. Ecology comments were reformatted (verbatim cut and paste) into a comment response table and draft responses were provided electronically to Ecology on December 12, 2003.

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2. Closure Plan Approval Status/Activities

- **Closure plan approval and processing steps**

Closure plan approval requires resolution of Ecology comments provided October 2003. To that end, the focus of this workshop was finalizing the draft RL comment responses submitted to Ecology December 12, 2003. RL/FH comment responses will be finalized based on agreements reached at this workshop and the comment response table will be updated and transmitted to Ecology by RL letter.

Agreed-to closure plan text changes identified in the responses will be presented to Ecology in draft form (redline/strikeout) for concurrence and/or discussion at future workshop(s). Upon Ecology concurrence with draft text changes, page changes will be made to the certified Revision 1 of the closure plan. Revision 1 will be re-dated and transmitted to Ecology for public review and approval via incorporation into the HF RCRA Permit. No additional closure plan certification will be sought because the plan will remain at Revision 1 and because closure plan terminology changes to date do not affect the substantive terms and conditions of the plan (i.e., closure actions or requirements) and so have not invalidated the Revision 1 certification.

- **Resolve Ecology closure plan comments**

All Ecology comments on the 241-Z closure plan provided to RL and FH on October 16, 2003 were discussed at this workshop. During the discussions, comment clarification was obtained and an RL/FH response for all comments was formulated that was acceptable to Ecology, RL, and FH (Comment Response Table, Attachment 4).

3. Workshop Action Items

- **Update and transmit comment response table.** RL/FH comment responses were finalized during workshop discussions and the updated comment response table is attached (Attachment 4). Comment responses will also be formally transmitted to Ecology by RL letter.
- **Update closure plan text.** RL/FH will proceed with revising closure plan text as agreed to in the finalized comment responses (Attachment 4).

4. Date of Next Workshop

- The date of the next workshop will be set at the next PFP PMM (January 8, 2004).

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Attachment 4

**RL/FH Responses to Ecology Review Comments to
Hanford Facility Dangerous Waste Closure Plan, 241-Z Treatment and Storage Tanks
DOE/RL-96-82, Revision 1**

Comment No.	Comment	Closed on
1.	<p>Page iii, FOREWORD: Rewrite the Forward with the following text:</p> <p>The Hanford Facility is owned by the U.S. Government Department of Energy, Richland Field Office and contractor operated. The Hanford Site covers approximately 560 square miles of semiarid land within the Pasco Basin of the Columbia Plateau in southeastern Washington State. The Hanford Site has restricted public access and provides a buffer for the smaller areas (including reactors, chemical separation facilities, and special nuclear material facilities) onsite that historically were used for production of special nuclear materials and waste storage and disposal. Dangerous waste and mixed waste (containing both radioactive and dangerous components) are generated and managed on the Hanford Facility. The mission of the Hanford Site recently has focused on waste management and environmental remediation and restoration. The dangerous waste is regulated in accordance with the Resource Conservation and Recovery Act of 1976 and the Washington State Hazardous Waste Management Act of 1976 (as administered through the Washington State Department of Ecology Dangerous Waste Regulations, Washington Administrative Code (WAC 173-303). The radioactive component of mixed waste is interpreted by the U.S. Department of Energy to be regulated under the Atomic Energy Act of 1954; the nonradioactive dangerous component of mixed waste is interpreted to be regulated under the Resource Conservation and Recovery Act of 1976 (RCRA) and WAC 173-303. Additional information regarding the Hanford Facility is described in the General Information Portion of the Hanford Site RCRA permit.</p> <p>For purposes of the Resource Conservation and Recovery Act of 1976 and the Washington State Department of Ecology Dangerous Waste Regulations, the Hanford Facility is considered to be a single facility. The single dangerous waste permit identification number issued to the Hanford Facility by the U.S. Environmental Protection Agency and the Washington State Department of Ecology is U.S. Environmental Protection Agency/State Identification Number WA 7890008967. The initial Hanford Facility Resource Conservation and Recovery Act Permit became effective in September 1994, and is comprised of two portions, a Dangerous Waste Portion, issued by Ecology, and a Hazardous and Solid Waste Amendments Portion, issued by the U.S. Environmental Protection Agency, Region 10. The Hanford Facility Dangerous Waste Permit Application is considered to be a single application organized into a General Information Portion (DOE/RL-91-28) and a Unit-Specific portion. Both the General Information and Unit-Specific portions of the Hanford Facility Dangerous Waste Permit Application address the contents of the Part B permit application guidance documentation prepared by the Washington State Department of Ecology and the U.S. Environmental Protection Agency (40 Code of Federal Regulations 270), with additional</p>	

Comment No.	Comment	Closed on
	<p>information needs defined by revisions of WAC 173-303 and by the Hazardous and Solid Waste Amendments. Information provided in this revised 241-Z Treatment and Storage Tanks closure plan is current as of July 2003.</p> <p>DOE-RL/FH Response: RL/FH believe that the current closure plan text is more appropriate than the suggested Ecology text that is inconsistent with other approved Hanford Site closures and introduces information that is redundant with the HF RCRA Permit. Specifically:</p> <ul style="list-style-type: none"> • The current Forward is consistent with other Ecology-approved Hanford Site permits [e.g., 300 Area Waste Acid Treatment System (closure plan) and Central Waste Complex (Part B)]. • The current Forward references the Ecology-approved General Information Portion (GIP) of the HF RCRA Permit, DOE/RL 91-28, Attachment 33, that contains approved, up to date Hanford Site information and discussion of the Hanford Site RCRA Permit. Restatement of this information is redundant and risks having to modify the closure plan if such information changes. • 241-Z will be incorporated into the HF RCRA Permit as a new unit-specific Part V, closure chapter, and to-date Ecology has never incorporated the Forward as an enforceable portion of the Permit. • This comment is not consistent with Ecology Comment #1 for the HA-20 MB Glovebox closure plan that requests inclusion of a simple 1 to 2 paragraph Forward. RL agrees with the Ecology HA-20MB reviewers. <p>Text modifications: None.</p>	
2.	<p>Page v, CONTENTS: The plan should contain the following chapters</p> <p style="text-align: center;">CONTENTS</p> <p>FOREWORD GLOSSARY PART A, FORM 3 (include history of Part A)</p> <p>1.0 INTRODUCTION 2.0 SYSTEM DESCRIPTION 3.0 PROCESS INFORMATION 4.0 WASTE CHARACTERISTICS 5.0 GROUNDWATER MONITORING 6.0 CLOSURE STRATEGY AND PERFORMANCE STANDARDS 7.0 CLOSURE ACTIVITIES 8.0 POST-CLOSURE ACTIVITIES 9.0 REFERENCES</p> <p>APPENDICES 1A TRI-PARTY AGREEMENT MILESTONES: -83-30, or other</p>	

Comment No.	Comment	Closed on
	<p>milestones impacting closure activities or compliance schedules</p> <p>DOE-RL/FH Response: This comments requests inclusion in the closure plan of M-83-30 series TPA milestones governing closure and inclusion of the current Part A, Form 3. These documents are not required by regulations governing closure plan content to be included with the closure plan. Further, the subject TPA milestones and the Part A, Form 3, Revision 6, have already been approved by Ecology and are not being revised at this time and so do not require resubmittal to Ecology for review and approval with the closure plan. These documents will be added to the closure plan by reference in Chapter 9.0, References. A copy of the approved TPA milestone package and the Part A, Form 3, can be provided to Ecology upon request.</p> <p>Text modifications: Add TPA milestones and the Part A, Form 3, to Chapter 9.0, References.</p>	
3.	<p>Page 1-I, Introduction: The introduction should contain the following information:</p> <p style="text-align: center;">CONTENTS</p> <p>1.0 INTRODUCTION AND OVERVIEW</p> <p>1.1 Background</p> <p>1.2 Preferred Closure Strategy</p> <p>1.3 Closure Plan and PFP Deactivation/Decommissioning Integration</p> <p>1.4 241-Z Treatment and Storage Tanks (241-Z) Closure Plan</p> <p>DOE-RL/FH Response: See response to Comment #4.</p>	
4.	<p>Page 1-1, Introduction and Overview: This chapter should be rewritten to contain the following:</p> <p style="text-align: center;">1.0 INTRODUCTION AND OVERVIEW</p> <p>This chapter provides background information for the 241-Z Treatment and Storage Tanks (241-Z) and provides an overview of the 241-Z closure plan.</p> <p>This certified closure plan for the 241-Z Treatment and Storage Tanks (241-A), an unpermitted RCRA treatment, storage, and/or disposal (TSD) unit is being submitted for approval to the Washington State Department of Ecology (Ecology) in accordance with Hanford Federal Facility Agreement and Consent Order (TPA) Milestone M-83-30. Submittal of a certified closure plan for the '241-Z Waste Treatment Facility' by July 31, 2003 was required by this milestone (Ecology et al. 1996). Management</p>	

of closure will be based on agreements made between RL and Ecology, as described in this closure plan and documented in the Administrative Record. General requirements for RCRA closure are discussed in the Tri-Party Agreement (TP A). These requirements (Section 5.3 of the Tri-Party Agreement) state that 'all [treatment, storage and/or disposal] TSP units that undergo closure, irrespective of permit status, shall be closed pursuant to the authorized State Dangerous Waste Program in accordance with WAC 173-303-610.' Closure of this unit will commence pursuant to WAC 173-303-610, WAC 173-303-640, and the Hanford Facility Dangerous Waste Permit (Permit). Approval of this closure plan will be obtained through the permit modification process pursuant to WAC 173-303-840 and WAC 173-303-830. The 241-Z Waste Treatment Facility and the 241-Z are synonymous. Although the treatment, storage and/or disposal of radioactive waste (i.e., source, special nuclear, and by-product materials as identified the Atomic Energy Act of 1954) are not within the scope of RCRA or Washington Administrative Code (WAC) 173-303, information is provided for general knowledge.

This closure plan is divided into nine chapters. Chapter 1.0 provides the introduction, regulatory basis, and strategy for managing the closure unit. Chapter 2.0, 3.0, 4.0, and 5.0 discuss the detailed facility description, process information, waste characteristics, and groundwater monitoring, respectively. Chapter 6.0 deals with the closure strategy and performance standard, including the closure activities for the D-4 through D-8 vaults, piping, miscellaneous associated building areas, glove box XX and associated ancillary equipment. Chapter 7.0 addressed the closure activities identified in Chapter 6.0, and also adds information on closure activities for the soil directly beneath the unit, regulated material removed during closure, and the schedule for closure. Chapter 8.0 provides post closure information, and Chapter 9.0 provides a list of references used throughout the document. Appendix A-1 contains Milestone M-083-22, -30, -31, & -32 documentation.

1.1 Background (Insert the following text: "The Hanford Facility is owned by the U.S. Government and operated by the U.S. Department of Energy, Richland Field Office. The Hanford Site covers approximately 560 square miles of semiarid land within the Pasco Basin of the Columbia Plateau in southeastern Washington State. The Hanford Site has restricted public access and provides a buffer for the smaller areas (including reactors, chemical separation facilities, and special nuclear material facilities) onsite that historically were used for production of nuclear materials and waste storage and disposal. Dangerous waste and mixed waste (containing both radioactive and dangerous components) are managed and produced on the Hanford Facility. The mission of the Hanford Site recently has focused on waste management and environmental remediation and restoration. The dangerous waste is regulated in accordance with the Resource Conservation and Recovery Act

of 1976 and the Washington State Hazardous Waste Management Act of 1976 (as administered through the Washington State Department of Ecology Dangerous Waste Regulations, Washington Administrative Code (WAC-173-303). The radioactive component of mixed waste is interpreted by the U.S. Department of Energy to be regulated under the Atomic Energy Act of 1954; the nonradioactive dangerous component of mixed waste is interpreted to be regulated under the Resource Conservation and Recovery Act of 1976 (RCRA) and WAC 173-303. Throughout this closure plan, 'mixed waste' refers to waste containing both dangerous and radioactive components. Additional information regarding the Hanford Facility is described in the General Information Portion of the Hanford Site RCRA permit.

Insert text from page 1-1, beginning on line 15 through line 30. Include information about the glove box, etc. that you intend to close along with the 241-Z tanks. Identify tank D-6 as a CERCLA past-practice tank)

1.2 Preferred Closure Strategy (insert text from page 1-1, beginning on line 32 through line 50 continuing on page 1-2, lines 1-4.

1.3 Closure Plan and PFP Deactivation/Decommissioning Integration (insert brief text explaining coordination of efforts. Include planned CERCLA actions (include dates) for tank D-6 & other CERCLA associated actions. Explain what is meant by 'terminal cleanout.'

Explain how you intend to handle the closure of the overflow tank.

DOE-RL/FH Response [to Comments #3 and #4]: RL/FH feel that the current closure plan text, as modified, would be more appropriate than the Ecology-suggested text that is inconsistent with the HF RCRA Permit and with other Hanford Site closure plans, introduces redundant information, and requests information that is outside the scope of an introductory chapter and this closure plan. Specifically:

- Chapter 1.0, Introduction, is intended to introduce the conditions of closure and the closure approach and except as noted here, has not been incorporated by Ecology into the HF RCRA Permit as an enforceable section. The sole exception to this has been four BHI-generated closure plans (HF RCRA Permit as Part V, Chapters 16-19) that were submitted simultaneously as DOE/RL-96-39, Appendix A and B. These plans had only five chapters and Chapter 1.0 likely included information normally found in other chapters of FH prepared closure plans.
- Current text generally already contains the information restated in the Ecology comment (closure approach, coordination with CERCLA) and relocating existing information in the same chapter does not benefit reader comprehension or otherwise improve the plan.

	<ul style="list-style-type: none"> • Discussion of closure plan approval being via the permit modification process in accordance with WAC 173-303-830 and 840 is not necessary because the GIP and WAC 173-303-610(3)(a) already identify closure plan submittal and approval as occurring in accordance with appropriate permit application and issuance procedures. • Summarizing closure plan chapter contents is inconsistent with current closure plans. • The paragraph beginning with “The Hanford Facility is owned by...” is a verbatim repeat of the suggested Forward (Comment #1) and the information already in the Ecology-approved GIP. • It is not necessary to define mixed waste. • The information for Ecology-proposed subsection 1.3 already exists in this section in logical order. • Coordination of RCRA and CERCLA for purposes of completing RCRA TSD unit closure is introduced in this chapter at an appropriate level of detail given that CERCLA involvement is a TPA-approved possibility not a foregone conclusion (Chapter 1.0, last two paragraphs). • The level of detail for CERLCA actions for non-RCRA tank D-6 is appropriate given that this tank is a past-practice component and incidental cleanup of non-RCRA locations by CERCLA (6.0) may occur in conjunction with RCRA closure actions but are outside the scope of TSD unit closure. • The overflow tank will be closed like the other RCRA tanks (7.2.1). <p>Text modifications:</p> <ul style="list-style-type: none"> • Sample glovebox information will be added to this and other appropriate closure plan sections. • TPA milestones will be incorporated by reference in Chapter 9.0, References (see response to Comment #2). • ‘Terminal cleanout’ information will be added to Chapter 7.0, 7.1. • The term ‘partial closure’ (line 41) will be replaced globally (Chapters 1.0, 6.0, 7.0, and 8.0) with text indicating that if the TSD cannot clean close under this plan, remaining TSD unit contamination will be addressed under a future CERCLA response action outside the scope of this plan. The schedule for the CERCLA action is established in TPA milestones and the period during which TSD unit closure is awaiting the CERCLA action (is not operating but is unclosed) will be identified as an approved extended closure period and compliance schedule for meeting RCRA TSD unit closure requirements. 	
<p>5.</p>	<p>Page 2-1, Section 2.1 Insert text (line 6) to include PFP complex is located in the 200 West Area of the Hanford Site. Identify tank D-6 as a CERCLA unit, a concrete tank</p>	

	<p>and, the size of the vault containing it. If appropriate, identify the past-practice infrastructure (line 20) as CERCLA.</p> <p>DOE-RL/FH Response: Accepted. [Note: Tank D-6 is not a concrete tank.]</p> <p>Text modifications: Revise subject text to add:</p> <ul style="list-style-type: none"> • 241-Z is in the 200-W Area of the Hanford Site. • Tank D-6 will be addressed under CERCLA. • New Figure 2-8 identifying vault size. • Concrete pipe trench is CERCLA past-practice infrastructure. 	
6.	<p>Page 2-1, Section 2.1.1</p> <p>Line 31; insert "single shell" after 'large.'</p> <p>Line 35; describe the size of the vaults.</p> <p>DOE-RL/FH Response: Accept line 31 and line 35 comments.</p> <p>Text modifications: Will identify tanks as being 'single wall', not 'single shell', since use of 'single shell' could create confusion due to the already existing Single Shell Tanks TSD unit. Will add vault size per new Figure 2-8 (See Comment #5).</p>	
7.	<p>Page 2-1, Section 2.1.1</p> <p>Insert in sentence in line 36: The cells have not floor drains, 'but contain sumps' and...</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: Suggested text will be added.</p>	
8.	<p>Page 2-1, Section 2.1.1</p> <p>Line 45; change "a" to "the" in sentence...'toward a sump located...'</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: Change line 45 as suggested.</p>	
9.	<p>Page 2-1, Section 2.1.1</p> <p>Describe how the tanks are physically positioned in the vaults. Are they sitting on elevated tank supports with an air space between the bottom of the tank and the vault floor or, are they located directly on the vault floor?</p>	

	<p>DOE-RL/FH Response: Will add text describing tank positioning in the vaults.</p> <p>Text modifications: Will add that tanks are flat with sloped bottoms on octagonal, concrete support pads having a layer of grout between the top of the pad and the bottom of the tank. New Figure 2-8 (Comment #5) will show how tanks are located within the vaults.</p>	
10.	<p>Page 2-2, Section 2.1.2.1</p> <p>Clarify date of construction; vaults were built in 1944 but the building was constructed at a later date. Why is there a difference?</p> <p>DOE-RL/FH Response: Line 26, page 2-2, currently states that the 241-Z Building was added in 1979 to provide weather protection for the vault, tanks and equipment. Will clarify text to more clearly indicate that the 241-Z building was constructed after the tank system. [Note: vaults were built in 1949.]</p> <p>Text modifications: Revise section 2.1, line 7, to indicate that vaults were constructed and tanks were installed in 1949 and the 241-Z Building was constructed in 1979.</p>	
11.	<p>Page 2-2, Section 2.1.2.2</p> <p>Need a more detailed description of the glove box and sample piping</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: Text will add information for sample glovebox (GB-2-241-ZA) and sample piping.</p>	
12.	<p>Page 2-3, Section 2.1.3, Line 13</p> <p>Insert into sentence after ...CERCLA action for the 200-UP-001 operable unit in accordance with section 5.5 of the TPA.</p> <p>DOE-RL/FH Response: The current text, as modified, would be more appropriate than the suggested text since reference to TPA Section 5.5 at this juncture is not appropriate. It is premature to state that a CERCLA OU 'remedial' action will remove contaminated buried pipe when it could be removed under a 'removal' action (i.e., EE/CA) such as at U-plant). If an EE/CA is used, Section 5.5 of the TPA does not apply. However, because buried piping remaining unclosed after initial RCRA closure activities will be addressed by a CERCLA response action, the text will be expanded to include either a CERCLA remedial or removal action.</p>	

	<p>Text modifications: Line 13 will be revised to read “..appropriate CERCLA <i>response</i> action” action.</p>	
13.	<p>Page 2-3, Section 2.2</p> <p>Identify appropriate section of the General Information document (reference the document)</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: GIP Section 6.1 will be referenced.</p>	
14.	<p>Page 2-3, Section 2.2</p> <p>Page F2-3, Figure 2-3: Identify Tanks D-5&D4 as waste collection tanks (two more arrows)</p> <p>DOE-RL/FH Response: Will clarify the figure.</p> <p>Text modifications: Revise Figure 2-3 appropriately.</p>	
15.	<p>Page 2-3, Section 2.2</p> <p>Update Figure 2-5 to show sump flow returns</p> <p>DOE-RL/FH Response: Sump flow returns are clearly described in the note on Figure 2-5 and inclusion of sump flow returns to this figure could add unnecessary complexity to this figure. RL will be happy to meet with Ecology and provide any additional tank system information.</p> <p>Text modifications: None.</p>	
16.	<p>Page 3-1, Section 3.1</p> <p>Waste codes should be included with the waste descriptions.</p> <p>DOE-RL/FH Response: Waste code information will be added to the closure plan. However, because Section 3.0 describes waste producing processes, it would be more appropriate to add this information to Chapter 4.0, Waste Characteristics. (See also the response to Comment #23 regarding adding waste codes to Chapter 4.0)</p> <p>Text modifications: Waste codes information will be added to closure plan section 4.2.5.</p>	

17.	<p>Page 3-1, Section 3.1</p> <p>5th bullet, further explain what is meant by additional plutonium processes waste in support of ...etc.</p> <p>DOE-RL/FH Response: The referenced 'additional Pu processes' are identified under Pu stabilization activities (3.1.5) that will be expanded. Waste information on the additional Pu processing mentioned in this bullet exists in Sections 4.2.4 and 4.2.5.</p> <p>Text modifications: More information regarding 'additional Pu processing' will be added to chapter 3.0.</p>	
18.	<p>Page 3-2, Section 3.2</p> <p>The first paragraph of this section is confusing as written and difficult to follow.</p> <p>DOE-RL/FH Response: Will clarify text.</p> <p>Text modifications: Will clarify paragraph by deleting text after the 2nd sentence and referring to Figure 2-5 that depicts waste transfer capability within the tank system.</p>	
19.	<p>Page 3-2, Section 3.2</p> <p>Also, what waste streams went into each tank (if different waste streams went into different tanks).</p> <p>DOE-RL/FH Response: Until 1993, the wastes from different buildings and processes waste were piped directly to individual tanks within the system. Since 1993, all waste has gone directly to Tk 8 and then commingled in the tank system making the value of pre-1993 information indeterminate. The addition of pre-1993 waste routing information is not necessary since all tanks are assumed to contain all potential wastes managed at the unit and so the decontamination and verification (e.g., sampling) activities for all tanks will be the same.</p> <p>Text modifications: None.</p>	
20.	<p>Page 3-3, Section 3.3</p> <p>Identify RCRA & CERCLA components in the title</p> <p>DOE-RL/FH Response: The nature of the past-practice unit will be identified in the section title.</p>	

	<p>Text modifications: 'Past-practice' components will be identified in the title as CERCLA Past-Practice (CPP).</p>	
21.	<p>Page 3-3, Section 3.3.1</p> <p>Clarify this paragraph. What failed in the system to cause the spill? What was the quantity of water actually spilled?</p> <p>DOE-RL/FH Response: Current text indicates that the March 1991 spill was due to operational error (Line 11) that spilled approximately 26,000 liters of water to the D-4 and D-5 vaults (Line 12). The March 2002 leak of the drain line to Tank D-8 caused a minor spill of approximately 1 liter to the D-8 containment vault (Lines 19-24).</p> <p>Text modifications: None</p>	
22.	<p>Page 4-i, Chapter 4.0</p> <p>Add new section: "4.2.6 Constituents of Concern for Closure." Reference the Part A.</p> <p>DOE-RL/FH Response: Will move waste code information to chapter 4.0 from the first paragraph of Section 7.1.4 and identify potential constituents of concern (CofC) for closure.</p> <p>Text modifications: Waste code information and discussion of potential CofCs will be added to section 4.2.5.</p>	
23.	<p>Page 4-i, Chapter 4.0</p> <p>Move Section 7.1.4 to Chapter 4.0.</p> <p>DOE-RL/FH Response: Waste code information in the first paragraph of Section 7.1.4 will be moved to 4.0.</p> <p>Text modifications: Relocate waste code information from Section 7.1.4 to new Section 4.2.6.</p>	
24.	<p>Page 4-1, Section 4.2.1 PRF Waste Streams</p> <p>What are the heavy metal contaminants of the PRF HSW?</p> <p>DOE-RL/FH Response: The PRF stripped Pu from the aqueous wastes of the RMA and RMC lines of 234-5Z (the primary Pu processing facility) using solvent extraction processes (4.2.1.1). The PRF HSW RCRA metals will primarily be those from 234-5Z waste that are now on the Part A, Form 3 and in Table 4-1.</p>	

	Text modifications: None.	
25.	<p>Page 4-1, Section 4.2.1 PRF Waste Streams</p> <p>Need information regarding the PPO and the PSA; where did you discuss their waste streams?</p> <p>DOE-RL/FH Response: Comment clarification is requested because Ecology-referenced PPO and PSA were not found in closure plan text.</p> <p>Text modifications: None.</p>	
26.	<p>Page T4-1, Table 4-1 & 4-2</p> <p>Where's Mercury, Arsenic, Magnesium, fluoride, chloride?</p> <p>DOE-RL/FH Response: Section 4.2.5 indicates that some heavy metals shown in the Part A, Form 3, (i.e., arsenic and mercury) were only occasional, low-concentration contaminants and so were not identified as anticipated process waste constituents in Table 4-1 and Table 4-2. The source of Ecology reference to magnesium, fluoride and chloride is not clear since none of these are WAC 173-303-9905 Dangerous waste constituents; none are on the current Part A, Form 3 (Rev 6); and, fluoride and chloride ions are only tracked for their potential to combine with other constituents in groundwater that was not affected by RCRA tank system operations (5.0).</p> <p>Text modifications: None</p>	
27.	<p>Page T4-1, Table 4-1 & 4-2</p> <p>Are all the constituents listed?</p> <p>DOE-RL/FH Response: All dangerous waste constituents that are reasonably expected to be seen at regulatory levels in tank waste are listed in the tables.</p> <p>Text modifications: None</p>	
28.	<p>Page T4-1, Table 4-1 & 4-2</p> <p>Explain the silver persulfate process in Chapter 3 & 4.</p> <p>DOE-RL/FH Response: PFP laboratories primarily developed and refined Pu production and recovery processes. Through the years, many different laboratory processes were used, including the silver persulfate and calciner scrubber processes, some of which added heavy metal constituents (Table</p>	

	<p>4-2). Detailed information regarding all the numerous PFP laboratory processes that contributed contaminants to the 241-Z tank System is not readily available and is not necessary since ongoing tank waste sampling has identified heavy metals in tank waste that are currently identified on Table 4-2; the Part A, Form 3; and, in the closure plan (Section 7.1.4).</p> <p>Text modifications: Revise Table 4-2 to delete reference to the silver persulfate and calciner processes.</p>	
<p>29.</p>	<p>Page 5-1, Chapter 5.0: Replace with following:</p> <p>'The 241-Z is not subject to the groundwater monitoring requirements of WAC 173-303-610 (7)(a) if there is not waste left in place, as consistent with the preferred 'clean closure' strategy. Section 6.3.1 of the TPA agreement states, "Any demonstration for clean closure of a disposal unit, or selected treatment or storage units as determined by the lead regulatory agency, must include documentation that groundwater and soils have not been adversely impacted by the TSD group/unit as described in WAC 173-303-645." Although the 241-Z has not operated as a dangerous waste surface impoundment, waste pile, land treatment, or landfill as defined in WAC 173-303-645 (1)(a), final 'clean closure' will depend upon demonstration that dangerous waste constituents have not been transported into the adjacent soil or groundwater in accordance with Section 6.3.2 of the TPA. The initial approach to demonstrating closure is to assess the integrity of the tank system and the vaults. If clean closure can be attained, groundwater monitoring is not required. In accordance with the TPA, the 241-Z is within the 200-ZP-1 (groundwater) Operable Unit. The 200-ZP-1 OU CERCLA cleanup will integrate RCRA actions with CERCLA actions in accordance with the TPA. Remediation of any groundwater contamination from the 241-Z unit will occur under the 200-ZP-1 OU CERCLA Record of Decision (ROD).</p> <p>DOE-RL/FH Response: The current closure plan text, as modified, would be more appropriate than the suggested text that is inconsistent with the TPA and the closure plan and that requires information outside the scope of this closure plan. Specifically:</p> <ul style="list-style-type: none"> • Referenced TPA Section 6.3.1 applies to disposal units and to "selected" treatment or storage units. Selection of this unit for extraordinary oversight of groundwater considerations and application of Section 6.3.1 is not supported by facts that show this TSD did not impact groundwater (i.e., is not a disposal unit, no recorded spills outside of the tank system containment, unit is almost 200 feet above groundwater, existing concrete covers). Given the limited potential for discharges to soil from this TSD unit and their limited potential to migrate to groundwater, groundwater monitoring is an unlikely postclosure prospect and should not be assumed. 	

	<ul style="list-style-type: none"> • Ecology comment text states that CERLCA cleanup “will” integrate RCRA action with CERCLA actions. However, as a tank system with functioning containment, operations of the TSD are not likely to have impacted groundwater and integration of cleanup is unlikely. • Land disposal units (surface impoundment, waste pile, land treatment unit or landfill) are defined in WAC 173-303-040 not WAC 173-303-645(1)(a) as implied in the Ecology comment. • Reference to TPA Section 6.3.2 (Closure as a Land Disposal Unit) is not appropriate at this time because any form of final closure other than clean closure is outside the scope of this plan. Further, if soil contamination remains above clean closure standards after final closure (2011), the HF RCRA Permit, Section II.K, “Modified Closure” (to industrial standards) would more likely occur and TPA Section 6.3.2 will not apply. • Use of terminology “... <i>‘assess the integrity’</i> of the tank system and the vaults...” could invoke requirements of WAC 173-303-640(2) for integrity assessments. Closure activities include visual inspections to identify cracks or pathway to soil and not tank or containment integrity assessments. • The integrity of the tanks is not used in this closure plan to verify soil closure, only the containment will be inspected to verify soil closure. <p>Text modifications:</p> <ul style="list-style-type: none"> • The second paragraph of 5.0 will be modified to indicate the following: ‘Soil will be clean closed as described in 6.0 after inspections that demonstrate that no pathway to soil exists for contaminants. If clean closure cannot be obtained due to potential soil contamination from TSD unit operations, contamination information will be identified in WIDS for evaluation and disposition by the appropriate future CERCLA response action. A plan for unit inspections will be developed for the period until completion of contamination disposition and final TSD unit closure that will not equate to postclosure care (7.2.5). Such a plan would address potential impacts to the environment, including groundwater, until final closure (2011). If, at the time of final closure, it is determined that contamination from TSD unit operations has impacted groundwater and/or will remain in soil at a level that reasonably could impact groundwater, a postclosure plan would be developed to address the need for and conditions of any required groundwater monitoring. 	
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30.	<p>Page 6-1, Section 6.1 CLOSURE STRATEGY Change to read:</p> <p>The 241-Z unit tanks (including some components, structures, and soil beneath the unit) will not be removed under this plan. The unit will be clean closed in place or will remain in place for disposition and final closure in conjunction with the CERCLA actions(s) for the 241-z OU (Chapter 7.2.1). The 241-Z unit will be clean closed with respect to dangerous waste contamination from RCRA operations in accordance with WAC 173-303-610 (2)(b) and WAC 173-303-640(8) and in accordance with WAC 173-303-806. Incidental cleanup of non-RCRA components (e.g., tanks D-6, D-9, D-10, and D-11) and structures are planned to occur in conjunction with the 241-Z tank system closure activities (in accordance with Milestone M-083-22) and are considered outside the scope of this closure plan. Past-practice contamination existing in the adjacent D-6 vault or emanating from documented spills to the D-6 vault is considered CERCLA-only contamination that has been identified in the Waste Information Data System (WIDS) for tracking to disposition by the appropriate CERCLA action(s) (e.g., the 200-ZP-1 OU) and is considered outside of the scope of this 241-Z TSD unit closure plan.</p> <p>All components, structure, and soil that meet the closure standards as identified in this plan and the requirements of WAC 173-303-610 will be clean closed. If the 241-Z unit can not be clean closed under this plan, the unit will undergo post closure pursuant to WAC 173-303-610, WAC 173-303-640(8) and in accordance with WAC 173-303-806. The Part A, Form 3, would be modified to remove clean closed portions from the TSD unit description and identify all unclosed portions for tracking until final closure. Final closure of the 241-Z unit would occur after disposition of any remaining TSD unit contamination in conjunction with the CERCLA Removal Action (e.g., engineering evaluation/cost analysis (EE/CA) in accordance with Milestone M-083-22) that includes 241-Z structures and/or the CERCLA Remedial Action that includes 241-Z soils. It is anticipated there will be a need for extension of the closure period beyond '180 and integration of closure with CERCLA action(s). Closure activities are scheduled to begin in June of 2005 and end by September 2011, as required, under the milestone M-083-31. As such, a request for extension pursuant to WAC 173-303-610(4)(e)(iii) will not be required. Should closure activities require additional time for completion, any extension of the closure period due to integration with CERCLA action(s) will be done in accordance with WAC 173-303-806, WAC 173-303-810, and WAC 173-303-830 and WAC 173-303-840.</p> <p>DOE-RL/FH Response: The current closure plan text, as modified, would be more appropriate than the suggested text changes that are inconsistent with regulations and agreements (TPA milestones) and that introduce redundant or unnecessary information. Specifically :</p> <ul style="list-style-type: none"> • Closure performance standard information is repeated. • The text assumes that this unit will undergo postclosure that is not
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	<p>anticipated. If needed, postclosure care would only occur after an extended closure period (that is not a postclosure period) and only then if final (CERCLA) closure activities outside the scope of this plan identify a closure level requiring postclosure care.</p> <ul style="list-style-type: none"> • Referenced WAC 173-303-806 is not applicable to interim status units. • Chapters 1.0 and 7.0, Section 7.3, discuss the appropriateness of integration with CERCLA and need not be repeated here. • Referenced WAC 173-303-610(4)(e)(iii) refers to landfill closure that is not anticipated. • An extension of closure will not be required as long as closure is completed by 9/30/11 (TPA milestone M-83-32). • Citation of WAC 173-303-806 (final status facilities only) and WAC 173-303-810 (specifically not applicable to interim status units) is not appropriate. Attempting to list all permit modification citations is not necessary since referenced WAC 173-303-610(3)(b) requires that changes to the “approved” closure plan comply with all applicable permit modification requirements. <p>Text modifications: Text will be modified as follows:</p> <ul style="list-style-type: none"> • Delete terminology “partial closure” from line 16. • Section 6.1: Add that for an extended closure period steps will be taken as described in Section 7.2.5 in coordination with PFP surveillance and maintenance activities to prevent threats from the not operating but unclosed unit. • Section 7.3: Add ‘if final closure activities cannot be completed by 2011, an extension of closure in accordance with the requirements of WAC 173-303- 610(4)(b) would be requested’. 	
<p>31.</p>	<p>Page 6-1, 6.2 Closure Performance Standards Replace with this text.</p> <p>"Clean closure, as defined in the HF RCRA permit, Section II.K.1 and as provided in this plan, will meet the closure performance standards of WAC 173-303-610 (2)(a) by eliminating future maintenance and by removing or reducing chemical contamination at the 241-Z unit to levels that controls, minimizes or eliminated to the extent necessary to protect human health and the environment, post-closure escape of dangerous waste, dangerous constituents, leachate, contaminated runoff, or dangerous waste decomposition products to the ground, surface water, ground water, or atmosphere. After closure, appearance of the land will be consistent with future land use determinations for adjacent portions of the 200 Areas. Clean closure will be achieved when all 241-Z unit dangerous waste, waste residue, or contaminated equipment are removed or decontaminated to the visual or analytical clean closure performance standards identified in this plan and established in accordance with WAC 173-303-610(2)(b). After closure, the appearance of the land will be consistent with future land use determinations for adjacent portions of the 200 Area. Clean closed tanks</p>	

	<p>and vault cells could remain in place until disposition in conjunction with future PFP decommissioning and CERCLA action(s) activities."</p> <p>DOE-RL/FH Response: Current closure plan text, as modified, will be more appropriate than the suggested text changes because:</p> <ul style="list-style-type: none"> • The information already exists in current text. • A sentence is repeated in this paragraph. • Clean closed materials will not necessarily be dispositioned by a CERCLA action as suggested in the Ecology comment. <p>Text modifications: Insert "postclosure" before "contaminant" in referenced text for clarity.</p>	
<p>32.</p>	<p>Page 6-1, Section 6.2.1 Clean Closure Standards for Structures and Components</p> <p>Change line 45 to read: At time of closure, Ecology will determine which closure standard to apply based on information provided during the terminal cleanout of the system.</p> <p>DOE-RL/FH Response: Use of current closure plan text, as modified, will be more appropriate than the suggested text. The current text identifies the 'approved' clean closure activities available to closure management under this plan including removal or decontamination that is visually or analytically verified. With full Ecology knowledge and involvement, closure management will decide which clean closure activity to attempt and the associated performance standard that must be met. Ecology will decide whether the performance standard has been met. However, the sentence will be revised for clarity.</p> <p>Text modifications: The sentence will be revised for clarity as follows: Based on conditions encountered at the time of closure, management will determine which approved method (visual inspections or analytical sampling and analysis) will be used to verify clean closure of structures and components and the performance standard that must be met.</p>	
<p>33.</p>	<p>Page 6-2, Section 6.2.1.2 Analytical Performance Standards...</p> <p>Change line 14, to read: Materials that do not meet the visual clean debris surface standard or to which the visual standard will not be applied (e.g., inaccessible pipe internal surfaces) will be clean closed by sampling and analysis.</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: The words "will be" will be inserted as suggested by Ecology.</p>	

34.	<p>Page 6-2, Section 6.2.1.2 Analytical Performance Standards...</p> <p>Line 22; define what is meant by 'totals analyses</p> <p>DOE-RL/FH Response: The term 'totals' analysis is commonly used to describe analyte concentrations determined in a sample by following sample preparation and analysis methods specified in SW-846 that identify the maximum (total) concentration of target analyte(s) in a sample matrix. RL/FH would be glad to meet with Ecology to further discuss totals analysis and feels that there would be no benefit to adding this information to the closure plan.</p> <p>Text modifications: None.</p>	
35.	<p>Page 6-2, Section 6.2.1.2 Analytical Performance Standards...</p> <p>Change line 24 to read: ...prescribed by WAC 173-303-610(2) (b) (i) will be used as the clean closure standard for the material.</p> <p>DOE-RL/FH Response: Accept comment.</p> <p>Text modifications: The words "will be" will be inserted as suggested by Ecology.</p>	
36.	<p>Page 6-2, 6.2.2 Closure Standards for Underlying Soil</p> <p>Change line 30 to read. Integrity inspections will be conducted on concrete surfaces to check for through-thickness cracks, etc.</p> <p>DOE-RL/FH Response: Ecology is suggesting use of term "integrity inspection" that when applied to tanks or containment could be misconstrued to invoke the requirements of WAC 173-303-640(2) for 'integrity assessments' which will not occur as a function of closure. [See Comment # 29.]</p> <p>Text modifications: None</p>	
37.	<p>Page 6-2, 6.2.2 Closure Standards for Underlying Soil</p> <p>Replace sentence beginning line 34:</p> <p>If inspections identify such cracks and further investigation (Chapter 7.0, Section 7.2.4) identifies a potential for soil contamination, the condition will be documented in the 241-Z TSD unit's Closure log and the unit will undergo post closure as described in Section 6.1.</p> <p>DOE-RL/FH Response: Accept Ecology text "... the condition will be</p>	

	<p>documented in the 241-Z TSD unit's closure log".</p> <p>However, Ecology text stating "...and the unit will under go postclosure as described in Section 6.1." is not consistent with other portions of this closure plan and with agreements (TPA milestones). The current text, as modified, would be more appropriate for use because it addresses discovery of potential soil contamination during RCRA closure activities (initial closure under this plan) that would require further CERCLA evaluation and disposition (final closure at a later date). Details of final closure are outside the scope of this plan and landfill closure is unlikely and should not be presumed.</p> <p>Text modifications: Section 6.2.2 modification:</p> <ul style="list-style-type: none"> • Add "... the condition will be documented in the 241-Z TSD unit's closure log" • Delete "Partial closure" from line 35. Revise the sentence to add that the unit will enter an approved, extended closure period as described in Section 6.1, the conditions of which are further described in Section 7.2.5. 	
<p>38.</p>	<p>Page 7-1, Chapter 7.0</p> <p>Pg 7-1: 2nd bullet: Please clarify; confusing ideas listed in last sub-bullet.</p> <p>Note: the order of these bulleted activities seems incorrect. Please review their order. It is expected that you will do an integrity inspection of the secondary containment prior to any removal activities; repair leaks & cracks, and then proceed with closure activities. The vaults can not be considered clean closed until after final removed or decontamination of tanks, ancillary equipment, etc. and a final inspection determines the vaults to me clean closure standards. At this point the closure status for the soil can be determined.</p> <p>DOE-RL/FH Response: The subject sub-bullet indicates that initial inspections of structures and components will be performed to identify and document the following:</p> <ul style="list-style-type: none"> • materials/components that could be clean closed as-is [if any]; • materials that will require removal or decontamination for clean closure [most]; • significant cracks or openings that (1) could be a pathway to soil for contaminants precluding immediate clean closure of soil under 6.2.2 without further RCRA or CERCLA and/or (2) that would require repair or use of engineered containment devices (liners, basins) before using decontamination solutions in the vaults. If no such cracks are found, the soil can be clean closed at this point . <p>Ecology is correct that clean closure of containment structures is not</p>	

	<p>anticipated to occur until bullet, line 40.</p> <p>Text modifications: None</p>	
39.	<p>Page 7-2, Section 7.1.3</p> <p>Bullet 1; this bullet is confusing. Please explain how RCRA waste becomes CERCLA.</p> <p>DOE-RL/FH Response: Waste that is generated by a CERCLA removal or remedial response action carried out in accordance with a CERCLA decision document (e.g., EE/CA) is CERCLA 'remediation waste'. Remediation waste can be accepted at ERDF. However, it is accepted that the discussion of CERCLA remediation waste at this bullet is confusing.</p> <p>Text modifications: The second sentence of this bullet discussing CERCLA remediation waste will be relocated to the end of this section.</p>	
40.	<p>Page 7-2, Section 7.1.3</p> <p>Bullet 2; Change sentence to read. ..will be designated at the point of generation, containerized..</p> <p>DOE-RL/FH Response: Current text is more appropriate than the suggested text that is redundant. Current text already requires "designation in accordance with WAC 173-303" (Section 7.1..3) that requires meeting all designation requirements, of which designation at the point of generation is only one such requirement.</p> <p>Text modifications: None.</p>	
41.	<p>Page 7-2, Section 7.1.3</p> <p>Bullet 3; Change sentence to read. ..if any, will be designated at the point of generation and transferred to... .</p> <p>DOE-RL/FH Response: Same comment as #40.</p> <p>Text modifications: None.</p>	
42.	<p>Page 7-2, Section 7.1.3</p> <p>Bullet 4; Delete "for storage until final disposition."</p> <p>DOE-RL/FH Response: This bullet is consistent with the prior bullets in this section that identify other units to be used for management of closure waste. This information is in accordance with WAC 173-303-610</p>	

	<p>(3)(a)(iv) and appropriately identifies that waste will not be treated or disposed of but will be stored at DST until final treatment and disposal.</p> <p>Text modifications: None</p>	
<p>43.</p>	<p>Page 7-3, Section 7.1.4</p> <p>This section moved to chapter 4; however, please reiterate information in this section.</p> <p>Insert at beginning of line 14: "It is anticipated that the 241-Z will be closed to 'clean closure' standards using the visually verifiable performance standard of a 'clean debris surface' or by meeting analytical performance standards (Chapter 6, Section 6.2.1.2)."</p> <p>DOE-RL/FH Response: Pertinent information (primarily the first paragraph) of this section will be transferred to section 4.2.5 leaving information (primarily the second paragraph) that is pertinent to this section only. See also Comments # 22, 23, and 44).</p> <p>Current text, as modified, would be more appropriate than the suggested text that is not consistent with closure plan text that identifies a different visual standard for soil (i.e., no containment cracks) that does not equate to the 'clean debris surface'. However, line 14 text will be revised for clarity.</p> <p>Text modifications: Relocate information in first paragraph of 7.1.4 to Section 4.2.5. Will retitle Section 7.1.4 to Closure Verification Sampling. For clarity, will revise current line 14 text: "...clean closure for 241-Z materials <i>not closed to visual standards</i> could be <i>achieved by</i> laboratory sampling.."</p>	
<p>44.</p>	<p>Page 7-3, Section 7.1.4</p> <p>This section moved to chapter 4; however, please reiterate information in this section.</p> <p>Line 15, Insert in front of 'Sampling would be used...' 'Sampling is expected on rinsates from the piping and tanks and, as such, it will be necessary to develop a Sampling and Analysis plan in accordance with 40 CFR 300.415(4). To coordinate any future closure activities with the operable unit, as discussed in Chapters 7 & 8, this information on the constituents of concern for closure will be integrated into the CERCLA clean up actions of the areas of the operable unit associated with the PFP building."</p> <p>DOE-RL/FH Response: Accept relocation and reiteration of Section 7.1.4 text addressed by Comments 22, 23, and 43.</p>	

	<p>Ecology reference to 40 CFR 300.415 (National Contingency Plan (NCP)/EE/CAs) addresses CERCLA sampling and is not appropriate because the subject text pertains to RCRA closure verification sampling of structures and not CERCLA sampling that, if necessary, would occur outside the scope of this closure plan.</p> <p>Text modifications: None (beyond response to Comment #43).</p>	
45.	<p>Page 7-3, Section 7.2.1</p> <p>Line 39; Change "could" to "will" and change the word "any" to "an." Please site appropriate WAC</p> <p>DOE-RL/FH Response: Accept changing "could" to "will". Use of the word "any" remains appropriate since the text reflects that interior and exterior surfaces of the same tank may be closed using any of the 'approved' visual or analytical methods identified in the plan. However, listing a separate WAC citation is not necessary because WAC 173-303-610 states that closure must occur in accordance with an 'approved' closure plan and any method in the approved plan is appropriate for use without further citations.</p> <p>Text modifications: Revise Line 39 as indicated in the response.</p>	
46.	<p>7.2.1.1 Closure of Tank Internal Surfaces</p> <p>What is the disposal pathway of the decontamination solutions? Will they go to the DST system?</p> <p>DOE-RL/FH Response: See the response to comment # 42 indicating that liquid closure waste will be transferred to another TSD unit (DST) for storage to await final treatment and disposal.</p> <p>Text modifications: None</p>	
47.	<p>Pg 7-4, line 4: Need details of visual inspection procedures and what the desired outcome of the visual inspection will be.</p> <p>DOE-RL/FH Response: This section (7.2.2.1, line 3) indicates that visual acceptance is to 'clean debris surface' standard. This performance standard will apply regardless of whether visual inspections are performed directly or remotely. If remote inspections are required, they will be appropriately planned and, as with all verification inspections, Ecology will be notified prior to performance.</p> <p>Text modifications: None.</p>	

48.	<p>Line 8 -10: Need more detail regarding what the materials are that could be removed. This section seems to combine two different approaches. Needs clarification & separation of events..</p> <p>DOE-RL/FH Response: This section (7.2.1.1) addresses closure of tank internal surfaces, including baffles and agitators. The current text references approved (Section 6.2) direct sampling as a clean closure verification option for materials that will not be removed or that don't meet visual clean standards.</p> <p>Text modifications: None</p>	
49.	<p>Page 7-4, Section 7.2.1.2, Page 7-4</p> <p>Line 19: Change "could" to "will."</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: Change "could" to "will" at line 19.</p>	
50.	<p>Page 7-4, Section 7.2.1.2, Page 7-4</p> <p>Lines 27: Need to sample and designate the paint on tank D-8.</p> <p>DOE-RL/FH Response: The presence of tightly adhered paint, even if lead-containing, does not preclude achievement of clean closure via the visual 'clean debris standard' as long as the paint does not cover or mask contamination. Because the tank was cleaned prior to painting, the paint is not covering contamination (Lines 29-34) and so paint sampling is not currently planned. If tank D-8 is removed, upon its generation as waste, designation would be performed that must consider the presence of lead in the paint.</p> <p>However, current closure plan text (Line 34) stating that this paint is "not regulated", although likely correct, has not been verified and will be deleted.</p> <p>Text modifications: Remove from Line 34: "..and because the paint itself was not regulated,..".</p>	
51.	<p>Page 7-5, Section 7.2.2</p> <p>Page 7-5, Line 10; Change to read "will" remain in place.</p> <p>DOE-RL/FH Response: Accept.</p>	

	<p>Text modifications: Revise line 10: "Materials that <i>will not be removed at closure</i> and do not meet clean closure standards <i>will remain...</i>"</p>	
52.	<p>Page 7-5, Section 7.2.3 Activities for Closure of the Concrete</p> <p>Line 25; please describe what is meant by the statement that "the area below the tanks and their support pads are grouted." Is there a space between the bottom of the tank and the support pad or is the tank sitting directly on the support pad? Is there a leveling course of grout between the tank and the support pad?</p> <p>DOE-RL/FH Response: Text will be clarified. (See also the response to Comment #9.)</p> <p>Text modifications: The first sentence of line 25 will be replaced with the following information: 'Each tank is installed on a concrete support pad. The space between the tank bottom and the support pad is grouted to equally support the tank weight.'</p>	
53.	<p>Page 7-5, Section 7.2.3 Activities for Closure of the Concrete</p> <p>Line 37: Change sentence to read. "Sumps used as rinsate collection areas will be cleaned and possibly inspected last."</p> <p>DOE-RL/FH Response: Current text will be revised for clarity.</p> <p>Text modifications: :Line 37 text will be changed to state that "...Sumps...<i>will be</i> cleaned last and <i>inspected after cleaning.</i>"</p>	
54.	<p>Page 7-5, Section 7.2.3 Activities for Closure of the Concrete</p> <p>Line 43: change to read... 'rinsate <i>will be</i> collected and sampled in accordance with the approved SAP.</p> <p>DOE-RL/FH Response: Accept.</p> <p>Text modifications: "Could" will be changed to "will" at Line 43.</p>	
55.	<p>Page 7-5, Section 7.2.3 Activities for Closure of the Concrete</p> <p>Line 44: Clarify intent of sentence, confusing.</p> <p>DOE-RL/FH Response: This text is intended to facilitate final closure certification by ensuring that every closure area has a checklist documenting closure of the location regardless of closure verification method.</p>	

	Text modifications: None	
56.	<p>Page 7-5, Section 7.2.4</p> <p>Line 49; Change to read. "The soils could be contaminated if the concrete has failed. An integrity inspection will be conducted to identify cracks in the concrete surfaces that could provide a pathway for dangerous waste or dangerous waste residues. If no cracks are noted, the soil will be designated as achieving clean closure.</p> <p>DOE-RL/FH Response: Accept Ecology text, as modified.</p> <p>Text modifications: Revise Section 7.2.4 to include the following: The soils only could be contaminated if the concrete had failed. Concrete surfaces will be inspected to identify cracks that could provide a pathway for dangerous waste or dangerous waste residues. If no cracks are noted, the soil will be designated as achieving clean closure.</p>	
57.	<p>Page 7-6, Section 7.2.5 Other Activities Required for Closure</p> <p>Line 30: Change this paragraph to read: During the period between when the Permittee demonstrates that not all waste or waste residuals can be practicably be removed from the 241-Z unit and certification of closure as a landfill, but prior to the initiation of post-closure care, will operate according to a contingency plan and personnel training plan to be submitted as a permit modification, as described in Section 8.0. This permit modification will also include inspection (including an inspection schedule, inspection parameters, and a response plan to unsatisfactory conditions) and/or monitoring of unclosed components and concrete structures that overlay potential soil contamination to ensure conditions do not develop that could mobilize contamination. Such a plan would identify all areas of concern.</p> <p>DOE-RL/FH Response: Current closure plan text, as modified, would be more appropriate than suggested Ecology text that is inconsistent with the closure approach that is based on TPA milestones and other approved Hanford Site closures; presumes landfill closure that is outside the scope of this plan; and, presents unnecessary administrative burdens. Specifically:</p> <ul style="list-style-type: none"> • The first sentence assumes that if the unit cannot clean close under this plan "closure as a landfill" will occur. However, only clean closure will occur under this plan. Any other closure method, including the unlikely landfill closure, is a final closure method that will only occur after CERCLA involvement and is outside the scope of this plan. • The Ecology-requested contingency and personnel training plans for the extended closure period (while awaiting CERCLA actions) are not necessary and are not consistent with other approved Hanford Site TSD closures (e.g., 105-DR and 300 Area WATS) that do not require 	

	<p>such plans. Maintaining a personnel training plan is not necessary because the unit will not be operating so trained operators are not required. Maintaining a contingency plan is not necessary because waste will not be managed so contingency planning for possible accidents is not required.</p> <p>Text modifications: Section 7.2.5 will be modified and provided to Ecology that will:</p> <ul style="list-style-type: none"> • Eliminate reference to 'partial closure' • Identify the TPA-approved extended closure period as a regulator-approved schedule for coordinating CERCLA actions with RCRA closure in order to get 241-Z closure back into compliance with RCRA closure requirements. • Better demonstrate meeting WAC 173-303-61(4)(b) requirements to prevent threats to human health and the environment during the extended closure period from the "unclosed but not operating" unit 	
58.	<p>7.3 Page 7-6, Section 7.3 Schedule of Closure</p> <p>Line 45: Change to read: ...will be coordinated with PFP deactivation activities and will be coordinated with future CERCLA actions(s).</p> <p>DOE-RL/FH Response: The Ecology statement that closure "will be" coordinated with future CERCLA action(s) is premature since 241-Z closure coordination with future CERCLA actions, although an approved option, will not occur if the unit can clean close under this plan. However the text will be clarified.</p> <p>Text modifications: Line 46: "...PFP deactivation activities and could be coordinated with future CERCLA actions(s), <i>as necessary</i>." See also the response to comment #30 for text changes to this section.</p>	
59.	<p>7.3 Page 7-6, Section 7.3 Schedule of Closure</p> <p>Line 46: Change to read: 'TPA milestone M-83-31 indicates that after June 30, 2005, the 241-Z tank system is to cease waste liquid discharges to Tank Farms. Closure activities might not begin until after this date.' Etc</p> <p>DOE-RL/FH Response: Accepted.</p> <p>Text modifications: Ecology text will be used.</p>	
60.	<p>7.4 Page 7-7, Section 7.4 Amendment of Plan</p> <p>Line 7; Change to read: Any amendments to the closure plan will be submitted in accordance with the Hanford Facility Dangerous Waste Permit Application, General Information Portion, Section 11.1.10</p>	

	<p>(DOE/RL-91-28) and in accordance with WAC 173-303-810(12) and WAC 173-303- 810(13)</p> <p>DOE-RL/FH Response: Amendments to the approved plan would occur in accordance with WAC 173-303-610(3)(b) as referenced in Section 11.1.10 of the GIP. WAC 173-303-610(3)(b) will be referenced in this portion of the closure plan.</p> <p>Text modifications: Add reference to WAC 173-303-610(3)(b) to section 7.4.</p>	
61.	<p>Page 7-7, Section 7.4 Certification of Closure</p> <p>Line 12; Change to read: Certification of closure will be submitted in accordance with the Hanford Facility Dangerous Waste Permit Application, General Information Portion, Section and in accordance with WAC 173-303-810(12) and WAC 173-303- 810(13).</p> <p>DOE-RL/FH Response: This section addresses closure activity certification, not closure plan, certification. Closure activity certification will occur in accordance with WAC 173-303-610(6) as referenced in Section 11.1.11 of the GIP. WAC 173-303-610(6) will be referenced in this section of the closure plan.</p> <p>Text modifications: Add reference to WAC 173-303-610(6) to section 7.5.</p>	
62.	<p>Page 7-7, Section 7.4 Certification of Closure</p> <p>Page F7 -1, Figures 7-1, Section 7: Add box for 'Depth of surface layer removal (cm) (e.g., for concrete)</p> <p>DOE-RL/FH Response: A specific box for concrete is not necessary because Section 7.2.3 identifies no specific numerical removal depth parameter (i.e., only removal of visual indication(s) that prevent meeting the 'clean debris surface standard'). Further, this section already requires that concrete decontamination be documented on the checklist.</p> <p>Text modifications: None.</p>	
63.	<p>Page 7-7, Section 7.4 Certification of Closure</p> <p>Page F7-2, Figure 7-2 Is the schedule in the proper order of events? Should closure of vaults come after closure of tanks and piping/ancillary equipment?</p> <p>DOE-RL/FH Response: Accept that the sequence of closure verification</p>	

	<p>is not clear on Figure 7-2. Initial vault cleaning and concrete crack inspections will be done as an initial step (Section 7.1 and Fig. 7-2). This could allow for soil closure depending on the outcome of the inspections (see the response to Comment #39). However, clean closure of vault surfaces is not expected to be verified until completion of tank decontamination (i.e., from the inside out - tank and component internals first, externals next, and then containment vaults) so that surfaces verified as clean closed are not recontaminated.</p> <p>Text modifications: A revised closure schedule (Figure 7-2) will be provided to Ecology to clarify order of closure verification.</p>	
64.	<p>Page 8-1, Chapter 8.0</p> <p>Line 2, replace with: The 241-Z is proposed to be closed by removal or decontamination ("clean closed"), in which case no post closure care would be required.</p> <p>DOE-RL/FH Response: Current text is more appropriate than the suggested Ecology text "...removal or decontamination ("clean closed")..." that equates decontamination with clean closure when other closure methods could result from decontamination (e.g., modified closure).</p> <p>Text modifications: None</p>	
65.	<p>Page 8-1, Chapter 8.0</p> <p>Line 4, replace this paragraph with: If the unit cannot be clean closed under this plan and the Permittee demonstrates that not all waste or waste residuals can be practicably removed, a permit modification will be submitted to revise the 241-Z closure schedule and modify closure requirements to reflect actions necessary to satisfy landfill closure requirements pursuant to WAC 173-303-640(8)(b). This revised plan will reflect and be consistent with the appropriate 241-Z CERCLA action(s) (Chapter 6.0, Section 6.1). The modified closure plan will contain a plan for unit monitoring and inspection as described in Chapter 7.0, Section 7.2.5 that will be in place until certification of closure as a landfill is complete.</p> <p>DOE-RL/FH Response: Current text is more appropriate than the suggested text that presumes a closure method that is outside the scope of this closure plan. The subject paragraph discusses coordination with CERCLA and the permit modification and inspection plan that would be generated for the ensuing extended closure period if the unit cannot be clean closed under this plan (i.e., after completion of Chapter 7.0 physical closure activities). Such a plan will not, as presented in Ecology text,</p>	

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	<p>include "actions necessary to satisfy landfill closure requirements pursuant to WAC 173-303-640(8)(b)" since landfill closure, if actually occurring, is a final closure method that would only occur after the extended closure period and outside the scope of this closure plan.</p> <p>Text modifications: None.</p>	
66.	<p>Page Distr-1, Distribution List: Correct spelling to read "Ayres"</p> <p>DOE-RL/FH Response: The spelling of Jeff Ayres name will be corrected.</p> <p>Text modifications: As stated in the response.</p>	