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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

October 1, 2007

Ms. Shirley J. Olinger, Acting Manager  
Office of River Protection  
United States Department of Energy  
P.O. Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: Department of Ecology Comments on 241-C-110 Tank Waste Retrieval Work Plan,  
RPP-33116, Revision 0A

Reference: Letter 07-TPD-036, dated August 3, 2007, from S. J. Olinger, USDOE-ORP, to  
J. A. Hedges, Ecology, "Submittal of the 241-C-110 Tank Waste Retrieval Work  
Plan (TWRWP), RPP-33116, Revision 0A" 0073583

Dear Ms. Olinger:

Ecology completed our review of the referenced document and our comments are enclosed.

If there are questions, contact Nancy Uziemblo at 509-372-7928 or myself at 509-372-7914.

Sincerely,

Jeffery J. Lyon  
Tank Waste Storage Project Manager  
Nuclear Waste Program

jjl/aa  
Enclosure

**RECEIVED**  
OCT 03 2007  
**EDMC**

cc: Roger Quintero, USDOE  
Woody Russell, USDOE  
Keith Carpenter, CH2M  
Moses Jaraysi, CH2M  
Jeff Luke, CH2M  
Stuart Harris, CTUIR  
Gabriel Bohnee, NPT

Russell Jim, YN  
Susan Leckband, HAB  
Ken Niles, ODOE  
Administrative Record: SST/Tank Waste Storage 5-2-4  
CH2M Correspondence Control  
Environmental Portal



# REVIEW COMMENT RECORD

Date	Review No.
Project No.	Page 1 of 5

<b>Document Number(s)/Title(s)</b> 241-C110 Tank Waste Retrieval Work Plan RPP-33116, Revision 0A	<b>Program/Project/Building Number</b>	<b>Reviewer:</b>	<b>Organization/Group</b> Nuclear Waste Program Cleanup Section	<b>Location/Phone</b> 3100 Port of Benton Blvd Richland, WA 99354 (509) 372-7950
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**Comment Submittal Approval:**

**Agreement with indicated comment disposition(s):**

**Status:**

Organization Manager (Optional)

Reviewer/Point of Contact  
Nancy Uziemblo

Reviewer/Point of Contact

Date

Date

Author/Originator: Ecology

Author/Originator

Item	Page #		Hold Point	Disposition (Provide justification if NOT accepted)	Status
1.	General Comment	Cyanide is present in tank C-110. Also, cyanide has been observed in groundwater near C-farm. Furthermore, cyanide is an anion, does not bind strongly to soils, and may leach to groundwater ( <a href="http://www.epa.gov/safewater/dwh/c-ioc/cyanide.html">http://www.epa.gov/safewater/dwh/c-ioc/cyanide.html</a> ). However, cyanide risk assessment results have not been provided in this TWRWP and the risk and hazard results in this TWRWP may be an underestimate of chemical hazards associated with these tanks and associated retrievals. This is further compounded by the lack of data on contaminants not included in the BBI (ex. Tributyl phosphate). These factors will need to be considered by Ecology during tank retrievals. This comment does not require a response from USDOE for this TWRWP.			



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Item	Page #	Description	Hold Point	Disposition (Provide justification if NOT accepted)	Status
5.	Section 3.1.1 Page 3-1	According to the regulations, any new piece of equipment requires an IA assessment and must address the impacts that the piece of equipment will have on the existing tank system. Therefore, provide all past integrity assessments to certify that the center corrugated caisson can be used for secondary-containment consistent with 40 CFR 265.192.			
6.	Section 3.1.1 Page 3-2 Table 3-1	Explain the planned uses for risers #8 and 5.			
7.	Section 3.1.2 Page 3-6	Provide a discussion of HFFACO Appendix I requirement (page I-6) for completing retrieval within 12 months of start date. Appendix I, section 2.1.5, Waste retrieval, page I-6 states "...DOE will complete SST waste retrieval activities meeting Agreement criteria of ..M-45... and ancillary equipment waste retrieval activities meeting regulatory requirements, within 12 months of the retrieval start date(s) approved in the TWRWP." Please include a timeline that indicates how the operator will meet the requirement to complete retrieval, and what process will be used to inform Ecology if this date and timeline will need to be changed.			
8.	Section 3.2 Page 3-6 Table 3-2	Provide the document/calculation reference for information provided in the table			
9.	Section 3.4 Page 3-10	HFFACO Milestone M-45-00 states that "...as much tank waste as technically possible..." Not technically practical. Please correct this statement.			
10.	Section 3.7 Page 3-17	A performance measure for the potential intrusion of rainwater or snowfall will need to be considered and discussed. With closure delays of more than 10 years, additional monitoring may be necessary to monitor for potential intrusion of rainwater and snowfall. Please include the plans and basis for additional monitoring.			
11.	Section 3.8 Page 3-17	IQRPE integrity assessment must also address potential impacts on existing tank systems used as secondary containment (as an example, the corrugated caissons, portable valve boxes). Please provide that assessment.			

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Date

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Item	Page #		Hold Point	Disposition (Provide justification if NOT accepted)	Status
12.	Section 3.9.1	Provide a timeline for when above ground equipment is to be removed, or if it is to be reused, or transitioned. Provide such information in the form of "in accordance with the HIHTL Management Plan" or some other specific performance measure.			
13.	Section 3.9.1	State how the HIHTL will be managed. Ecology expects the current HIHTL Management Plan will be used to manage all HIHTLs. Address this in this section.			
14.	Section 3.9.1 Page 3-18	Description does not clearly indicate the disposition of the new WRS components. Please provide sufficient detail to allow us to understand what the major disposal disposition categories for equipment are, what Hanford Site burial grounds are being used, what process will be used for the management of the HIHTLs, and if any above ground equipment is anticipated to be left in place.			
15.	Section 4.1.2.1 Page 4-3, Paragraph 3	While data on C Farm groundwater monitoring are provided to Ecology in quarterly and annual reports, please state how Ecology will be notified of the new groundwater data when it is entered into HLAN. Groundwater monitoring data during retrieval should be reported to Ecology within a few weeks of completion.			
16.	Section 4.1.2.2 Page 4-3	Drywells extend only into a part of the vadose zone, not to the water table. Therefore, groundwater samples can not be collected from drywells. Please correct.			
17.	Section 4.2.1 Page 4-5 Paragraph 1	Ecology and USDOE-ORP will need to agree on the use of Drywell logging and HRR for leak detection during retrieval. The TWRWP will need to be updated once an agreement is reached.			
18.	Section 4.2.1.1	In this section, you discuss the capabilities of the measurement systems for leak detection and their detection limits. Please discuss the minimum tank volume and cesium concentration required to show an increase in counts above background. Please discuss the calculated travel time for a leak of this size to show up in the drywell.			
19.	Section 4.2.1.1 Page 4-7 Paragraph 7	Reporting of the drywell logging data in the RDR is not timely and therefore not useful for LDMM. State the timing for analysis and availability of the data via HLAN. While it is valuable information, timelier reporting is needed if there are unexplained anomalies detected. Please correct.			

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Item	Page #	Description	Hold Point	Disposition (Provide justification if NOT accepted)	Status
20.	Section 4.2.1.2 Page 4-8 Paragraph 5	The timing of notification to Ecology needs to be specified. Ecology expects notification within a 72 hour time period or sooner. Please clarify.			
21.	Section 4.6.1	Please state the maximum current waste level and the maximum benchmark level for controlling liquid additions. Define the meaning of "as close to."			
22.	Section 5 Page 5-5	<p>Add the following text under the Compliance Method column for 265.191 – "Assessment of existing tank systems."</p> <p>The SST Integrity Assessment Report concluded that the reinforced concrete tank structures have adequate collapse margin and justify safe storage of interim stabilized waste. However, given the tank leak history and current conditions of tank liners, long-term leak integrity, for the liquids remaining in tanks, cannot be proven for any SSTs. Therefore, the SSTs are not compliant with RCRA 40 CFR 265.191. The SSTs are currently authorized to continue operations pending closure under the authority of the HFFACO milestone M-45-00.</p>			
23.	Section 6.3	Provide a timeline for when the transfer lines are to be disconnected and capped; as well as the permanent isolation of previously isolated intrusion routes that were opened for purposes of retrieval.			
24.	Section 7.1.1.3 Page 7-9 1 <sup>st</sup> paragraph of section	A statement in previous TWRWPs has been omitted here. The statement was "The groundwater contaminant concentrations used for retrieval leak impact graphs were derived directly from the modeling output data from RPP-13774 analysis." Has this condition changed? If so, please explain the source of the groundwater contaminant concentrations used in the retrieval leak impact graphs. If it has not changed, please include the statement.			
25.	Section 7.10 Page 7-2 2 <sup>nd</sup> to last paragraph	This is new text not used in previous TWRWPs. Please delete "Use of RPP-13774 in this document was discussed with, and agreed to informally, by Ecology prior to developing this TWRWP." Ecology still has unresolved comments from the original review of RPP-13774 and continues to expect additional data that have not been included in this document (for instance, nearby unplanned release inventories, direct contact evaluations, ecological risk assessment results, etc).			