



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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May 24, 2011

11-NWP-038

Ms. Stacy Charboneau, Deputy Manager  
Office of River Protection  
United States Department of Energy  
P.O. Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: Notice of Violation - Failure to Comply With Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-045-100

Reference: Letter 10-TPD-166, dated December 28, 2010, from T. W. Fletcher, USDOE-ORP, to J. A. Hedges, Ecology, "Submittal of Documentation in Fulfillment of Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestones M-045-100 and M-045-101" 0093037

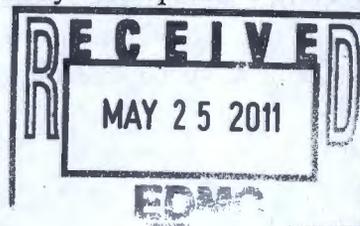
Dear Ms. Charboneau:

The United States Department of Energy-Office of River Protection (USDOE-ORP) submitted the *Single-Shell Tank System Catch Tank Assumed Leak Response Plan*, RPP-PLAN-48438, Revision 0 (Plan) to fulfill HFFACO Milestone M-045-100 (see reference). The Department of Ecology (Ecology) reviewed the Plan, and our review comment record is enclosed.

Milestone M-045-100 requires USDOE-ORP to:

*"Submit to Ecology as an Agreement Primary Document a Catch Tank 'assumed leak' response plan. This Plan will include criteria for declaring a tank an assumed leaker, response actions that will be taken, notifications, and provisions to ensure initiation of liquid removal within 90 days."*

Ecology determined that the Plan does not fulfill Milestone M-045-100. This milestone was intended to provide a leak response plan that would include sufficient evaluation and criteria information to allow for the pumping of liquids within 90 days in response to identification of a leak in a catch tank.



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The Plan fails to meet three criteria of Milestone M-045-100:

**1. Submit to Ecology, as an Agreement Primary Document, a Catch Tank "Assumed Leak" Response Plan**

Milestone M-45-100 does not limit its application to only the small subset of monitored catch tanks associated with RPP-9937 as addressed in the Plan (see Section 1.1, paragraph 2, page 1 of the Plan). The milestone text contains no limitation on the catch tanks to be included. Further, a related milestone (M-45-101) clearly applies to more than just monitored catch tanks. As demonstrated in the Plan, (Table 1, page 2, which lists both monitored and unmonitored catch tanks), there are many unmonitored catch tanks associated with the SST System that have not been included in the Plan.

**2. Criteria for Declaring a Tank an Assumed Leaker**

Required leak response actions are specified in both 40 Code of Federal Regulations 265.196 and Washington Administrative Code 173-303-640(7).

This Plan did not include the criteria for declaring a catch tank an assumed leaker. Instead, the Plan provides a process via a guidance document (TFC-ENG-CHEM-D-42, Tank Leak Assessment Process – see Section 2.0, page 3 of the Plan).

Ecology expects to see the criteria USDOE will use to identify an assumed leaker in the Plan. As the Plan is written, the guidance document TFC-ENG-CHEM-D-42 will need to become an enforceable part of the Tier 1 SST permit.

**3. Provisions to Ensure Initiation of Liquid Removal within 90 days**

No provisions are in place in this Plan to ensure initiation of liquid removal from a leaking catch tank within 90 days. Instead, Section 4.0, page 5, states, "Within 90 days of a determination that a leak has occurred in a catch tank, mitigation activities shall commence," with a schedule covering 15 months to pump liquids. Ecology expects USDOE to comply with the milestone with provisions to ensure initiation of liquid removal within 90 days of identification of a leak.

Ecology asserts that USDOE has failed to comply with HFFACO Article VII, Paragraph 26, wherein USDOE agrees to perform the work described in the Action Plan. This letter does not notify USDOE that Ecology intends to take formal enforcement action (in accordance with HFFACO Article VII, Paragraph 29). However, Ecology reserves the right to make such notification, pending our review of USDOE's response to the requests listed on page 3.

The Plan will become an enforceable part of the SST Tier 1 Permit, and as such must include the milestone requirements. USDOE needs to revise and resubmit the Plan to include criteria to declare a catch tank an assumed leaker and provisions to initiate liquid removal from such a tank within 90 days.

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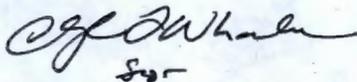
Ecology requests that USDOE's response to this letter include:

1. USDOE's schedule to revise and resubmit the Plan.
2. USDOE's plan to initiate monitoring of the unmonitored tanks to comply with the milestone requirement to include "criteria for declaring a tank an assumed leaker."
3. USDOE's commitment to revise the Plan to include "provisions to ensure initiation of liquid removal within 90 days."

We met with both USDOE-ORP staff and Washington River Protection Solutions, LLC regarding the Plan, and have agreed to meet again to discuss the best ways to meet the requests listed above.

If there are any questions, please contact Jeff Lyon at 509-372-7914.

Sincerely,



Jane A. Hedges  
Program Manager  
Nuclear Waste Program

kw/lkd  
Enclosure  
cc w/enc:

Dave Bartus, EPA  
Dennis Faulk, EPA  
Chris Kemp, USDOE-ORP  
Bob Lober, USDOE-ORP  
Joanne Norton, USDOE-ORP  
Susan Eberlein, WRPS  
Lucinda Penn, WRPS  
Stuart Harris, CTUIR

Gabriel Bohnee, NPT  
Russell Jim, YN  
Susan Leckband, HAB  
Ken Niles, ODOE  
**Admin Record: Tank Waste Storage M-045-100**  
Environmental Portal  
USDOE-ORP Correspondence Control  
WRPS Correspondence Control

# REVIEW COMMENT RECORD

Date: May 19, 2011

Review No. 1

Project No. TPA Milestone M-45-100

Page 1 of 7

Document Number(s)/Title(s)	Program/Project/Building Number	Reviewers	Organization/Group	Location/Phone
Single-Shell System Catch Tank Assumed Leak Response Plan, RPP-PLAN-48438, Revision 0	Department of Ecology Nuclear Waste Program 3100 Port of Benton Blvd Richland, WA 99352	K. Wold, Lead M. Barnes J. Caggiano M. Hendrickson J. Lyon	Cleanup Section – Tank Storage, Operations, and Closure Group	372-7985

Comment Submittal Approval:

Agreement with indicated comment disposition(s)

Status:

Organization Manager (Optional)

Date

Reviewer/Point of Contact

Date

Reviewer/Point of Contact

Author/Originator

Author/Originator

Item	Page #, Line #, or Section and Paragraph	Comment (s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	Hold Point	Disposition (Provide justification if NOT accepted.)	Status
1.	General	<p><b>Comment:</b> Ecology anticipates a clear Single-Shell Tank System Catch Tank Assumed Leak Response Plan (Plan) with enough detail to understand how the United States Department of Energy (USDOE) will respond to a leaking catch tank. The Plan needs to have definable elements with work specifics, so Ecology can identify unique steps and schedules for the entire process of leak verification and USDOE response to terminate the leak, including provisions to ensure initiation of liquid removal within 90 days.</p> <p><b>Modification Needed:</b> Provide a response plan that meets the requirements of Tri-Party Agreement Milestone MS-045-100.</p>			
2.	General	<p><b>Comment:</b> The Single-Shell Tank System Leak Detection and Monitoring Functions and Requirements (F&amp;R) Document, RPP-9937, was an interim action awaiting SST System Closure. The F&amp;R Document contains several criteria used to establish the tank and ancillary equipment monitoring frequency and inspections.</p>	X		

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		<p><b>Modification Needed:</b> This Plan needs to bridge the gaps of the F&amp;R Document and identify paths for leaking catch tank mitigation. However, this document does not contain the necessary monitoring, leak mitigation, and closure information needed. Provide this information.</p>			
3.	General	<p><b>Comment:</b> As noted, the F&amp;R Document was an interim action awaiting SST System closure. However, it did not address Washington Administrative Code (WAC) 173-303-640(7) requirements. Since the SST system is designated as unfit-for-use, those specific regulatory requirements must be followed and documented.</p> <p><b>Modification Needed:</b> Include an established and documented reporting protocol in the revised Plan or in a designated work plan.</p>	X		
4.	General	<p><b>Comment:</b> No leak detection or prevention details are given in the Plan, including how and if all catch tanks are physically isolated from the SST system, and if all of their pumpable liquids have been removed.</p> <p><b>Modification Needed:</b> Provide the process details to physically isolate catch tanks to remove pumpable liquid in the event of a leak or refer to the implementing procedure.</p>			
5.	General	<p><b>Comment:</b> What tank selection criteria are used to select which tanks are monitored and which are not monitored? For example, CR Vault tanks 001, 002, and 011 are not monitored, while CR Vault tank 003 is monitored. Vault tank 002 (which is not monitored) contains 270 gallons of liquid at a pH of 5.</p> <p><b>Modification Needed:</b> Provide selection criteria and justification for not monitoring Vault tank 002.</p>			

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6.	Page 1, Section 1.1 and page 2, Table 1	<p><b>Comment:</b> Milestone M-045-100 is not limited to the F&amp;R Document and SST System Part A. The milestone did not limit its application to only the small subset of monitored catch tanks associated with RPP-9937 or the SST System Part A. The milestone text contains no limitation on the catch tanks to be included. Further, a related milestone (M-045-101) clearly applies to more than just monitored catch tanks.</p> <p>As demonstrated in Table 1, which lists both monitored and unmonitored catch tanks, there are many unmonitored catch tanks associated with the SST system that are not included in the Plan. It is incorrect to assume that all SST components are listed in the F&amp;R Document and SST System Part A. Criteria should be included for all tanks, not just catch tanks that are monitored. Specifically:</p> <ul style="list-style-type: none"> <li>• Not all catch tanks, double-contained receiver tanks, vaults, or diversion boxes are included in the F&amp;R Document or SST System Part A.</li> <li>• There is no provision in the Plan to include additional catch tanks in the leak response plan once they are found or identified.</li> <li>• The Plan assumes this milestone does not require any additional monitoring or leak response. There is no strategy to ensure all tanks are monitored regardless of the F&amp;R Document, or when the monitoring was stopped or if the tank was in service or not.</li> <li>• There is no provision to initiate monitoring of unmonitored tanks in order to comply with the milestone requirement.</li> <li>• Tanks that have not been in service should be visually inspected, sampled, and then closed.</li> </ul> <p><b>Modification Needed:</b> Provide leak response for all catch tanks to meet Milestone M-045-100.</p>	X		

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		<p>Include in the Plan:</p> <ul style="list-style-type: none"> <li>• Criteria for declaring a tank an assumed leaker, regardless of the F&amp;R documentation or SST System Part A, or when the monitoring was stopped, or if the tank was in service or not.</li> <li>• Plan to initiate monitoring of unmonitored catch tanks.</li> <li>• Provision to include additional tanks once they are found or identified.</li> <li>• Strategy to ensure that all tanks are monitored, including a plan to initiate monitoring of unmonitored tanks.</li> </ul>			
7.	Page 1, Section 1.2	<p><b>Comment:</b> What is the provision to exclude valve pits or boxes, seal pots, or other miscellaneous pits from this document, especially if they contain tanks?</p> <p><b>Modification Needed:</b> Add these additional components to the Plan.</p>	X		
8.	Page 2, Table 1	<p><b>Comment:</b> Table is confusing. It would be clearer if only the tanks required to be monitored and their frequency were included in Table 1 and unmonitored tanks presented in another table.</p> <p><b>Modification Needed:</b> Separate the monitored from the unmonitored tanks.</p>			
9.	Page 2, last paragraph	<p><b>Comment:</b> The last paragraph states that “the majority of unmonitored catch tanks have little or no current data available to ascertain where a leak occurred.” And “data has not been collected since 1980.” Thus, USDOE cannot ascertain if a leak is occurring. Yet, these tanks are not discussed further in this plan. It is unclear how USDOE determines if the unmonitored catch tanks are leaking or may have leaked. No strategy or method for monitoring these catch tanks is included in this Plan.</p> <p><b>Modification Needed:</b> Include a strategy for how the unmonitored catch tanks will be monitored, including the method used to collect data to determine if leaks are occurring and/or will occur.</p>	X		

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10.	Page 3, Section 2	<p><b>Comment:</b> Provide the criteria for how a catch tank is classified as either “sound” or an “assumed leaker.”</p> <p><b>Modification Needed:</b> Provide Tank Farm operational guidance document (TFC-ENG-CHEM-D-42) or a better description of this guidance and how it is used and when it is applied.</p>	X		
11.	Page 3, Section 2.0	<p><b>Comment:</b> The Plan states that OSD-T-151-00031 provides specification limits for triggering the TFC-ENG-CHEM-D-42 tank leak assessment for tanks and miscellaneous vessels. A trend analysis is then conducted.</p> <p>Milestone M-045-100 requires a document that includes the criteria for declaring a tank an assumed leaker and the actions to take to initiate liquid removal within 90 days. Leak response actions are to be conducted as specified in 40 CFR 265.196 and WAC 173-303-640(7). If the operational guidance document, TFC-ENG-CHEM-D-42, contains the leak response actions, it will become an enforceable part of the Tier 1 SST Permit.</p> <p><b>Modification Needed:</b> Provide the criteria for declaring a tank an assumed leaker and provide the required leak response actions in this plan.</p>	X		
12.	Page 3, Section 2.1	<p><b>Comment:</b> Trend analysis is used as a tool to determine if the subsequent data point for the tank level is within specification limits for the catch tanks. However, it is unclear the number of data points out of specification that is needed or what level change is needed and how many data points must be collected prior to making a decision that the tank is leaking.</p> <p><b>Modification Needed:</b> Provide a better description of the number of data points, level changes vs. timing, and specified limits that are triggered before the tank is considered leaking. Also, provide a table with each tank and associated limits or excursion levels.</p>	X		

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13.	Page 3, Section 2.2	<p><b>Comment:</b> Section 2.2 contains a bulleted listing for a leak evaluation. However, no corresponding schedule or lengths of duration are noted for each task.</p> <p><b>Modification Needed:</b> Add the length of time required for each task or bulleted item. If it is the same as Figure 1, then reference that figure.</p>	X		
14.	Page 3, Section 2.2	<p><b>Comment:</b> No mention of infiltration or intrusion is noted in the Plan. One could have a leaking catch tank and not know it is leaking if it is continuing to fill with storm-water run-off.</p> <p><b>Modification Needed:</b> Add tank level specification limits for intrusion and infiltration of storm-water.</p>			
15.	Page 4, Section 3	<p><b>Comment:</b> Section 3 notes that “An option analysis will be initiated on any verified assumed leaking catch tank...” Regulatory requirements (WAC 173-303-640 [7][b][i]) state that “The owner/operator must, within 24 hours after detection of the leak ... remove as much of the waste as is necessary to prevent further release of dangerous waste to the environment and to allow inspection and repair of the system...” Therefore, the Plan is deficient, as it does not follow regulatory requirements or meet the requirements of Milestone M-045-100.</p> <p><b>Modification Needed:</b> To correct the deficiencies, the Plan must include:</p> <ol style="list-style-type: none"> <li>1. How long it will take to respond to a leaking tank.</li> <li>2. What corrective actions can and will be implemented for a leaking catch tank.</li> <li>3. How USDOE will initiate removal of liquid within 90 days.</li> </ol> <p>The revised Plan must also state that any actions, including no action, require Ecology approval before implementation.</p>	X		

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16.	Page 5, Section 4	<p><b>Comment:</b> Section 4 begins by stating “Within 90 days of a determination that a leak has occurred in a catch tank, mitigation activities shall commence.” WAC 173-303-640 (7)(b)(i) requires 24-hrs or at the earliest practicable time. Planning should take place within 24 hours. Milestone M-45-100, requires initiation of liquid removal within 90 days.</p> <p><b>Modification Needed:</b> Ecology expects USDOE to comply with the milestone with provisions to ensure initiation of liquid removal within 90 days. The leak response actions, as identified in the milestone, are not included in this Plan. Add a response plan prior to leaks into the baseline and include operations based on the types of tanks and the selection’s implementability in the field.</p>	X		
17.	Page 5, Figure 1	<p><b>Comment:</b> Figure 1 is Generalized Schedule for Performing Mitigation Actions of Catch Tank Assumed Leakers. At Month 1, the determination and notification of catch tank assumed leaker has occurred. The schedule then continues with various activities for 15 months. Nowhere in this schedule are actions to initiate liquid removal within 90 days provided.</p> <p><b>Modification Needed:</b> Ecology expects USDOE to comply with the milestone with provisions to ensure initiation of liquid removal within 90 days of identification of a leak. Provide a leak response plan to ensure initiation of liquid removal within 90 days and provide a schedule supporting the milestone M-045-100 criteria.</p>	X		