



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 18, 2020

20-NWP-159

Brian A. Harkins, Tri-Party Agreement Manager
Office of River Protection
United States Department of Energy
PO Box 450, MSIN: H6-60
Richland, Washington 99352

Re: Department of Ecology's (Ecology) Comments on the United States Department of Energy –
Office of River Protection's (USDOE-ORP) *Maintenance and Performance Monitoring Plan for
the Interim Barriers Program* (RPP-RPT-61684, Rev. 1).

References: See page 2

Dear Brian A. Harkins:

Ecology reviewed the *Maintenance and Performance Monitoring Plan for the Interim Barriers
Program* (RPP-RPT-61684, Rev. 1), received from USDOE-ORP with letter 20-TF-0069
(Reference 1).

Ecology's review of RPP-RPT-61684, Rev. 1 reflects our expectations described in Ecology letter
20-NWP-106 (Reference 2). It is unclear how RPP-RPT-61684 is differentiated from the Annual
Interim Barriers Maintenance and Performance Monitoring Report described in Tri-Party Agreement
Milestone M-045-92.

Enclosed are Ecology's comments on RPP-RPT-61684 Rev 1.

If you have any questions, please contact me at jeff.lyon@ecy.wa.gov or (509) 372-7914, or
Maria Skorska, Single Shell Tank Closure Engineer, at maria.skorska@ecy.wa.gov or
(509) 372-7891.

Sincerely,

Lyon,
Jeffery (ECY)

Digitally signed by
Lyon, Jeffery (ECY)
Date: 2020.09.18
15:27:57 -07'00'

Jeffery J. Lyon
Tank Systems Operation and Closure Project Manager
Nuclear Waste Program

kr/aa
Enclosure

cc: See page 2

References:

1. Letter 20-TF-0069, dated July 23, 2020, “The U.S. Department of Energy, Office of River Protection, Transmittal of RPP-RPT-61684, Maintenance and Performance Monitoring Plan for the Interim Barriers Program, Rev. 1”
2. Letter 20-NWP-106, dated June 11, 2020, “Department of Ecology Response to Letter 19-TPD-0029, “U.S. Department of Energy, Office of River Protection Response to Letter 19-NWP-194, ‘Department of Ecology’s (Ecology) Review and Assessment of the Maintenance and Performance Monitoring Plan, RPP-RPT-61684””

cc electronic w/enc:

Dave Einan, EPA
Becky Blackwell, USDOE-ORP
Dustin Stewart, USDOE-ORP
John Perry, MSA
Margaret Lamothe, WRPS
Alexander Pappas, WRPS
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Maria Skorska, Ecology
NWP RIM Coordinators, Ecology
Environmental Portal
Hanford Administrative Record
Hanford Facility Operating Record
MSA Correspondence Control
USDOE-ORP Correspondence Control
WRPS Correspondence Control

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Document Number(s)/Title(s) RPP-RPT-61684 Maintenance and Performance Monitoring Plan for the Interim Barriers Program	Program/Project/Building Number	Reviewers Maria Skorska Jon Lindberg Kyle Rucker	Organization/Group Ecology	Location/Phone
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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 #/ section # Line #	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	Title of report	Suggest that the title of the report be change to RPP-PLAN-61684 from the current RPP-RPT-61684. The current title implies a report instead of a work plan.			
2	Page 1, Section 1.0, last paragraph.	At the end of the last paragraph add a sentence stating that results of the inspections, maintenance, and monitoring activities specified in this work plan will be included in the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).			
3	Page 1, Section 1.0, paragraph 1, end of 3 rd sentence, and a few other places within the document	“Groundwater” occurs in the vadose zone (unsaturated zone), as well as within the underlying saturated zone (beneath the water table). The correct terminology would be to say, “...can accelerate the mobilization of contaminants towards the water table (or saturated zone).”			

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4	Page 1, Section 2.0, Second paragraph, 1 st sentence.	The first sentence of the paragraph starts with “The vadose zone...” uses old geologic terms. The terms “middle-designated Ringold Formation” and “upper Ringold Formation” are outdated. More up-to-date terminology would have the sentence written as follows: The vadose zone, over which all interim surface barriers are constructed, is comprised (in ascending order) of the sandy gravels of Ringold Formation Unit E (containing the water table), the predominantly silty sands of the Ringold Formation Taylor Flats unit, the lower gravels and upper muds of the Cold Creek unit, and lower sands and upper sandy gravels of the Hanford formation. The hard caliche is within the Cold Creek unit.			
5	Page 3, last sentence	Regarding: “Items checked per TFC-PLN-14, <i>Waste Information Data System Surveillance and Maintenance Description</i> ,” please clarify <i>where</i> these items are listed. (i.e., below?)			
6	Section 3.2, general comment	This section is written in the present tense and provides descriptions of activities that currently occur at T Farm Barrier. The work plan should identify activities that will be performed over the 25-year life time of this barrier. Starting with subsection 3.2.1 change text from the present tense to the future tense to describe the activities that will occur in the future.			
7	Page 4, first bullet	Please clarify who/what is "their" in this bullet. Is it the T farm interim barrier? Be specific.			
8	Page 4, 3 rd bullet	Does this bullet address the rip rap on the sides of the detention basin? Revise this bullet to clarify the location of the rip rap surfaces.			
9	Page 4, section 3.2.3	Delete the last sentence: Due to the document being under revision, the reader is referred to RPP-9937 for the most current in-tank and ex-tank monitoring requirements applicable to T Farm. Describe in this work plan the in-tank monitoring and ex-tank monitoring requirements in RPP-9937. Add a statement that any changes to these requirements that may			

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		result from the revision of RPP-9937 will be reflected in a future revision of this work plan.			
10	Page 5, lines 1-3.	Are there neutron access tubes in T Farm? Please clarify and discuss how moisture monitoring in deep soils will be performed at T farm.			
11	Page 4, Section 3.2.3	Remove the last sentence. List the in-tank and ex-tank monitoring (e.g., drywell logging) requirements for T Farm identified in RPP-9937. Please add a statement that these in-tank and ex-tank monitoring requirements applicable to T-Farm may be revised when RPP-9937 is revised, and that this revision will be reflected when this work plan is updated and submitted to Ecology with each new interim surface barrier design as required under Ecology et.al. 1989, HFFACO Milestone M-045-92.			
12	Page 4, Section 3.3.1	Add a figure illustrating locations of monitoring nests at T Farm.			
13	Page 5, second paragraph.	Appendix A does not belong in this document and remove references to Appendix A throughout this work plan. Reporting of results of barrier maintenance and performance monitoring activities is out of scope for this work plan, but should instead be provided in a separate report titled <i>Annual Interim Barriers Maintenance and Performance Monitoring Report</i> (M-045-92) due annually on 10/31.			
14	Page 5, 6 th paragraph, last sentence	Revise this paragraph as follows: “Annual monitoring reports are published, and data included in the report is gathered from the previous fiscal year. Moisture data collected in a fiscal year will be reported in the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).”			
15	Page 6	Delete the last sentence in the paragraph above Table 2 (reference to Appendix A).			
16	Page 6, Section 3.3.2	Revise the last sentence as follows: “and are summarized in Appendix <u>the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).</u> ”			
17	Page 6, Section 3.3.3	Revise the introductory paragraph as follows:			

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		“Results of the Data collected at T Farm as part of the maintenance and monitoring of interim barriers will be summarized in the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).” are reported in Appendix A. The results may be included as part of the monitoring plan (such as this one) or as a separate report.			
18	Page 6, Section 3.3.3, first bullet	Revise as follows: “A short description of each barrier farm <u>T Farm and interim barrier</u>”			
19	Page 6, Section 3.3.3, 2nd bullet	Revise this bullet as follows: "Results of visual inspections performed during the year, including a summary of results captured on Site Form A-6007-352, “Annual Environmental Interim Measures Maintenance Plan Inspection”			
20	Page 9, last sentence in the first paragraph.	Revise this sentence as follows: “Items checked per TFC-PLN-14 are listed <u>include:</u> ”			
21	Page 9, first bullet	Does this bullet address the rip rap on the sides of the detention basin? Revise this bullet to clarify the location of the rip rap surfaces.			
22	Page 9, Section 4.1.3	Delete the last sentence: “The reader is referred to RPP-9937 for the most current in-tank and ex-tank monitoring requirements applicable to T Farm.” Add a description of the in-tank monitoring and ex-tank monitoring requirements in RPP-9937. Add a statement that any changes to these requirements that may result from the revision of RPP-9937 will be reflected in a future revision of this work plan.			
23	Page 9, section 4.2.1, last sentence	The last sentence in the first paragraph is not clear. Was the intent to say that water flux was expected due to large changes in soil water content between the tanks? Please revise.			
24	Page 9, section 4.2.1	Please add a figure illustrating locations of nest sites.			

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25	Page 10, 2 nd paragraph	Revise the second paragraph as follows: “To date, the monitoring data indicates that the interim surface barriers are continuing to curtail recharge of water to the vadose zone and reduce the impact of meteoric water on soil-moisture conditions. Additional Data analysis and graphs on the impact of the barriers to the vadose zone moisture monitoring can be found in Appendix A of this document. <u>will be included in the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).</u> ”			
26	Page 10, 6 th paragraph	Revise that paragraph as follows: “ Annual monitoring reports are published, and data included in the report is gathered from the previous fiscal year. Moisture data collected <u>during the year in FY 2018 can be viewed in Appendix A of this monitoring plan.</u> <u>will be included in the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).</u> ”			
27	Page 10, Section 4.2.2	Discuss objectives and findings of the leak assessment program specific to TY Farm. Delete: “No tank leak assessments were completed for TY Farm in FY 2018.” This information belongs in the <u>Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).</u>			
28	Page 11, Section 4.2.3, 1 st paragraph.	Revise as follows: Results of the data collected at TY Farm as part of the maintenance and monitoring of <u>the</u> interim barriers are <u>will be</u> reported in <u>Appendix A.</u> The results may be included as part of the monitoring plan (such as this one) or as a separate report. <u>the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92).</u>			
29	Page 11, Section 4.2.3, first bullet	Revise as follows: “A short description of each barrier <u>TY farm and interim barrier...</u> ”			
30	Page 11, Section	Revise this bullet as follows: “ <u>Results of visual inspections performed during the year, including a summary of results captured on Site Form</u> ”			

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	4.2.3, 2nd bullet	<u>A-6007-352, “Annual Environmental Interim Measures Maintenance Plan Inspection”</u>			
31	Page 12, 3rd paragraph, first sentence	Revise the sentence as follows: “The SX Tank Farm was selected to receive an interim barrier following completion of the <u>interim barriers</u> barrier demonstration projects at T and TY Farms.”			
32	Page 12, 4 th paragraph	Include a figure illustrating locations of the monitoring nests at the SX Farm.			
33	Page 12, 4 th paragraph, last sentence	Revise the sentence as follows: “...the 2020 annual interim barrier monitoring report <u>the Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92)</u> .			
34	Page 14, 1 st paragraph, last sentence	Revise as follows: “Items checked per TFC-PLN-14 are listed <u>include:</u> ”			
35	Page 16, Section 5.2.3, 1 st sentence	Revise the first as follows: “ The format of the annual monitoring report will include the following items ” <u>The Annual Interim Barriers Maintenance and Performance Monitoring Report (M-045-92) will include:</u>			
36	Page 16, Section 5.2.3, 1 st bullet	Revise to read: “A short description of each barrier <u>SX farm and interim barrier</u> ,...”			
37	Page 16, Section 5.2.3, 2 nd bullet	Revise this bullet to read: “ <u>Results of quarterly visual inspections performed during the year, including a summary of results captured on Site Form</u> <u>A-6007-352, “Annual Environmental Interim Measures Maintenance Plan Inspection”</u> .”			
38	Page 16, Section 6	Design of the TX interim barrier has already been approved and, per HFFACO Milestone M-045-92, it should be included in this revision of the work plan. Revise this section to include information for the TX interim barrier analogous to the sections addressing interim barriers at T, TY, and SX farms.			

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39	Page 16, Section 7.	At the end of the Barrier Update paragraph add the following: <u>“This work plan will be updated when the U Farm interim barrier is approved by Ecology.”</u>			
40	Page 16, Section 8	Delete “Section 8.0 Conclusion”. Add “Section 8 Research Completed to Evaluate New Performance Monitoring Technologies.” Add a new section that addresses the need for a conclusion in <u>The Annual Interim Barriers Maintenance and Performance Monitoring Report</u>			
41	Appendix A	Appendix A does not belong in this document and remove references to Appendix A throughout this work plan. Reporting of results of barrier maintenance and performance monitoring activities is out of scope for this work plan, but should instead be provided in a separate report titled <i>Annual Interim Barriers Maintenance and Performance Monitoring Report</i> (M-045-92) due annually on 10/31.			