



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Richland Field Office

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June 23, 2022

22-NWP-098

Paul Schroder, Deputy Assistant Manager
Tank Farms Division
Office of River Protection
United States Department of Energy
PO Box 450, MSIN: H6-60
Richland, Washington 99352

Re: Department of Ecology's Response to the United State Department of Energy Regarding Review
Comment Record for the *FY2020 Annual Interim Surface Barrier Monitoring Report*,
RPP-RPT-63200, Revision 0

Reference: See page 2

Dear Paul Schroder:

The Department of Ecology (Ecology) received the United States Department of Energy (USDOE) Letter 22-TF-001121 (Reference 1), which transmitted USDOE's responses to Ecology's comments for the *FY2020 Annual Interim Surface Barrier Monitoring Report*, RPP-RPT-63200, Revision 0.

Ecology does not approve the request to include responses to comments in the FY2021 Annual Interim Surface Barrier Monitoring Report, and expects USDOE to submit the revised FY2020 Annual Interim Surface Barrier Monitoring Report, RPP-RPT-63200, by September 1, 2022.

Enclosed is the Review Comment Record (RCR) with Ecology's responses to USDOE dispositions.

If you have questions or concerns, please contact me at jeff.lyon@ecy.wa.gov or (509) 539-1996, or Kyle Rucker, Project Coordinator, at kyle.rucker@ecy.wa.gov or (509) 537-7373.

Sincerely,

Digitally signed by
Lyon, Jeffery (ECY)
Date: 2022.06.23
13:33:45 -07'00'

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

ms/aa
Enclosure

cc: See page 2

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Reference: Letter 22-TF-001121, dated May 13, 2022, "The U.S. Department of Energy Response to Washington State Department of Ecology Letter 22-NWP-044, 'Re: Department of Ecology Response to the United States Department of Energy on our Review Comment Record for the FY2020 Annual Interim Surface Barrier Monitoring Report, RPP-RPT-63200, Revision 0'"

cc electronic w/enc:

David Einan, EPA
Ricky Bang, USDOE
Becky Blackwell, USDOE
Stephanie Brasher, HMIS
Jon Perry, HMIS
Michael Turner, HMIS
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Environmental Portal
Hanford Administrative Record
Hanford Facility Operating Record
HAB Correspondence Control
HMIS Correspondence Control
USDOE Correspondence Control
WRPS Correspondence Control

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Document Title(s)/Number(s): Ecology Comments on the Fiscal Year 2020 Annual Interim Surface Barrier Monitoring Report, RPP-RPT-63200, Rev.0

Document Manager		Telephone Number	Project Manager		Telephone Number	Facility Site ID	Cleanup Site ID	
			Jeff Lyon		(509) 372-7914			
Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/ Close	Reviewer Initials
1.	Title	Mistake in the title. The title refers to a barrier instead to "barriers".	Correct the title.	Mistake in the title.	Accept. Will reworded to state 'barriers'	Accepted		
2.	Executive Summary, general comment	Executive Summary includes confusing and meaningless statements (see comments that follow).	An executive summary should succinctly state objectives of the document, followed by a high-level summary of accomplishments.	An Executive Summary should succinctly state objectives of the document, followed by a high-level summary of lessons learned and other accomplishments.	Broad statement refers to comments 3-6. Will revise Executive Summary to provide a high-level summary and clearly states objectives in the FY21 report.	Accepted		
3.	Executive Summary, 1 st paragraph, last sentence	The following sentence does not make sense. "The data gathered determined the lifetime performance of the barriers."	State that gathered data was evaluated in this report to determine performance of the barrier. For example, the data gathered were used to determine the continued effectiveness of the barrier to divert surface water from infiltrating into the underlying soils beneath the ISBs.	The sentence is meaningless and requires clarification.	Accept. Will add clarification as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
4.	Executive Summary, 2 nd paragraph	The following two statements include meaningless phrases (i.e., "soil moisture percentage rates") and appear to contradict each other. Also, the technical details in the second sentence do not belong in an executive summary. "Heat dissipation unit data at nest sites with interim barriers indicated a decrease in soil moisture percentage rates when compared to the year of installation. ... Nest TA indicated a slight increase in moisture levels at most depths down to 10 meters (33 feet)."	Suggest the following change: "Heat dissipation unit data at nest sites <i>within</i> interim barriers indicated a decrease in soil moisture percentage rates when compared to the year of installation. ... Nest TA indicated a slight increase in moisture levels at most depths down to 10 meters (33 feet)."	Statements include meaningless phrases, contradict each other, and refer to technical details that do not belong in an executive summary.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
5.	Executive Summary, 2 nd paragraph	The following statement is meaningless and confusing, "Additionally, all neutron moisture probe locations situated under barriers at 241-T and 241-TY Tank Farms showed reduced moisture percentages when compared to the moisture rates at installation."	Revise this sentence to clearly communicate what has been learned from data collected from the neutron moisture probes under the T and TY barriers. For example, did you intend to report that monitoring instrumentation has recorded moisture reduction under the T and TY barriers? If so, then simply state just that.	The stated "reduced moisture percentages when compared to the moisture rates at installation" is meaningless and confusing.	Accept. Will revise as it pertains to FY21 data	Partially accepted. Please revise the 2020 report.		
6.	Executive Summary, page i, 2 nd paragraph from the bottom of the page	(1) Explain why nothing has been done to repair the barrier at T Farm.	(2) Include an explanation why the T barrier is not being maintained. (3) For example, explain that: T Farm barrier was not designed for a 25-year service life, and it was constructed over a portion of T Farm as a demonstration project to evaluate performance of an innovative barrier technology of spray-on polyurea over a geotextile material above a	Include a convincing explanation why the T Barrier is not being maintained.	Not accept. 1) T-ISB is maintained, and it continues to divert meteoric water away from tank T-106. Specifications for maintenance are listed in RPP-SPEC-32483,	Accepted. We appreciate the reference to the 25-year service life requirement for the T-barrier and agree that the barrier must be maintained to perform as designed.		

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			<p>layer of compacted soil. While the T barrier is still performing to minimize water infiltration, the polyuria material has not weathered well and was not used again at other barriers.</p>		<p><i>“T Farm Interim Surface Barrier Subsystem Specification”</i>. Reasons for not repairing the T- ISB were communicated to ECY on 10-21-21 in 21-ECD-003416.</p> <p>2) T- Barrier is maintained. Additionally, the purpose of the annual report is to “summarize results of maintenance activities for the previous year and research completed to evaluate new technologies,” TPA M-045-92, Appendix D.</p> <p>3) The T ISB was designed to “[f]unction under environmental conditions present at the Hanford site for a period of 25 years.” Reference RPP-SPEC-32483 <i>“T Farm Interim Surface Barrier Subsystem Specification”</i> and RPP-RPT-47123, <i>“Interim Surface Barrier Evaluation Report,”</i> submitted to Ecology in partial fulfillment of HFFACO Milestone M-045-90 in 2010. (DOE, 2010). This same information concerning the 25-year design life was provided to Ecology in response to the</p>	<p>We note that the non-compliance for failure to maintain the T Farm barrier is open and subject compliance actions (Second Response To The Washington State Department Of Ecology Single-Shell Tank System Dangerous Waste Compliance Inspection Report NO. 20.721,” dated October 21, 2021.)</p> <p>We also note that DOE’s response references documents not approved by Ecology.</p>		
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					Ecology inspector's contention that the T ISB was a permanent structure. (see DOE Letter, B. T. Vance (DOE and J. R. Eschenberg (WRPS) to D. Bowen (Ecology), , "Second Response To The Washington State Department Of Ecology Single-Shell Tank System Dangerous Waste Compliance Inspection Report NO. 20.721," dated October 21, 2021.)			
7.	Page vi, List of Terms	The list of terms include SX1 and SX2. (1) The SX2 description includes the word "site" yet it is not used for SX1? (2) Why are only these two terms included and not the T and TY nest sites or the SX neutron probe sites?	Suggest removing SX1 and SX2 from the list of terms; otherwise, included all the nest sites for SX, T and TY.	List of Terms is incomplete.	Accept. Will revise list of terms as they pertain to FY21 report	Partially accepted. Please revise the 2020 report.		
8.	Section 1.0, page 1-1, first sentence	"The U.S. Department of Energy (DOE) Office of River Protection (ORP) has constructed interim surface barriers (ISBs) over portions of the 241-T, 241-TY, and 241-SX Tank Farms." This statement is incorrect. Only one interim barrier was constructed over a portion of an SST farm.	Correct this statement to clarify which interim barrier was constructed over a portion of the farm, and which interim barriers covered whole farms.	The statement incorrectly claims that the interim surface barriers at T, TY, and SX farms have been constructed over portions of these farms.	Will clarify how many SSTs are covered at each interim barrier farm. All installed barriers cover only portions of tank farms. Refer to RPP-RPT-61684 " <i>Maintenance and Performance Monitoring Plan for the Interim Barriers Program.</i> "	Not accepted. Revise the text as requested. Operational margins inside fence lines of tank farms are not covered by interim barriers. However, Ecology has approved engineering specifications for interim barriers after verification that interim barriers would cover all tanks and auxiliary equipment to ensure that a whole tank farm is secured. The only exception is T-Farm, with the interim barrier over a portion of the farm.		

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9.	Section 1.0, page 1-1, 2 nd paragraph, 1 st sentence	It is incorrect to state that all barriers were designed for a 25-year service life. T farm barrier was not designed for a 25-year service life.	Revise this sentence to “RPP-RPT-61684 is a monitoring plan designed to ensure that ensures effective prevention of moisture intrusion under the barriers over their 25-year service life, <u>with the exception of the partial barrier over T farm that was a demonstration project not designed for a 25-year service life.</u> ”	T farm barrier was not designed for a 25-year service life.	Not accept. The T ISB was designed to "[f]unction under environmental conditions present at the Hanford site for a period of 25-years." Reference RPP-SPEC-32483 and RPP-RPT-47123 submitted to Ecology in partial fulfillment of HFFACO Milestone M-045-90 in 2010. (DOE, 2010). This same information concerning the 25-year design life was provided to Ecology in response to the Ecology inspector’s contention that the T ISB was a permanent structure. (see DOE Letter, B. T. Vance (DOE) and J. R. Eschenberg (WRPS) to D. Bowen (Ecology), 21-ECD-003416, “ <i>Second Response To The Washington State Department Of Ecology Single-Shell Tank System Dangerous Waste Compliance Inspection Report NO. 20.721,</i> ” dated October 21, 2021.)	Accepted.		
10.	Section 1.1, page 1-1, 1 st and 3 rd paragraphs.	The 1 st and 3 rd paragraphs appear to be cut and paste from other documents and add no value to the document.	Revise the 1 st and 3 rd paragraph to clarify: (1) that the barrier <i>over a portion</i> of T farm SSTs was the first one constructed as a <i>demonstration project using polyuria material which had not weathered well</i> , and that the (2) Barriers that followed at other tank farms were constructed to cover all SSTs at the farms (3) with a durable modified asphalt material designed for a 25-year service life.	The 1 st and 3 rd paragraphs appear to be cut and paste and add no value to the document.	environment, natural phenomena hazards, and induced environmental requirements identified in the subsystem specification.” 2) Barrier objective was to cover past leaks, not to cover all SST’s. RPP-ENV-41309, “ <i>Criteria for Prioritizing Hanford Site Tank Farm Interim</i> ” 3) Yes, barriers were constructed to have a 25 year design life, RPP-SPEC-32483, section 3.2.3, “ <i>T Farm Interim Surface Barrier Subsystem Specification</i> ”.	Not accepted in part. Include appropriate background. Ecology would like to clarify that the DOE’s response is focused on secondary documents not approved by Ecology, and do not completely reflect historical perspective of subject matter negotiations via the TPA process. Include text that addresses clarification that Actions throughout the Interim Measures program are subject to negotiations and approval of TPA milestones.		
11.	Section 1.1, last paragraph, page 1-2	The brief description of the vadose zone is irrelevant and adds no value to this document.	Remove the whole paragraph starting with “The vadose zone...”	This text is not relevant and adds no value to this document.	Accept. Will remove paragraph for the to FY21 report	Partially accepted. Please revise the 2020 report.		

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12.	Page 1-3, Section 1.1.1, 2 nd Paragraph	The second sentence of the paragraph (the paragraph before Figure 1-1) states “the objective of the ... barrier demonstration project was to show a reduced rate of downward movement of an existing vadose zone contamination plume”. This may have been the objective of the ISB but the effect to the plume cannot be determined based only on the data in the report. What the report does provide is an evaluation of the soil moisture changes for certain depths beneath the barrier.	The sentence should be revised to state something similar to “The objective of the T Farm barrier demonstration project was to mitigate the infiltration of precipitation into the underlying soils to reduce the rate of downward movement of an existing vadose contamination plume”.	Technical – ISB objective is to reduce infiltration into the vadose zone to reduce plume movement which is validated by monitoring the soil moisture beneath the cover.	Accept. Will revise objective to reference PNNL-16538 report, “ <i>T Tank Farm Interim Surface Barrier Demonstration – Vadose Zone Monitoring Plan,</i> ” which states, “...proposed to use an interim surface barrier...to prevent or reduce infiltration of meteoric water entering into the subsurface to reduce the rate of the downward movement of leaked contaminants.”	Accepted		
13.	Page 1-4, Section 1.1.1, 2 nd Sentence of the Paragraph	The paragraph reads a bit awkward due to how the neutron probe and depth is introduced in the paragraph.	Suggest moving the 2nd sentence as the second to last sentence in the paragraph or to somewhere in the middle of the paragraph, after the HDU discussion.	Editorial – suggestion.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
14.	Page 1-5, Section 1.1.2, Last Paragraph	The paragraph is also a bit awkward to read.	Suggest moving the second to last sentence [Data collection equipment at the nest sites include HDUs, CPs, and neutron probes (PNNL-19772)] to become the third sentence in the paragraph (before the HDU discussion).	Editorial – suggestion.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
15.	Section 1.1.1, page 1-4, Figure 1-2 and paragraph below it.	Figure 1-2 does NOT identify nest sites TA, TC, and TD. It identifies Instrumentation Nests A, B, C, and D.	Update Figure 1-2 to identify instrumentation nests TA, TC, and TD. Discuss the relevance, if any, of nest sites A, B, C, and D.	Figure 1-2 does not identify instrumentation stations at T Tank Farm.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
16.	Section 1.1.2, page 1-6, the last sentence in the paragraph above Figure 1-4	Where in this report is the data collected from the referenced nest stations “analyzed and contained”?	Revise that statement to state where (in which Section) data collected from the nest stations is “analyzed and contained within this report”.	Need a reference to a section in this report.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
17.	Section 1.1.3, the first paragraph	There are several incorrect statements in this paragraph: (1) The first sentence in the paragraph overstates the success of the T barrier demonstration, which in fact did not weather well and was the reason not to build the next barriers that way. (2) The 4th sentence “The objective...” is incorrect. The primary objective was to cover all SSTs, leakers or not, <u>to prevent contact with precipitation in the event the old tanks, currently sound, were to leak in the future.</u>	Recommend the following revisions to this paragraph. In 2019, the SX Farm ISBs were the first barriers completed under the HFFACO Milestone M-045-92 series. <u>The SX barriers were constructed in sections that when completed covered all SSTs at the SX farm.</u> The objective for the SX Farm barriers was to continue the decrease of downward movement of contaminants in the vadose zone. <u>cover SSTs, leakers or not, to prevent infiltration in the event the tanks, currently sound, were to leak in the future and thereby proactively prevent migration of contaminants.</u> An aerial photo of the SX Farm after installation of the barriers is shown in Figure 1-5. The SX Farm barrier is composed of three separate barriers: south, north, and	There are several incorrect statements in this paragraph.	Not accept. 1) The reasons polyurea was not selected are well documented in RPP-RPT-38323, “ <i>Tank Farm Interim Surface Barrier Runoff Alternatives Study</i> ”. Weathering of T Barrier was not why polyurea was not selected. At the time of selection, T barrier was performing as expected. Examples of criteria from the report are listed below and none refer to the T barrier performance.	Partially Accepted. Please insert the suggested revisions that Ecology recommends. Regarding DOE’s reference to RPP-RPT- 38323, “Tank Farm Interim Surface Barrier Runoff Alternatives Study”, we note that the last paragraph of Introduction recommends the use of modified asphalt as the next interim barrier material. (https://www.osti.gov/servlets/purl/961581). RPP-RPT- 38323 identified a number of concerns with polyuria, including that it		

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expansion. The area of the three barriers covers all 15 tanks at SX Farm (Figure 1-6) and makes up one cohesive SX Farm barrier.”

Examples of criteria from report include: Cost, environmental conditions, flexibility and expansion, dome loading, tank farm facility surveillance and monitoring, safety issues during construction, retrieval, future removal, etc.

- 2) The Tank Farm barrier objective was to “minimize the impact of surface precipitation, and thus recharge, in driving contaminant movement toward groundwater” and was stated in RPP- ENV- 41309, 2009, “*Criteria for Prioritizing Hanford Site Tank Farm Interim Surface Barriers and for Evaluating Their Performance*” for T Barrier and all anticipated future barriers

Additionally, SX barrier was not originally designed to cover all 15 tanks RPP-RPT-48353, “*241-SX Tank Farm Interim Surface Barrier Preliminary Design Report*’ The expansion barrier was added to the design years later. Ecology did not provide a reference to support their comment.

Will remove the first two struck out sentences: “~~Successful barrier performance was established during the barrier demonstration at T Farm and TY Farm. The decision was made through the HFFACO to continue the construction of ISBs at additional farms.~~”

attracts radon. This results in chemical changes (weathering due to radon) and the associated maintenance and operational difficulties.

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18.	Page 1-6, Section 1.1.3, 2 nd Paragraph, 1 st Sentence	First sentence mentioned soil moisture changes are monitored using HDUs and neutron probes. No mention of CPs (which were installed at the previous two tank farms, T and TY). Ex CPs were not installed at the SX nest sites.	Explain if CPs were not installed at the SX nest sites, and why not.	1) Clarification needed if CPs were not installed at the SX nest sites 2) Why not.	Accept. 1) Capacitance probes (CP's) were not installed at SX barrier nest stations and will modify FY2021 report to clarify this. 2) CPs have an operational life expectancy of only one to two years as stated in RPP-RPT-61684, <i>Maintenance and Performance Monitoring Plan for the Interim Barriers Program</i> .			
19.	Page 1-6, Section 1.1.3, Page 1-6, 2 nd Paragraph in Section, 2 nd Sentence	The sentence states nests were installed "over" the barriers. Technically, they were installed through and beneath the covers.	Is there a better word that can be selected in place of "over" the barriers? For example, "at interim barriers".	Technical edit.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
20.	Section 1.1.3, page 1-7, the last sentence above Section 1.1.4	Where in this report is the data collected from the referenced nest stations "analyzed and contained"?	Revise that statement to state where (in which Section) data collected from the nest stations is "analyzed and contained within this report".	Need a reference to a section in this report.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
21.	Section 1.1.4, Figures 1-6 and 1-7	Figures 1-6 and 1-7 are for the SX Tank Farm and do not belong in the section discussing TX tank farm.	1) Please include figures illustrating the layout of the TX tank farm, locations of monitoring instrumentation in the TX farm, the TX ISB and the evapotranspiration basin.	Figures 1-6 and 1-7 are for the SX Tank Farm and do not belong in the section discussing TX tank farm. Need figures illustrating the layout of the TX tank farm, locations of monitoring instrumentation in the TX farm, and the location of the TX ISB and the evapotranspiration basin.	Accept. 1) Will revise as it pertains to FY21 report. Will add figure illustrating the layout of TX Tank farm however, no barrier monitoring instrumentation was installed at TX.	Partially accepted. Please revise the 2020 report.		
22.	Page 2-1, Section 2.1, 4 th Paragraph of the Section.	The paragraph describes the 2020 tumbleweeds but not the 2020 T Farm poly-liner cracks observations, (only the 2013 actions, cracks observed in 2014, and that observations since 2014 did not meet inspection). No mention of 2020 poly-liner observations.	1) Rearrange the paragraph to discuss the poly-liner observations since 2014 (assume cracks) and the 2020 observations.	Need to state that the 2020 T Farm poly-liner observations did not meet inspection.	Will add clarification on observations made to the T-ISB as it pertains to the FY21 report. T-ISB is still affective and performs within the limits specified in RPP-SPEC-32483 " <i>T Farm Interim Surface Barrier Subsystem Specification</i> ". Performance monitoring data support this determination. Inspection sheets and photos are included in the Appendix of the Annual Monitoring Report(s) to illustrate barrier condition.	Partially accepted. Need to include reference to the 2020 T Farm poly-liner observations that indicated the T farm barrier did not meet requirements based on the Ecology inspection. Ecology notes that the non-compliance for failure to maintain the T Farm barrier is open and subject to a compliance activity.		

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23.	Page 2-1, Section 2.2, 1 st Paragraph in Section, 2 nd Sentence.	The sentence which states “conducting routine inspection minimizes the spread/transfer of contamination” is a bit of a push. Inspection with maintenance does help to prevent infiltration due to potential cover wear (as stated in the previous sentence) but with potential leaking tanks within these farms, the statement should not be included without information as to the plume movement over time.	Recommend removing the sentence or combine with the previous sentence.	Technical – would not speculate as to plume movement without citing a report.	Accept. Will remove sentence.	Accepted		
24.	Section 3.0	Section 3 is confusing as interim barriers are discussed together. It needs to be restructured to address each Interim Barrier separately.	Divide this section into individual paragraphs for each of ISBs. In each reference figures illustrating the locations of the monitoring nest stations, how the performance of each barrier is being monitored, and what has been learned from monitoring - how well each barrier actually performs.	Section 3 is confusing as all interim barriers are discussed together.	Accept. Will divide paragraph into individual paragraphs to clarify information to the FY21 report	Partially accepted. Please revise the 2020 report.		
25.	Page 3-1, Section 3.0, 1 st Paragraph, 5 th Sentence	The sentence stating capacitance probe data has exceeded the 2-year design life is fine but it is not apparent why CPs were not installed at SX. (1) Need to understand issues with the CPs after 2 years of use.	Suggest adding a brief discussion as to CP malfunctions or issues since the probes were installed (which were a lot longer ago then two years before 2017) and that the information collected is redundant to that of the HDUs and neutron probes.	Technical – (2) strengthen the argument for not installing capacitance probes at SX and future barrier.	Not accept. The purpose of this report is not to justify or explain monitoring requirements agreed upon between Ecology and DOE in RPP-RPT-61684, <i>Maintenance and Performance Monitoring Plan for the Interim Barriers Program.</i> ” Additionally, document RPP-PLAN-48439, <i>241-SX Tank Farm South Interim Surface Barrier Monitoring Plan, 2011, Rev. 0</i> , states “[b]ased on knowledge gained from monitoring at T and TY, only the HDU arrays and neutron monitoring are capable of detecting the small initial moisture changes due to barrier installation, and provide the longevity needed for barrier monitoring. The capacitance probes are also capable of detecting the small initial moisture changes, but have an operational life expectancy of only one to two years.” Note that the SX barrier monitoring plans were reviewed and approved by Ecology as documented in Ecology letter 11-NWP-044.	Accepted		

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26.	Section 3.0, 4 th paragraph	The objective of this report is to document ISB performance. The following sentence reflects DOE's expectations which by itself adds no value to this report. "Upon placement of ISBs, changes in soil moisture were expected to be more significant in shallower depths."	Discuss if monitoring has confirmed this expectation for soil moisture changes.	The objective of this report is to document ISB performance instead of stating DOE's expectation for soil moisture changes.	Accept. Will revise as it pertains to FY21 report	Not accepted. Please revise the 2020 report to discuss if monitoring has confirmed the stated expectation for soil moisture changes.		
27.	Page 3-1, Section 3.0, 4 th Paragraph, 2 nd Sentence	The sentence mentions the shallow T Farm HDUs lie within fill and deeper HDUs lie within the Hanford formation but there is no mention as to fill or native soil for the TY and SX nest HDUs.	Besides the T Farm HDU locations, provide the same information (geologic material/fill) for TY and SX farms.	Consistency – provide similar information for monitoring nests at all ISB.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
28.	Page 3-2, Section 3.1, 3 rd Paragraph of Section, 1 st Sentence	In the first sentence when discussing the age of the monitoring system, it is not clear which monitoring systems are being discussed.	Modify the sentence to state "The age of the T and TY Tank Farms monitoring systems ...".	Identify which monitoring systems are being discussed.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
29.	Page 3-4, Section 2.3.1, 1 st Paragraph	The sentence in question states that "the changes in soil-water pressure at 10-m depth was less significant because the drainage water from the shallow depths continue to move into the deeper soil". The drainage rate is one plausible reason but other reasons could be lateral movement of moisture at depths based on changes in the geologic material, the barrier acting more as a cone with depth then a vertical column from barrier to groundwater or a combination of all three.	Would suggest toning down the statement and replace "because" with "most likely due to".	Technical – since rate of soil moisture reduction can be complicated, be qualitative in the statement.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		
30.	Section 3, 5 th and 6 th paragraphs	These paragraphs are Ok in terms of discussing theory. Needed is an explanation what has been learned about ISB performance from monitoring efforts using these systems.	State what has been learned about ISB performance from monitoring efforts using these systems.	These paragraphs are Ok in terms of discussing theory. Needed is an explanation what has been learned about ISB performance from monitoring efforts using these systems.	Accept. Will revise as it pertains to FY21 report	Partially accepted. Please revise the 2020 report.		