



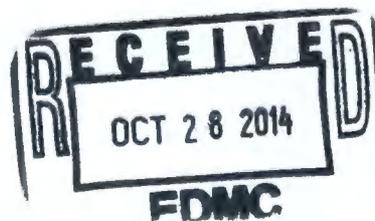
**Department of Energy**  
 Richland Operations Office  
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14-AMRP-0310

OCT 23 2014

Ms. J. A. Hedges, Program Manager  
 Nuclear Waste Program  
 State of Washington  
 Department of Ecology  
 3100 Port of Benton Blvd.  
 Richland, Washington 99354



Dear Ms. Hedges:

**M-91 TRANSURANIC MIXED/MIXED LOW-LEVEL WASTE PROJECT MANAGEMENT PLAN, HNF-19169, REVISION 13, RESPONSE TO COMMENTS**

- References:
- (1) Ecology ltr. to O. A. Farabee, RL, from S. S. Lowe, "Re: Ecology Comments on M-91 Transuranic Mixed/Mixed Low-Level Waste Project Management Plan, HNF-19169, Revision 13, May 2014," 14-NWP-173, dtd. August 18, 2014.
  - (2) RL ltr. to J. A. Hedges, Ecology, from R. J. Corey, "M-91 Transuranic Mixed/Mixed Low-Level Waste Project Management Plan, HNF 19169, Revision 13," 14-AMRP-0206, dtd. June 12, 2014.

This letter provides responses to State of Washington Department of Ecology (Ecology) comments on the latest version of the M-91 Transuranic Mixed/Mixed Low-Level Waste Project Management Plan received to date, Reference (1). The plan was submitted in June 2014 in compliance with the Hanford Federal Facility Agreement and Consent Order Milestone M-091-03, Reference (2).

As Reference (1) indicates, Ecology's comments are draft and future discussions are necessary "to determine how best to address the current Performance Management Plan comments once the overall M-91 scope and schedule is better defined," the U.S. Department of Energy Richland Operations Office only plans on addressing specific comments at this time. Revision of the plan will be delayed to an, as yet, undefined date.

M-091-03  
 1226101, 1226730

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Ms. J. A. Hedges  
14-AMRP-0310

-2-

OCT 23 2014

If you have any questions, please contact me, or your staff may contact Al Farabee, of my staff, on (509) 376-8089.

Sincerely,



Ray J. Corey, Assistant Manager  
for the River and Plateau

AMRP:MSC

Attachment

cc w/attach:

G. Bohnee, NPT  
R. Buck, Wanapum  
D. A. Faulk, EPA  
S. Harris, CTUIR  
S. Hudson, HAB  
R. Jim, YN  
N. M. Menard, Ecology  
K. Niles, ODOE  
J. B. Price, Ecology  
D. Rowland, YN  
D. G. Singleton, Ecology

Administrative Record (M-91)  
Environmental Portal

cc w/o attach:

J. V. Borghese, CHPRC  
R. A. Kaldor, MSA  
K. J. Lueck, CHPRC  
R. E. Piippo, MSA

Item	Ecology Comments per Letter, 14-NWP-173, dated August 18, 2014, <i>Ecology Comments on M-91 Transuranic Mixed/Mixed Low-Level Waste Project Management Plan, HNF-19169, Revision 13, May 2014.</i>		DOE Response
1	P.iv, Table ES-1; p 1-7, Table 1-1; p 1-10, Table 1-2; p 4-2, section 4.1; p6-1, Section 6; p 7-8, section 7.2; p.D-3	Editorial comment; the document has many instances with m3 showing cubic meters. Change all m3 to m <sup>3</sup> .	Accepted
2	p.1-10, Table 1-2	Milestone M-091-01A is listed as "on Schedule". At PMM on 6/26 this was changed to "at Risk".	Language was correct as of for the reporting period of the 2014 annual update. Language will be updated during the next annual update of the M-91 PMP.
3	p.1-10, Table 1-2	Milestone M-091-01A is listed as "on Schedule". At PMM on 6/26 this was changed to "at Risk".	Language was correct as of for the reporting period of the 2014 annual update. Language will be updated during the next annual update of the M-91 PMP.
4	p.1-10, Table 1-2	Milestone M-091-01A is listed as "on Schedule". At PMM on 6/26 this was changed to "to be missed".	Language was correct as of for the reporting period of the 2014 annual update. Language will be updated during the next annual update of the M-91 PMP.
5	p.1-10, Table 1-2	Milestone M-091-01A is listed as "on Schedule". At PMM on 6/26 this was changed to "to be missed".	Language was correct as of for the reporting period of the 2014 annual update. Language will be updated during the next annual update of the M-91 PMP.
6	p.2-6, Section 2.3/4	The text says "618-11 Burial Grounds". Remove "s" from Burial grounds	Accepted
7	p.2-6, Section 2.3/4	Based on milestone M-016-00B all work in the 300 area and 618-10/11 is supposed to be done by 6/30 2018. At a 300 PMM, USDOE indicated tht the milestone might not be met due to work at 618-11 and 324 Building. This could mean that there will be no Lessons Learned	As noted in Table 1-2, retrieval of the alpha caisson by 12/31/2018 is at risk. There is nothing to be resolved, it just means that if the caissons are retrieved before the 618-11 cleanup activities (which

		if the 618-11 has not been retrieved when the alpha caisson work needs to start. How will this be resolved if the 618-11 burial ground has not yet been removed?	is highly unlikely) they will not have the advantage of lessons learned from the retrieval of the 618-11 caissons.
8	p.2-12, section 2.4	This section talks about how soil remediation will take place through 200-SW-2 cleanup actions. "There are opportunities to support the 200-SW-2 investigative process through implementation of the SAPs." Thus, it is important that the SAPs are in the 200-SW-2 work plan. USDOE has hinted at they prefer that this not be the case.	Characterization will be accomplished as part of the 200-SW-2 decision process, like typical of all CERCLA cleanup activities.
9	p3-3, section 3.3	MLLW-07: All these treatment groups list a treatment pathway which describes the treatment technique in some way such as "thermal". However, for MLLW-7 it is listed as "commercial" with no indication of techniques that will be used. The section below states we are talking about "stabilization" and "macro-encapsulation". Recommend using that and remove "commercial", or using "stabilization or macro-encapsulation at commercial facility".	Accepted
10	p.3-5, section 3.5/1	"half the capacity currently used". This just does not sound right. It means that half the design capacity has been filled, correct?	Trench 31 has approximately 10,000 m3 usable waste disposal space remaining and Trench 34 has approximately 9,000 m3. This equates to T 31 47% full and Trench 34 42% full.
11	p.4-3, Figure 4-1	This graph is problematic. In Rev 12B the small containers would be done first FY16-FY18 and then the large and RH containers. Here everything has been piled up in FY 19-22. Is this really realistic?	Yes this is realistic because it is anticipated that the small containers would be repackaged onsite and the large and RH containers (meeting the acceptance criteria) would be repackaged at a commercial facility.
12	p.4-4, figure 4-2	This graph is problematic. In Rev 12B the small containers would be done first FY16-FY18 and then the large and RH containers. Here everything has been piled up in FY 19-22. Is this really realistic?	Yes this is realistic because the shipment rates are based on WIPP availability and capacity.
13	p.6-2 section 6.1/3	All boxes in Storage Area A will require secondary containment? Is the phrase "requiring secondary containment" used excuse USDOE from doing just that because the containers have only debris and no liquids.	Storage practices are based on what is known about the waste.

14	p.6-2, section 6.2/1	This writing is problematic although correct based on the current Part A application. It would be better to delete the sentence with the “storage” are listing.	As stated in this chapter. It is recognized that DOE and Regulator agreements may change the current Part A’s within SWOC.
15	p.7-2, Table 7-1	Editorial error: In the first section, third bullet it says: Addressed in this PMP (see Sections &.1 and 7.2) It should say “Sections 7.1 and 7.2).	Accepted
16	p.7-3, section 7.1.2/2 and p.7-4, section 7.1.4/2 and p. 7-9, section 7.4.3/2	The last sentence indicates that the D-10 tank is also in somewhat vacuum when it comes to treatment technologies, and there is a potential that the K-Basin sludge is a problem. How will USDOE be able to get a schedule to get this tank treated, repackaged, and shipped to WIPP by 2024?	The volume of waste to be treated in which year is not container specific.
17	p.C-2, Figure C-1	This comment was also given for Rev 12. This map shows the “Green Islands”. The GI are not directly RSW. It would be better if the map showed RSW as in the following maps, and not confuse the issue in this map. I would actually prefer if Fig C-1 is removed and only C-2 and C-3 shown.	Accepted
18	p.C-3, Figure C-2	This map gives the incorrect impression that there is a lot of RSW in this landfill, when in fact half of Trench 7 has been emptied. Can a new symbol be created showing the area which has been retrieved? (Such as a cross or hatch symbol over the red.)	Accepted
19	p.C-4, Figure C-3	This map gives the incorrect impression that there is a lot of RSW in this landfill, when in fact half of Trenches 1,4 and 7 has been emptied. Can a new symbol be created showing the area which has been retrieved? (Such as a cross or hatch symbol over the red.)	Accepted
20	p.C-5, Section C1.3/1	Editorial error: It says that Figure C-5 shows the trenches in 218-W-4A. This is incorrect, it shows 218-W-3A.	Accepted
21	p.C-6, Figure C-4	This comment was also given for Rev 12. This map shows the “Green Islands”. The GI are not directly RSW. It would be better if the map showed RSW as in the following maps, and not confuse the issue in this map. I would actually prefer if Fig C-4 is removed and only C-5 is shown.	Accepted

22	p.C-7, Figure C-5	This map gives the incorrect impression that there is a lot of RSW in this landfill, when in fact half of Trenches 17 and almost half of Trench 8 has been emptied. Can a new symbol be created showing the area which has been retrieved? (Such as a cross or hatch symbol over the red.)	Accepted
23	p.C-8, Figure C-8	This map should also show the RSW trenches although it is ok here as there are no GI to confuse the issue. It can also be removed as the information is now in Figure C-7.	Accepted
24	p.C-9, Figure C-7	This map gives the incorrect impression that there is a lot of RSW in this landfill, when in fact half of Trenches 27 and half of Trench 17 has been emptied. Can a new symbol be created showing the area which has been retrieved? (Such as a cross or hatch symbol over the red.)	Accepted
25	p.D-3, Table D-3	In the table under "Analytical Basis". There is probably something wrong about the dates on these two bullets that describe shipment of CH-TRUM waste. I think it should say 2020-2023 for the first one, and 2024-2030 on the second.	The dates are correct. The CH-TRUM shipments are divided between M-091-44 and M-091-46 CH-TRUM waste. Language will be revised to clarify.
26	p.E-3, Table E-1	The first sentence describing the 224B is missing a word "product". I think it should read "and concentrate plutonium nitrate solution that was the product of the 221-B Building bismuth-phosphate process.	Accepted
1	p. 1-3, Section 1.2	The scope of the M-91 PMP needs to be expanded to include management of CH-TRU and RH-TRU wastes. Significant quantities of TRU waste already exists in aboveground storage (approx. 2,400 containers in CWC) and more will be generated. The TRU waste will impact the availability of Hanford facilities and infrastructure. Management of TRU and TRUM waste must be integrated in the M-91 PMP for a complete understanding of the scope, cost, and schedule for waste disposition. (SL)	The current language of M-091-03 includes TRUM waste only. TRU waste is outside the scope and will not be added to the PMP.
2	p.1-7, Section 1.4	This is the first mention of retrieval of RSW being delayed to 2019. That is a significant change from the previous plan and needs to be highlighted in the Executive Summary. (SL)	Accepted
3	p.1-8, Section 1.4	Text refers to existing offsite commercial capabilities for repackaging CH-TRUM and some RH-TRUM waste, and the mission need to acquire additional capability for waste that cannot be managed	If Ecology chooses to help DOE with DOT and the Western Government Agency, we would happily accept the help.

		commercially. Processing capability currently exists at Idaho and is available for processing Hanford wastes, and also needs to be considered. (SL)	
4	p. 1-8, Section 1.4  p. 4-1, Section 4	Clarification is needed of CCP's role and responsibilities in performing certification and shipment of CH and RH TRU and TRUM wastes. This should be consistent with the PRC prime contract Sections C.2.3.6.1 and C.2.3.6.2. For example, CHPRC is responsible to provide infrastructure to support installation and operation of the CCP-provided RTR equipment, drum assay equipment, and mobile loading equipment; that should be mentioned in the M-91 PMP. (SL)	Appropriate detail will be added.
5	p. 2-1, Section 2.1	Test refers to the retrieval schedule and evaluating factors such as minimizing life cycle retrieval costs, optimizing retrieval versus capacity for repackaging, WIPP shipment schedule, and offsite treatment capacity. The top priority is to get the waste out of the ground and into safe storage. The other factors are less relevant as the CWC has much unused storage capacity. (SL)	It is not agreed that getting waste out of the ground and into safe storage is the top priority and that the other factors are less relevant. Based on recent discussions with Ecology disposition of waste currently in aboveground storage is currently a higher priority than the retrieval of RSW.
6	p. 2-1, Section 2.1	Text states that as retrieval of RSW is delayed, treatment of MLLW and repackaging/shipping of TRUM waste will be also be delayed. Need to clarify that what is delayed is final completion of the TPA milestone due to reduced funding. There currently is much TRUM waste in aboveground storage that is available for repackaging, regardless of whether retrieval occurs. (SL)	Accepted, will clarify language
7	p. 3-1, Section 3	(Editorial) Text states that MLLW which cannot currently be treated commercially is considered no-path-forward waste, and is covered under Milestone M-091-03D-02 as discussed in Chapter 6; should be Chapter 5. (SL)	Accepted
8	p. 3-1, Section 3.2	Text states that MLLW without non-conforming items is sent off-site for processing (presumably treatment). Is no MLLW planned to be processed on-site? (SL)	At this time it is anticipated that MLLW will be treated commercially.

9	p. 3-3, Section 3.4.1	Text refers to 2 drums of MLLW-02 waste that contain high concentrations of mercury and are identified as no-path-forward waste. Should these drums be in the treatability group MLLW-06, "Mercury Waste"?	The two drum have been dispositioned. Language will be deleted from the Section 3.4.1.
10	p.3-5, Section 3.4.7	The treatability group MLLW-10, "Reactive Metals" include waste reactive materials such as sodium metal. Text does not state if there is any of this waste is in inventory (thought there was sodium in storage at CWC). (SL)	The sodium in storage at CWC is not within the scope of M-091 milestone series and not mentioned in the PMP.
11	p.4-1, Section 4.1 Figure 4-1  p.7-6, Section 7.2, Figure 7-1  p. D-3, Table d-3	(Multiple instances) Text provides volume projections for shipping TRUM waste to WIPP.  a) CH-TRU and RH-TRU waste needs to be included for completeness as there are significant quantities which will impact the projections (see comment #1).  b) Up to 11 shipments per week to WIPP are planned. Historically the maximum number of shipments from WRAP has been 2-3. Please include a discussion of the infrastructure needed to support the higher rate such as: <ul style="list-style-type: none"> <li>• Characterization and NDE/NDA capabilities/needs.</li> <li>• Waste certification throughput.</li> <li>• Number of TRUPACT II and RH-72 shipping containers and trucks.</li> <li>• Loading facilities and support services (e.g., helium leak-testing of shipping containers, payload assembly and inventory management).</li> <li>• Receipt and processing of CH and RH shipping containers at WIPP and return to Hanford.</li> <li>• Supporting documentation for WIPP shipments.</li> </ul> (SL)	a) See comment #1 response. b) CCP is under contract to provide needed capabilities to meet Hanford needs for shipments of TRU waste to WIPP. CCP currently has the resource necessary to up to 11 shipments per week.
12	p. 4-7, Section 4.2.1.2	The list of WRAP treatment capabilities should include stabilization to be consistent with Section 3.4.1. (SL)	TRU waste going to WIPP is not stabilized (i.e., grouted).

13	p. 5-3, Section 5 Table 5-1	Please identify the container ID numbers for the no-path-forward MLLW waste in each treatability group.	Accepted
14	P.7-2, Section 7 Table 7-1	(Editorial) In the 3 <sup>rd</sup> bullet, change “Section &.1” to “Section 7.1”.	Accepted
15	p. 6-2 Section 6.2	Storage of the K Basin sludge in the T Plant canyon needs to be described as that will significantly affect operations. (SL)	Refer to the <i>Amendment to the Interim Remedial Action Record of Decision for the 100 K Area K Basins</i> .
16	p. 7-3, Section 7.1.2	Text says per the ROD for the K Basin sludge that the sludge will be treated, packaged for disposal, and interim stored pending shipment to disposal. The text later says the sludge will be placed in casks and transferred to T Plant for interim storage until a new treatment and packaging facility is available. Responsibility for performing treatment and repackaging of the sludge, and whether this occurs before or after interim storage is not clear. (SL)	Decision on the treatment process and location is under review.
17	p. 7-4, Section 7.1.4	Discussion of the D-10 tank from U Plant needs to be expanded to address that absorbent was added and the RH-TRUM waste has a D001 oxidizer waste code due to high nitrate. Treatment and repackaging of this waste for shipment to WIPP will be complex and subject to a 2024 deadline per the ROD. (SL)	Accepted, will add clarification
18	p. 8-2, Section 8.1 Figure 8-1	Comments on the RL-0013 funding profile: a) Figure 8-1 needs to include a column for the 2032-Life Cycle to cover activities beyond 2013 (e.g., IDF disposal of WTP waste, post-closure monitoring of MW trenches). b) The scope description in some cases is vague and needs to be expanded. For example for WBS 013.07 WRAP, it just says it provides for safe operation and maintaining minimum safe conditions, while the funding has a significant uptick in 2019-22. c) WBS 013.15 TRU Disposition – Would expect funding to be higher in 2020-25 due to many more shipments to WIPP and the need to support CCP activities. d) WBS 013.21 MW Trenches – Funding in 2029-31 increases	a) Activities past 12/30/2030 are not within the scope of the M-091 milestone series. Refer to the Hanford Lifecycle Scope, Schedule, and Cost Report, under M-036-01 for life cycle activities outside the scope of M-091. b) Safe operations include repackaging activities during 2019-2022. Clarification will be provided. c) CCP provides the capability/funding to load/ship TRU waste to WIPP. d) Closure of Trenches 31 and 34 is beyond 12/30/2030. Refer to the Hanford Lifecycle Scope, Schedule, and Cost Report, under M-

		only slightly. This does not appear sufficient for closure of the trenches and constructing two surface barriers. (SL)	036-01 for life cycle activities outside the scope of M-091.
19	p.8-4, Section 8.3.1	Ecology cleanup priorities from 2010 are listed. These are meaningless as DOE has their own priorities list which is provided to the contractors in the form of planning guidance. The DOE and Ecology priority lists do not agree in many aspects. As the DOE priority list is what drives the work in the field, the DOE priority list is what should be shown as a project constraint. (SL)	Ecology cleanup priorities are included so the reader understands that Ecology acknowledges that the M-091 work scope is lower priority than other Hanford cleanup activities.
20	p.8-6, Section 8.3.3.2	Text discusses several potential issues with providing on-site processing capability for RH-TRUM waste. There is demonstrated capability already existing at Idaho for processing RH waste in various package configurations. Processing the RH waste at Idaho needs to be included. (SL)	If Ecology chooses to help DOE with DOT and the Western Government Agency, we would happily accept the help.
21	p. D-5, Table D-5	In 4 <sup>th</sup> bullet, 2019 should be 2020 to be consistent with Figure 8-1. (SL)	Accepted
1	p.1-1, Section 1	Paragraph 3, 2 <sup>nd</sup> sentence. Change ‘has’ to ‘have’ so sentence reads as follows: “... goals have been included in this PMP.”	Accepted
2	p.1-3, Section 1.2	2 <sup>nd</sup> bullet. Is there a milestone associated with this bullet?	No – the milestone for identify no-path-forward waste and disposition schedule has been completed and no long exists.
3	p. 1-8, Figure 1-4	Top right of figure: Final box reads “MWTS 31 & 34 or ERDF” What determines if the waste goes to the MW trenches or ERDF” Is it a determination of RCRA versus CERCLA, or can both type of waste go to either site?	The first choose is to send the waste to ERDF for disposal. If the waste does not meet the ERDF acceptance criteria (or a project schedule cannot be met) then the waste is sent to the MWDT for disposal.
4	p. 1-9, Section 1.4	5 <sup>th</sup> bullet. Change ‘Agreement’ to ‘Agreed’ so sentence reads as follows: “M-091 work scope will be performed following the conditions set forth in the Agreed Order (Ecology (2014).”	Accepted

5	p. 1-11, Section 1.5	3 <sup>rd</sup> bullet. Reference Table 2-1 in parentheses at the end of this bullet; it will tie the bullet back to what workscope was suspended, had higher priority, etc.	Accepted however Table 1-2 will be put in parentheses.
6	p. 2-1, Section 2	4 <sup>th</sup> bullet. It is likely that some good information will come out of the retrieval processes for the 618-10 and -11 Burial Grounds. Instead of saying "DOE will consider incorporation...", consider saying "DOE will incorporate any applicable lessons learned from the retrieval of TRU waste..."	Accepted
7	p.2-1, Section 2.1	First sentence. Change to say either: (1) "Retrieval operations have been placed in a layup condition." Or (2)"The retrieval operation has been placed in a layup condition."	Accepted
8	p.2-3, Section 2.2	First paragraph, first sentence. Change 'resumes' to 'resume' so sentence reads as follows: '..once retrieval operations resume.'	Accepted
9	p. 2-3, Section 2.2	2 <sup>nd</sup> bullet. What is does "Characterization of the buried containers .."mean? For example is characterization performed by (1) reviewing records of the containers and their contents or (2) by actual opening and characterization of the container/contents or (3) some combination of both? Clarify what "characterization means".	Accepted, will add clarification
10	p. 2-3, Section 2.2.1	First paragraph, last sentence. Change 'being' to 'be' so sentence reads as follows: "Small containers of RH-RSW intermingled with CH-RSW drums will also be retrieved."	Accepted
11	p.2-5, Section 2.2.1	2 <sup>nd</sup> paragraph for the top of page, last sentence. Separate the word 'maybe', so the sentence reads as follows: "If a WIPP prohibited item is found, the item(s) will be characterized and/or dispositioned onsite and repackaged onsite or may be packaged offsite (Chapter 4)."	Accepted
12	p. 2-5, Section 2.2.2	First bullet. Which "trench" is being referred to in this statement?	Non-drum containers are located in numerous trenches. Language will be revised to delete reference to a particular trench.
13	p. 2-5, Section 2.2.2	Second bullet. Which "trench" is being referred to in this statement?	Non-drum containers are located in numerous trenches. Language will be revised to delete reference to a particular trench.

14	p. 2-6, Section 2.3	Fourth paragraph, third sentence. Change 'store' to 'storage', so the sentence reads as follows: "Options evaluated include retrieval of the RH-RSW individually in the trench or removing a caisson intact and storage at a TSD.."	Accepted
15	p. 2-12, Section 2.4	First paragraph, first sentence. Change 'contaminates' to 'contaminants' so sentence reads as follows: "of determining whether or not release of contaminants to the environment.."  'Contaminate or contaminates' is the act(s) of contaminating. 'Contaminant or contaminants' are the actual contaminating agent(s) or constituents(s).	Accepted
16	p. 2-12, Section 2.4	Second paragraph. What is requiring the sampling at the bottom of the trenches once waste is retrieved? Is it being driven by RCRA or CERCLA or both. The last sentence of this paragraph makes it even more confusing, as it says the milestone does not require sampling/analysis, Please rewrite this paragraph to make it clear when and why sampling and analysis are required, and what if any bearing the milestone has on why the sampling and analysis occurs.	Sample and analysis of trench substrate soils is required under Administrative Order No. 03NWPKW-5494, as amended. Will add clarification.
17	p. 2-13, Section 2.4	Last paragraph on page. If/when sampling occurs after waste removal from the trenches, you <u>have</u> implemented the SAPs. So, you will be providing input into the CERCLA/200-SW-2 cleanup process. Suggest you rewrite this paragraph to clarify this.	Accepted, clarification will be added.
18	p. 3-1, Section 3.2	Second paragraph, third sentence. What is meant by "characterized" in this sentence? Please indicate examples of types of activities you will do to "characterize" this type of waste.	Accepted, clarification will be added.
19	p. 3-4, Section 3.4.4	Second sentence. Is it accurate that there are currently NO mercury-bearing wastes in the Hanford Site Inventory? It appears you mean for this particular group (MLLW-06). But are there other groups that do have mercury -bearing waste? Stating there is none in the Hanford Site Inventory, even with the clarification in the parentheses, raises the question about if it still exists elsewhere onsite in other waste groups.	None is currently identified. Clarification will be added.

20	p. 3-5, Section 3.4.5	First paragraph on page, last sentence. What exactly are you trying to say by "DOE has implemented significant commercial capabilities with firms..." Does DOE have: (1) contracts in place with these firms or (2) can DOE easily/quickly put contracts in place with these firms? Please clarify what is meant by the statement "... has implemented significant commercial capabilities..".	Subcontractor to DOE has contracts in place with commercial facilities for the treatment of MLLW. Clarification will be added..
21	p. 3-5, Section 3.4.7	Second sentence. Is sodium metal the only water-reactive metal found in this Waste Treatability Group?	Sodium potassium (NaK) waste is also included in this waste treatability group.
22	p.3-5, Section 3.5	First paragraph, last sentence. What is the breakdown of capacity by trench? The total number is useful information, but a breakdown by trench would be better. Please give the remaining capacity for each of the MW trenches (31 and 34).	Trench 31 has approximately 10,000 m3 usable waste disposal space remaining and Trench 34 has approximately 9,000 m3. This equates to T 31 47% full and Trench 34 42% full.
23	p. 4-1, Section 4	First bullet. Add the word 'future' in as follows:"...as of June 30, 2009, and from future retrieval operations..."	Accepted
24	p. 4-1, Section 4	Second bullet, first sentence. Add the word 'future' in as follows: "...as of June 30, 2009, and from future retrieval operations..."	Accepted
25	p. 4-1, Section 4	Second bullet, second sentence. What are some examples of this "new capability" referred to here? If you have some examples of what is being considered, it would be good to list/mention them.	Accepted, Section 4.2.2 will be expanded to include examples.
26	p. 4-1, Section 4	Third bullet. What is involved in "Acquiring the necessary capability to repack the retrieved alpha caissons RH-TRUM waste..."? You must have some idea of what will be needed, or some examples of what is being considered. Is there any problem with giving some examples? Right now it looks like we have no idea what we are going to do, so we've states it this way.	Accepted, Section 4.2.3 will be expanded to include examples.
27	P 4-1, Section 4.1	Third paragraph. Is Figure 4-2 pushed out to FY 18-20 for restart because of the shutdown at WIPP or for other reason? Since WIPP is shutdown and will continue to be for some time, it has affected this schedule in addition to the obvious funding issues. Shouldn't it also be addressed as part of this PMP?	Accepted

28	p. 4-2, Section 4.1	First full paragraph at top of page, last sentence. Why are shipments being delayed until FY 2019? Is it because of the shutdown at WIPP and/or other reasons? Please explain the reasons for delay.	Accepted
29	p. 4-2, Section 4.1	Second full paragraph at top of page. When is the current due date for the milestones being discussed here?	The due date for M-091-44S is 9/30/2018. Date will be added.
30	p. 4-2, Section 4.1	Third full paragraph at top of page. Is this delay due to lack of funding? If the expected resources do not become available in FY20, what happens then? Perhaps, you could be a little clearer on why these delays are occurring and what the contingency is if resources do not become available as expected.	Accepted
31	P. 4-2, Section 4.1	Fourth full paragraph at top of page, first sentence. Add the word 'are' as follows: "Details for the re-deployment of certification/shipping capability at Hanford have not been established and are subject to national priorities."	Accepted
32	p. 4-2, Section 4.1	Fourth full paragraph at top of page, second sentence. Change 'has' to 'have' as follows: "Details for the re-deployment of onsite repackaging of TRUM waste have not been established."	Accepted
33	p. 4-2, Section 4.1	Fourth full paragraph at top of page, third sentence. Add 'a' to sentence as follows: "Preliminary cost for ramp-up of certification/shipping is \$3M, with a duration of six months."	Accepted
34	p. 4-2, Section 4.1	Fourth full paragraph at top of page, fourth sentence. Add 'a' to sentence as follows: "Cost for repackaging at WRAP is \$5.4M with a duration of twelve months."	Accepted
35	p. 4-2, Section 4.2	Second paragraph. Change sentence to read as follows: "This section addresses containers currently in storage including approximately 1,000 drums and these the remaining containers to be retrieved from the LLBGs."	Accepted
36	p. 4-2, Section 4.2	Third paragraph, second sentence. If the "...drum contents will be characterized and/or dispositioned onsite before the drum is shipped offsite.", why are the drums not being repackaged onsite? It seems like a more effort to open and characterize a drum onsite and then ship offsite for repackaging. If the drum requires being opened and	Wording directly from AO

		characterized onsite because of a prohibited item, we should finish the job and repackage it onsite too.	
37	p. 4-2, Section 4.2	Fourth paragraph, first sentence. Change sentence to read as follows: “ <del>For</del> Boxes of RSW that have been determined to be TRUM waste is are x-rayed,…”	Wording directly from AO
38	p. 4-2, Section 4.2	Fourth paragraph, second sentence. Change ‘for’ to ‘or’ in sentence as follows: “..is not found, the box will be either repackaged onsite or sent offsite for repackaging…”	Accepted
39	p. 4-3, Figure 4-1	Why is the gap from FY 14 to FY 18 occurring? Is it (1) lack of funding, (2) WIPP closure, or (3) both?	The gap from FY 2014-2018 is due to lack of funding as stated in Section. Will add clarification.
40	p. 4-4, Figure 4-2	Why is the gap from FY 13 to FY 20 occurring? Is it (1) lack of funding, (2) WIPP closure, or (3) both?	The gap from FY 2013-2020 is due to lack of funding as stated in Section. Will add clarification.
41	P 4-5, Figure 4-3	Top oval box, large container CH-TRUM & non-caisson RH-TRUM line, second box to right. Add the word ‘repackaged’ as follows: “Perform screening assay to determine whether the repackaged waste is MLLW or TRUM”	Accepted
42	p. 4-7, Section 4.2	First paragraph at top of page, second sentence. The information is placed in the operating record, which is good. How does this information correlate with what is in SWITS? If the review generates information not in SWITS, can it be added to SWITS? If no, then how is the info in the operating record tied to container records (e.g., SWITS)?	The paragraph refers to the waste record which includes waste reports from SWITS. Waste data is updated in SWITS as necessary.
43	p. 4-7, Section 4.2.1.1	Second paragraph. Suggest paragraph be altered by use of bullets as follows: “T Plant has the capability to repackage 55 and 85 gallon containers of CH-TRUM waste. <ul style="list-style-type: none"> <li>• T Plant modular enclosure systems have TRUM waste processing limitations (i.e., plutonium quantities, weight, and sharp items)</li> <li>• The 2706-T Facility activities include staging, verifying, treating, venting, sampling, and storing CH-TRUM waste.”</li> </ul>	Accepted, will revise as appropriate for clarification.

44	p. 4-10, Section 4.2.2	Second paragraph (below figure 4-6), first sentence. Is there a possibility of giving an example or examples of the “new capability” referred to here? Giving examples will not hold you to using them, they are just examples. The way it is written right now, there is so much ambiguity and it appears that there is no idea of how we will perform these tasks. It would be good to show we have some actual examples of processes that might work, if we have them.	Accepted, Section 4.2.2 will be expanded to include examples.
45	p. 4-11, Section 4.3.3	Second sentence of paragraph. It is stated that “.. it is expected that CCP will provide the capability to load and ship RH-TRUM waste to WIPP.” The question is if this is a real possibility that CCP can provide these services. If there is any chance that they might not be able to provide them do we have a contingency plan? This should be discussed here, as it would be a major roadblock to getting the materials shipped offsite and meeting the milestones, since the capability does not currently exist at the Hanford site.	Accepted. Project constraints for certification and shipment of TRU shipments to WIPP are provided in Section 8.3.7.. Section will be expanded as necessary.
46	p. 5-3, Table 5-1	First row, “Onsite Treatment Required”, column “Disposition Path Description”. What is the final disposal site for this waste once treated, onsite (where? MW trenched or ERDF?) or offsite (to WIPP)?	The waste will be disposed at the MWBT 31 or 34. The disposal site will be added to the table.
47	p. 5-3, Table 5-1	Third row, “High Uranium”, column “Disposition Path Description”. What is the final disposal site for this waste once treated, onsite (where? MW trenched or ERDF?) or offsite (to WIPP)?	The waste will be disposed at the MWBT 31 or 34. The disposal site will be added to the table.
48	p. 5-3, Table 5-1	Fourth row, “325 Building Hot Cell Debris, column “Disposition Path Description”. What is the final disposal site for this waste once treated, onsite (where? MW trenched or ERDF?) or offsite (to WIPP)?	The waste will be disposed at the MWBT 31 or 34. The disposal site will be added to the table.
49	p. 5-3, Table 5-1	Fifth row, “Oversize Package”, column “Treatment Problem”. The statement says that a package was retrieved that is “... too high for acceptance at Perma-Fix Northwest.” I assume that you mean ‘radiologically’, but you should clarify as to what is “too high for acceptance”.	Accepted.
50	p. 6-2, Section 6.4	Second sentence of paragraph. I am unsure as to your meaning I this sentence. What ‘agreements’ are being referred to an what might change within those agreements?	Accepted, clarification will be added. Revisions to the current Part A’s have not yet been approved.

51	p. 7-2, Section 7.1.1	Fifth sentence in paragraph. The document cited could not be found in the AR or in IDMS. Has this document been issued and if yes, where can it be found? There is also no link in the reference section.	The referenced document is attached to a transmittal letter. Reference will be updated.  05-AMCP-0242, K.A. Klien (DOE-RL) to M.A. Wilson, <i>Transmittal of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Non-time Critical Removal Action Memorandum for Plutonium Finishing Plant, Above-Grade Structures</i> , dated May 2, 2005.
52	p. 7-4, Section 7.1.3	Second paragraph, last sentence. Change sentence to read as follows: "The WIPP compliant containers are being stored at CWC <del>for the interim prior</del> until they can be shipped to WIPP."	Accepted
53	p. 7-4, Section 7.1.4	First and second paragraphs. It is unclear the way the paragraphs are written, if the tank heel is still in the tank, although it seems it would have to be. Is the heel still in the tank. If yes, then the tank heel and tank are stored together at CWC. So you will have to disposition both the heel and the tank to dispose of the waste. The heel is TRUM, but will the tank be only TRU if the heel is removed? This isn't really clear as written. Is there any way to make this more clear, especially since this is high visibility item for EPA?	Accepted, clarification will be added.
54	p. 7-5, Section 7.1.6	First paragraph, last sentence. As written, this sentence does not make sense. Please rewrite the sentence. I'd give a suggestion, but I really can't tell what you are trying to say.	Accepted, clarification will be added.
55	P 7-5, Section 7.1.6	Second paragraph, last sentence. Change sentence to read as follows: "Over time, this process formed localized areas of concentrated contaminants." (see comment 15 for further explanation)	Accepted
56	p. 7-5, Section 7.1.6	Third paragraph, last sentence. Change 'disposal' to 'disposed of', so the sentence reads as follows: "The selected pipelines associated with these OUs will also be excavated and disposed of at ERDF."	Accepted
57	p. 7-6, Section 7.1.6	Second paragraph from top of page, last sentence. Add the word "tank" so the sentence reads as follows: "All available information indicates that the settling tank has not leaked."	Accepted

58	p. 8-1, Section 8.1	Third paragraph, first sentence. Add a comma and the word 'and' so the sentence reads as follows: "WBS 013.01 Project Management – This scope includes safety, health, and quality technical support, and oversight, and is performed to support implementation...".	Accepted
59	p.8-5 Section 8.3.3.1	First paragraph, third sentence. Change 'fission' to 'fissionable' so sentence reads as follows: "There is a risk that the actual waste containers hold higher quantities of fissionable material than indicated in the waste records,"	Accepted
60	p. 8-5, Section 8.3.3.1	Third paragraph, last sentence. Change sentence to read as follows: "To mitigate this risk, cold testing and training in use of mobile hot cells using a mock-up caisson to simulate field conditions, will be performed."	Accepted
61	p. 8-5, Section 8.3.3.1	Fourth paragraph. Change the text to read as follows: "Another approach being explored is retrieving the alpha caissons intact and shipping then to a TSD (e.g., T Plant, CWC) for interim storage until capability is available for processing. Further analysis for this approach is needed to evaluate the risks involved. For example, some risks/issues could include: <ul style="list-style-type: none"> <li>• Alpha inventory in the facility</li> <li>• High radiological activity rate waste handling</li> <li>• Interfaces between other projects such as K Basin Sludge Project.</li> </ul>	It is not necessary to bulletize sentence. No change will be made.
62	p. 8-5, Section 8.3.3.1	Fifth paragraph, second sentence. Change 'may' to 'could' so sentence reads as follows: "Lessons learned from this activity could be applied to the retrieval of the alpha caissons in the 218-W-4B Burial Ground."	Accepted
63	p. 8-6, Section 8.3.3.2	First paragraph, last sentence. Change 'can' to 'could' so sentence reads as follows: "The surface radiological activity rate of the waste could be as high as 50,000 mrem/hr."	Accepted

64	p. 8-6, Section 8.3.4	First sentence of paragraph. Change 'are' to 'may be' so the sentence reads as follows: "there is a risk that RSW retrieval operations may be impacted by higher than expected contamination levels, container degradation, or container locations."	Accepted
65	p. 8-7, Section 8.3.6	Partial paragraph at top of page, partial sentence continued from previous page. Add an 's' to 'shipment' so the sentence reads as follows: "...time and increases the number of shipments to WIPP."	Accepted
66	p. 8-8, Section 8.3.7	Third sentence in the paragraph. Change 'to' to 'of' so sentence reads as follows: "Shipments to WIPP are dependent on a number of factors, including availability of shipping casks,..."	Accepted
67	p. 8-8 Section 8.6	Second paragraph from top of page, first sentence. Change sentence to read as follows: 'For TRU waste that cannot be packaged into WIPP certifiable containers at the point-of-generation, the future large container CH-TRUM and RH-TRUM capability being acquired under the M-91 scope could also be used to repackage this waste, along with WRAP, T Plant, or commercial facilities.'	Accepted
68	p. 8-8, Section 8.6	Third paragraph from top of page, second sentence. Change 'is' to 'are' so sentence reads follows: "At this time no impacts t the M-91 work scope are anticipated.."	Accepted
69	p. E-1, Table E-1	First row "200-BC-1", column "Description". Where you say "during which secondary cooling waste became contaminated.." it should say "...during which secondary cooling water became contaminated.." Secondary cooling loops for reactors contain water and that is likely became contaminated. When this water was disposed of to the trench the soil became contaminated. The excavated contaminated soil is the waste you are discussing here. Suggest changing 'waste' to 'water' as shown above.	Accepted
70	p. E-1, Table E-1	Second row "200-SW-2", column "Description", first paragraph, last sentence. Add an 'a' so sentence reads as follows: "These waste sites include 3 ponds, a burn pit, and a ditch."	Accepted
71	p. E-1, Table E-1	Third row "200-WA-1", column "Description", third listed reference. Change 'Wasted' to 'Waste' so sentence reads as follows: From Table 2-15 in RHO-RE-ST-30P, <i>Hanford Defense Waste Disposal Alternatives: Engineering Support Data for the Hanford Defense Waste – Environmental Impact Statement.</i> I looked up this reference	Accepted

		title, and it says 'waste' not 'wasted'.	
72	p. E-2, Table E-1 continued	First row "200-DV-1", column "Description", listed reference. Change "Wasted" to 'Waste' so sentence reads as follows: "Estimated volumes taken form Table 2-15 in RHO-RE-ST-30P, <i>Hanford Defense Waste Disposal Alternatives: Engineering Support Data for the Hanford Defense Waste – Environmental Impact Statement.</i> " I looked up this reference title, and it says 'waste' not 'wasted'.	Accepted
73	p. E-3, Table E-1 continued	Second row "224B", column "Description", first paragraph, first sentence. Add the word 'from' and remove the words 'the of', so the sentence reads as follows: "The 224-B Building, located in the 200 East Area of the Hanford Site, was used to purify and concentrate diluted plutonium nitrate solution that was from <del>the of</del> the 221-B Building bismuth-phosphate process."	Accepted
74	p. E-6 References	Second reference listed on page. Change "Wasted" to 'Waste' so sentence reads as follows: "RHO-RE-ST-30P, <i>Hanford Defense Waste Disposal Alternatives: Engineering Support Data for the Hanford Defense Waste – Environmental Impact Statement</i> , Rockwell Hanford Operation...." I looked up this reference title, and it says 'waste' not 'wasted'.	Accepted