

Comment No.	Comment	Response
<b>Colorado Department of Public Health &amp; Environment (CDPHE) Comments</b>		
<b>General Comments</b>		
None		
<b>Specific Comments</b>		
1	Section 9.2.2.1 – Explain why only AOC wells are used in the FS evaluation.	<p>AOC wells are wells that are within a drainage and downgradient of a contaminant plume or group of contaminant plumes. These wells were selected by the RFCA Parties in the IMP as the wells that will be monitored to determine whether the plumes are discharging to surface water. As explained in section 9.2.2.1, (now 10.2.2.1) the locations of the groundwater AOC wells are also based on consideration of regulatory provisions concerning groundwater point of compliance locations. This information, plus the groundwater use classification of surface water protection, were the key factors the RFCA Parties considered when selecting the locations to evaluate Groundwater RAO 1.</p> <p>This issue is explained in detail in section 9.2.2.1 (now 10.2.2.1). No change made.</p>
2	Section 9.2.2.3 – A) This discussion in regard to Figure 9.2 seems confusing since there are locations in the buffer zone and next to the site boundary that exceed the MCLs, yet this section states that water in the buffer zone and off-site will support all uses. Please provide an explanation for this apparent discrepancy. B) Stating that, “On-site groundwater will not be used for any purpose unrelated to RFETS cleanup activities” assumes an institutional control is in place. C) The third sentence in the second paragraph states that it is important to know where groundwater is contaminated above MCLs. This section needs to explain why it is important to delineate “the boundary between the outer BZ and on-site groundwater.”	<p>A. Original Table 9.3 provides information for each groundwater sample location where MCLs were exceeded in the reconfigured BZ OU. The RFCA Parties have reviewed original Table 9.3 and determined that the analytes and locations with the MCL exceedance do not require institutional controls. This discussion will be moved to new Section 9.0, Summary and Conclusions of the RI.</p> <p>B. The statement “On-site groundwater will not be used for any purpose unrelated to RFETS cleanup activities” is a quote from the RFCA Vision. This statement will be added to Section 10.0, Detailed Analysis of Alternatives, (now Section 11.0) to ensure that it is included in the discussion of institutional controls.</p> <p>C. The third sentence will be deleted.</p>

Comment No.	Comment	Response
3	<p>Section 9.3.1 – Please provide consistent discussion of AOIs and COCs, or explain why discussions are including COCs vs. AOIs. Why weren't COCs discussed in the groundwater discussion? Also, this discussion should be expanded to recognize that surface water standards are supposed to be met everywhere on site not just at the POCs.</p>	<p>Please see Section 1.4 for a general explanation of AOIs and COCs.</p> <p>The discussion on surface water COCs will be deleted. The section will be modified to reflect only the surface water AOIs.</p> <p>Based on the analyses conducted, groundwater COCs were not identified in the Groundwater and Soil RAO TM or in the CRA.</p> <p>Section 9.3.2.1 (now 10.3.2.1), second paragraph, third sentence will be revised as follows:</p> <p>“No surface water AOIs exceed the surface water standards at any surface water POC or the surface water monitoring location immediately upstream of the surface water POC for those surface water AOIs where data are not available at the surface water POC. However, as stated, surface water sample results do not always meet Colorado surface water quality standards for some analytes at some on site monitoring locations upstream of the terminal ponds.”</p> <p>Section 9.3.2.1 (now 10.3.2.1), second paragraph, last sentence will be revised as follows:</p> <p>“An institutional control will be needed to prevent use of surface water upstream of the terminal ponds.”</p> <p>Note: This sentence will be moved and will become the first sentence of the second paragraph. The sentence “An institutional control . . . will become the last sentence in the paragraph.</p>
4	<p>Section 9.3.1.2 – Please provide the rationale for this COC discussion. Why are only certain analytes discussed? Why are VOCs or metals not identified? Also, please include other</p>	<p>This section will be deleted. Please see response to CDPHE specific comment 3.</p>

Comment No.	Comment	Response
	potential AOIs, per previous comments, seen at surface water measurement locations other than the POCs.	
5	Section 9.3.1.3 – Please modify this discussion to identify that surface water is supposed to meet standards everywhere on site not just at the POCs. Also, that the compliance being discussed here is associated with penalties as opposed to compliance at other sampling sites where there are no associated penalties. Compliance is also measured at POMs and POEs, to determine if actions are necessary to prevent the degradation and non-compliance of surface water quality elsewhere on site, other than at the POCs.	Section 9.3.1.3 (now Section 10.3.1.3) will be deleted. Discussions on the demonstration of compliance are more appropriate in the IMP and/or RFCA.
6	Section 9.3.2 – The surface water RAO should be modified: “Meet surface water standards, which are the WQCC surface water standards, in all surface water on-site.” The last sentence in the second paragraph should also be modified: “This RAO is met at surface water POCs.” Alternatively, the above proposed modification could added as a second RAO. The first existing RAO is met; the new second would need institutional controls for Segment 5 until water quality could support all uses.	Please see response to CDPHE specific comment 3.
7	Section 9.3.2.1 – This discussion should include a discussion, per previous comments, to ensure the ponds are not perceived as part of the solution.	In the past, the system of retention ponds has been used as a surface water management tool; however, these ponds will not be relied on as part of the final remedy for the site. No change made.
8	Section 9.4.1 (p. 9-12) – The last sentence in the first paragraph should be changed to address the consequences of the SWMU-specific approach to risk management under CHWA/RCRA.	<p>The last sentence will be deleted to keep this section focused only on the environmental concerns that were identified in the RI.</p> <p>The following footnote will be added:</p> <p>“CDPHE guidance requires evaluation of contaminant concentrations on a solid waste management unit or release site basis. As discussed in Section 1.2.3, this was implemented at RFETS on an IHSS-by-IHSS basis during the accelerated action</p>

Comment No.	Comment	Response
		<p>process. As noted in the Section 1.4.3, by addressing cumulative impacts from multiple release sites, the CRA's exposure unit approach complements, but does not supplant, the CHWA's emphasis on individual release sites. Because the parties had anticipated using institutional controls consistent with the anticipated future use of the site, CDPHE determined that a post-remediation analysis of residual risk on a release site basis was not necessary."</p>
<p>9</p>	<p>Section 9.4.2.2 – Please explain how this RAO is met everywhere on site or give specific references to earlier fate and transport sections where an explanation is provided.</p>	<p>The paragraph after the RAO will be deleted and replaced with the following paragraph:</p> <p>“Soil RAO 2 is met provided residual soil contamination is not disturbed. If residual soil contamination is disturbed, the residual soil contamination could migrate to surface water via erosion which could result in some surface water sample results above surface water standards at some surface water monitoring locations. An institutional control is needed to prevent disturbance of soil.”</p>
<p>10</p>	<p>Section 9.4.2.3 – As discussed previously, please provide an explanation for the change in discussion from AOIs to COCs. Also, please provide the risk associated with current levels of Pu contamination in the Wind Blown EU to compare with the 1 x 10<sup>-6</sup> risk associated with 9.8 pCi/g.</p>	<p>Please see response to CDPHE specific comment 8.</p> <p>Section 9.4.2.3 (now 10.4.2.3), second paragraph after RAO: the following sentence will be added:</p> <p>“Results of the CRA indicate potential risk to a WRW is estimated to be 2 x 10<sup>-6</sup> for exposure to plutonium-239/240 in surface soil in the Wind Blown Area EU.”</p> <p>This statement is also made in Section 9.4.1 (now 10.4.1).</p>
<p>11</p>	<p>Section 9.4.2.3 and Table 9.1 - Text in this section and in the comments column of pages 2 and 3 of the table should be revised to address the three IC-related issues described in comments on preceding sections: 1) CHWA SWMU-specific risk evaluation, 2) assumption of refuge scenario, and 3) residual subsurface soil contamination. All of these indicate that soil RAO 3 is not met</p>	<p>Please see response to CDPHE specific comment 8.</p> <p>The following will be added after the fourth paragraph of Section 9.4.2.3 (now 10.4.2.3):</p> <p>“Because the CRA evaluates potential risk to the wildlife refuge</p>

Comment No.	Comment	Response
	without appropriate institutional controls.	<p>worker and wildlife refuge visitor, the assumptions used in the CRA human health calculations, including the assumptions used in calculating WRW PRGs, need to be embodied in an institutional control. Section 11.0, Detailed Analysis of Alternatives, will evaluate alternatives that include the underlying assumptions used in the CRA human health calculations as an institutional control.”</p> <p>Note: Section 9.6 (now 10.6) will be deleted and replaced with the following:</p> <p>“Four RAOs (groundwater RAO 2; groundwater RAO 3; soil RAO 1; soil RAO 3) are not met in the Central OU. Two RAOs (surface water RAO and soil RAO 2) are met under current site conditions; consequently, institutional controls are needed to ensure that the RAOs will continue to be met (Table 10.1). All ARARs, except for the environmental covenant ARAR, are met in the Central OU as long s the land surface is not disturbed; consequently, institutional controls are needed to ensure that some ARARs will continue to be met. Alternatives will be developed and evaluated in detail for the Central OU (Section 11.0).”</p>
12	<p>Section 9.5.2 - #1) Although this ARAR may be met at the surface water POCs, the standards are also supposed to be met everywhere on site. #2) It is not our understanding that “no further actions can be taken”, rather, that no additional actions can reasonably be taken at this time. It should also be recognized that future additional actions may be taken based on future monitoring results that might identify other areas of concern (such as at SW056). #9) The environmental covenant ARAR has not been met by accelerated actions, as no EC has been granted. The sentence should mention that the covenant will be applied to the DOE-retained portion.</p>	<p>#1. The following will be added to the end of the second sentence:                      “, but surface water sample results do not always meet Colorado surface water quality standards for some analytes at some on site monitoring locations upstream of the terminal ponds.”</p> <p>#2. The phrase “no further actions can be taken” will be deleted and replaced with the phrase “no additional actions can reasonably be taken.” The need for any future additional actions will be determined through the consultative process. This is a true statement for any future monitoring results that might identify other areas of concern. As such, it is</p>

Comment No.	Comment	Response
		<p>inappropriate to add a specific comment in this section of the RI/FS Report.</p> <p>#9. The following will be added to Section 9.5.2 (now 10.5.2):                      “8. Environmental Covenant: This ARAR is met at the Present Landfill, but the environmental covenant needs to be expanded to include the Central OU.”</p>
13	<p>Section 9.6 – in the first paragraph, the environmental covenant ARAR has not been met by accelerated actions, as no EC has been granted.</p>	<p>Please see response to CDPHE specific comment 12.</p>
14	<p>Section 9.6 – In this section and elsewhere in the document, the terms “reconfigured BZ OU” and “reconfigured IA OU” are used. These terms anticipate changes to these OU boundaries, which have not yet occurred. Once these boundary changes are made, alternate terms, such as “retained lands” and “refuge lands”, could help make the distinction between the OU boundaries used for accelerated actions and the realigned areas described here and presented in the Proposed Plan.</p>	<p>Section 9.6 proposed changes to the OU boundaries. The RFCA Parties will continue discussions to fine-tune the OU boundaries. The final boundary can be included in the final RI/FS Report. Approval by the RFCA Parties of the RI/FS Report will be approval of the reconfigured OU boundaries. This discussion will be moved to new Section 9.0, Summary and Conclusions of the RI.</p> <p>It is anticipated that the Central OU will be consistent with the DOE retained lands; however, it is not appropriate to use the term “DOE retained lands” or “refuge lands” in the RI/FS Report. What DOE and the USFWS determine to be the DOE retained lands or refuge lands is separate from the RCRA/CHWA and CERCLA process.</p>
15	<p>Table 9.1 –This table should be modified as appropriate based on previous comments. Either delete “at surface water POCs” from the RAO and “This RAO is met” from the comments, or create a second RAO as described above.</p>	<p>Please see response to CDPHE specific comment 3.</p>
16	<p>Table 9.2 – A) Asbestos associated with buildings left in the ground should be mentioned under comments related to National Emissions Standards for Asbestos. B) Point of Compliance wells are identified in Section 9.2.2.1 as AOC wells. Please provide a</p>	<p>A. The waste disposal section of the asbestos NESHAP, §61.151, only applies to friable asbestos or non-friable asbestos that will be sanded, grinded, etc., or has a high probability of becoming pulverized, etc. Any asbestos left in buildings was</p>

Comment No.	Comment	Response
	consistent discussion/definition under comments regarding Colorado Basic Standards for Groundwater. C) For groundwater monitoring, this table should refer to 6 CCR, 1007-3 §§ 264.91 through 264.100, not part 265 (see 265.121(a)(3)).	non-friable, therefore, the regulation is not R&A. No change made. B. Table 9.2 (now Table 10.2) will be corrected to reflect AOC wells rather than POC wells. C. The groundwater monitoring requirements reflect the ARARs identified in the regulator approved Present Landfill IM/IRA.
17	Figures – A) It is recommended that there be some recognition of actual site-derived contamination vs. naturally-occurring exceedances, or otherwise not associated with site-generated contamination (such as from well casings). This would help in understanding the appropriateness of the POC/AOC well locations. B) Section 9 figures show either the IA OU or both the IA OU and the “reconfigured IA” boundary. All figures should be consistent.	A. Table 9.3 (now Table 10.3) provides information for each groundwater sample location where MCLs were exceeded in the reconfigured BZ OU. Known information regarding whether an exceedance may be caused by actual site-derived contamination vs. naturally-occurring exceedances, or otherwise not associated with site-generated contamination (such as from well casings), is provided in the table. Note: This table will be moved to new Section 9.0, Summary and Conclusions of the RI. B. The reconfigured OU boundaries appear in new Section 9.0, Summary and Conclusions of the RI. The figures associated with this section will include both the RFCA OU boundaries (as dashes) and the proposed reconfigured OU boundaries (as a solid line). The authors thought it might be helpful to reviewers to see both boundaries on one figure. The RFCA Parties could decide to remove the RFCA OU boundaries for clarity.
	<b>Editorial Comments</b>	
1	Section 9.2.1 – The potential problems identified in the last paragraph could be highlighted as bullets.	Change made.
2	Section 9.2.2.1 (p. 9-4) – Modify the second sentence in the fourth paragraph: “The locations of the groundwater AOC wells on Figure 9.2 are...”	Change made.
3	Section 9.2.2.1 (p. 9-4) – Capitalize “Hazardous” in the middle of the fifth paragraph.	Change made.
4	Section 9.3.2.1 – Add an “s” to the end of “POC” in the second sentence of the second paragraph.	Change made.
5	Section 9.4.2.3 (p. 9-13) – The third sentence in the second	Change made.

Comment No.	Comment	Response
	paragraph should be edited slightly. substitute "is met" for "are met" and strike ". Additionally, annual" and insert ", and annual"	
<b>Environmental Protection Agency (EPA) Comments</b>		
<b>General Comments</b>		
1	Based on previous EPA comments regarding discussion of AOIs and ecological risk, it is recognized that Sections 8 through 10 will require modification; therefore, comments on that issue have not been submitted for Sections 8-10.	Ongoing discussions between the RFCA Parties will address the issue. Upon resolution, the sections will be revised as necessary.
2	Surface water is cited as being above standards at various locations throughout the site. RFCA says surface water standards needs to be met everywhere on the site. Therefore, surface water needs to be carried forward in the FS.	Please see response to CDPHE specific comment 3.
3	Because asbestos remains in the Present Landfill (PLF), please include text that provides for ongoing containment of asbestos.	<p>Table 9.2 (now Table 10.2) identifies the National Emission Standards for Asbestos as an ARAR for the Present Landfill, IHSS 114.</p> <p>The following will be added to Section 9.5.2 (now 10.5.2):</p> <p>"National Emission Standards for Asbestos: This ARAR is met at the Present Landfill because any asbestos-containing waste material was covered with at least 60 centimeters of compacted nonasbestos-containing material. The cover provides for ongoing containment of asbestos-containing waste material."</p>
4	An additional Point of Compliance (POC) is defined in the PLF Interim Measure/Interim Remedial Action (IM/IRA) and RFCA Attachment 10 at the seep treatment system outfall. Please include in the text and Figure 9.1.	The current language reflects the Present Landfill IM/IRA. No change made.
5	Section 9.3.1.1, RFCA Section 2.3 is cited. The section may need updating based on the results of the risk assessment and the ultimate boundary of the DOE-retained lands. This section of RFCA is currently specific to radionuclides, and may not be protective of ecological receptors based on the results of the	As stated in RFCA Attachment 5, Section 2.3, the need for and location of POEs and performance monitoring points will be addressed as necessary in the CAD/ROD. The RFCA Parties could also decide to identify the constituents to be monitored and the frequency of monitoring in the CAD/ROD.

Comment No.	Comment	Response
	ecological risk assessment.	
	<b>Specific Comments</b>	
1	Pages 8-5 and Page 9-7, last sentences of first full paragraphs. These pages state that groundwater RAOs are not met, but that “at this time, no other alternatives... are feasible or practicable.” Please provide the rationale for this conclusion from the Groundwater IM/IRA.	Section 8.0, Contaminant Fate and Transport, provides the rationale for this conclusion which is consistent with the conclusions from the Groundwater IM/IRA.
2	Page 9-2, 4th Paragraph. This section discusses ecological risk assessment goals and endpoints. Please define these terms.	Section 9.1 (now 10.1), eighth paragraph, first sentence: The sentence will be deleted and replaced with the following:  “The environmental protection RAO is based on the overall Ecological Risk Assessment (ERA) risk management goal identified in the CRA Methodology, i.e., ‘Site conditions due to residual contamination should not represent significant risk of adverse ecological effects to receptors from exposure to site-related residual contamination.’ ”
3	Page 9-7, Third Paragraph, Bullet 1. Bullet 1 describes the East Trenches Plume Treatment System (ETPTS). For clarity, please revise the second sentence to include the italicized words. The sentence should be revised to “A phytoremediation project was implemented downgradient of the ETPTS (along South Walnut Creek) to enhance treatment of residual portions of the East Trenches VOC plume downgradient of the ETPTS. Make a similar change to Bullet 3.	Phytoremediation has not been implemented as a treatment technology at RFETS. The bullets will be revised as follows:  A phytoremediation project was implemented downgradient of the ETPTS (along South Walnut Creek) to reduce the migration of contaminated groundwater that could impact surface water quality.  A phytoremediation project was implemented downgradient of the SPPTS (along North Walnut Creek) to reduce the migration of contaminated groundwater that could impact surface water quality.
4	Page 9-15, Section 9.5.2. The introductory sentence implies that this section discusses all ARARs identified in Table 9.2. However, this does not seem to be the case. For example, NESHAPS is listed in the table, but not addressed in this section. This sentence should be changed to reconcile what is addressed	The sentence will be revised as follows: The sources of identified ARARs (Table 9.2) (now Table 10.2) and a summary of how key ARARs are met is provided below.

Comment No.	Comment	Response
	in this section with all of the ARARs mentioned in Table 9.2. Section 10.3.3.2 should also be reconciled.	
5	Page 9-16, 2nd ARAR. In reference to the groundwater treatment systems, please change "operating properly and successfully" to "operating as designed."	Change made.
6	Page 9-16, 3rd ARAR. The analyte list for the PLF outfall has changed. Please update the text in this section.	SVOCs will be added to the analyte list.
7	Table 9.2, Page 4 of 22. In the requirement for Floodplain/Wetlands, please include in the comment column that acreage is undergoing restoration as part of the interim remedy at the pond below the PLF and monitored as part of the PLF monitoring and maintenance (M&M) and sitewide wetlands plans.	The following will be added to the comment column:  "Acreage is undergoing restoration in accordance with the Rocky Flats Wetland Mitigation Monitoring and Management Plan."
8	Table 9.2, Page 4 of 22. The NPDES comment should indicate that the substantive equivalent of NPDES is provided for at the PLF outfall in the PLF M&M and sitewide IMP plans. This comment is logically added between the two existing sentences.	The following will be added to the comment "Substantive requirements for a NPDES permit are included in the Present Landfill IM/IRA. These requirements will be carried forward into the final CAD/ROD."
9	Table 9.2, Page 4 of 22. Please delete NPDES and add "any nationwide, regional, or individual permit".	Please see Table 9.2 (now Table 10.2), 33 CFR 323.2 and .3 Comment. No change made.
	<b>Editorial Comments</b>	
1	Several figures in Sections 8, 9, and 10 are repeats from Section 7 and previous sections. Please consider removing redundant figures as these sections of the document are revised.	The figures that are repeated were considered key to understanding proposed OU boundary changes and what institutional controls were needed without having the reader flip back and forth between these key sections. Because there are not many figures and the information contained on them is vital to understanding the alternatives considered by the RFCA Parties, no change will be made.
2	In the Table of Contents, please add PLF to the list of acronyms.	Change made.
<b>U.S. Fish and Wildlife Service's (USFWS) Comments</b>		
<b>General Comments</b>		
1	In the case of references to the ERA, the phrase "no significant risk of adverse ecological effects" is used, please give HQ values	This information will be provided in the new CRA summary and conclusions section, Section 7.0.

Comment No.	Comment	Response
	that show this.	
	<b>Specific Comments</b>	
1	Section 9.3.1.2, page 9-10, last paragraph – If there are 19 surface water AOIs and some of them are detected at POEs and POMs above surface water standards, why are they not routinely monitored at POCs?	Please see response to CDPHE specific comment 3.
	<b>Editorial Comments</b>	
	None	