MEETING NOTES
Waste Management Area C RCRA Facility Investigation Report

MEETING DATE: March 29, 2016
LOCATION: Washington State Department of Ecology Office, Richland, WA
ATTENDEES:

Ryan Beach (DOE-ORP)	Damon Delistraty (Ecology)	Beth Rochette (Ecology)
Marcel Bergeron (WRPS)	Dan Parker (WRPS)	Kristin Singleton (WRPS)
Joe Caggiano (Ecology))	Anna Radloff (WRPS)	Marysia Skorska (Ecology)
Ryan Childress (WRPS)	Julie Robertson (Freestone)	Cindy Tabor (WRPS)

BACKGROUND INFORMATION: The meeting was called to promote continued Ecology, EPA, DOE, and WRPS discussion about comments associated with and revision of RPP-RPT-58339, Rev. A Draft *Phase 2 RCRA Facility Investigation Report for Waste Management Area C* (WMA C RFI Report). The report was submitted to Ecology and EPA in December 2014 to meet *Hanford Federal Facility Agreement and Consent Order* (HFFACO) Milestone M-045-61. Ecology's February 23, 2015 response to the RFI report submittal (Letter 15-NWP-37) noted that holding "a recurring meeting to discuss statements, regulatory interpretations, and the process steps for obtaining an agreeable RFI/CMS process for WMA C Closure" would be beneficial. Ecology comments on the WMA C RFI Report and supporting documents were transmitted on July 7, 2015, "Department of Ecology's (Ecology) Completed Review of Phase 2 RCRA Facility Investigation Report for Waste Management Area C, RPP-RPT-58339, Revision A Draft" (15-NWP-120).

Lists of expectations, agreements, and actions (including the status of any actions) are documented in the meeting notes.

PURPOSE OF MEETING: This meeting was called to discuss select comments on the WMA C RFI Report.

STATUS OF PRIOR MEETING NOTES: Ms. Robertson provided status information on the following sets of meeting notes:

- December 2, 2015, Performance Assessment meeting: Notes had been signed by DOE and were with Ecology for signature.
- January 13, 2016, Performance Assessment meeting: Sign-off was completed at this March 29, 2016, meeting.
- February 23, 2016, meeting: Notes were with Ecology for review.
- March 17, 2016, meeting: Notes were in internal review.

DISCUSSION OF SELECT ECOLOGY COMMENTS ON WMA C RFI REPORT AND BRA: The attendees discussed select Ecology comments on the WMA C RFI Report and proposed responses, as shown in the attached table. The comments focused on Section 6 of the document. Ms. Tabor identified that rows shaded pink in the attached table identified that the comment will be addressed in one or more volumes of the WMA C HFFACO Action Plan Appendix I Performance Assessment (IPA), which is scheduled to be released later this calendar year. Ms. Tabor also noted that a yellow-shaded row on the attached table indicated a comment for which DOE and WRPS need further clarification from Ecology.

The attendees tentatively agreed to the proposed responses to the following WMA C RFI Report comments pending their incorporation into the revised WMA C RFI Report: Joe 29, Joe 30, Joe 32, Joe 33, Joe 34, Joe 35, Joe 38, Joe 39, Joe 40, Joe 41, Joe 42, Joe 43, Joe 44, Joe 45, Joe 46, Joe 47, Joe 48, Joe 49, Joe 50, Joe 51, Joe 85, Joe 86, Joe 87, Joe 88, Joe 91, Joe 92, Joe 93, Joe 103; Beth 21.

Pending incorporation into the revised WMA C RFI Report, the attendees tentatively agreed to a modified updated response to the following comments, as detailed below:

- Joe 31: Modify line 39/first sentence of Section 6.2.2 to read, "The second component of the WMA C IPA is an initial assessment of long-term performance of WMA C, however defined for closure, assuming implementation of anticipated closure actions."
- Joe 36: Revise/correct the Washington Administrative Code citation. Mr. Marcel took an action to identify the correct citation.
- Joe 37: Change "digital" to "numerical."
- Joe 82: The response will be shaded pink to indicate that the comment will be addressed in one or more volumes of the IPA.
- Joe 83, Joe 84, Joe 90: The responses will be shaded pink to indicate that the comment will be addressed in the IPA (Past Leaks Analysis portion).

The attendees agreed to hold the following WMA C RFI Report comments open pending further discussion: Beth 20, Beth 22, Beth 23.

EXPECTATIONS, AGREEMENTS, AND ACTIONS: Expectations, agreements, and actions are provided in the tables that follow. A new expectation was recorded during this meeting.

NEXT MEETING: Ms. Tabor proposed holding the next meeting in April, date to be determined.

Ryan E. Beach	Ryan E Beach	5/4/16
DOE Project Manager (print)	DOE Project Manager (signature)	Date
Michael W Barnes	Michael W Barnes	5/6/16
Ecology Project Manager (print)	Ecology Project Manager (signature)	Date

DATE	EXPECTATIONS
01/23/2016	1. Mr. Barnes expressed his expectation that if the revised WMA C RFI Report refers to 200-BP-5 documentation to address groundwater conditions, the 200-BP-5 remedial investigation report should first be finalized.
03/17/2016	2. By the end of May 2016, an agenda item will be added to allow for discussion of the results of Action Number 2015-10-28-2 regarding groundwater integration.

DATE	AGREEMENTS
04/15/2015	1. Regarding references in RPP-RPT-58339, Rev. A Draft *Phase 2 RCRA facility investigation Report for Waste Management Area C* to RPP-PLAN-37243 *Phase 2 RCRA Facility Investigation/Corrective Measures Study Master Work Plan for Single-Shell Tank Waste Management* Areas: • References in the draft RFI report are adequate as is and do not require modification. • The HFFACO milestone (M-045-58) associated with the Master Work Plan is complete. • It would be beneficial to continue discussion on the topics covered in the Master Work Plan.

ACTIONS (2 pages)			
Action Number	**Actionee**	**Description**	**Status**
2015-08-26-1	Cindy Tabor	Evaluate whether internet links to reference documents can be added to the RFI report.	In progress. Will remain open until document revisions are farther along.
2015-10-28-1	Mike Barnes	Ms. Tabor, Ms. Radloff, and Messrs. Barnes, Caggiano, and Bergeron will work together to clarify what groundwater technical information Ecology needs to see in the RFI report. The parties will also identify whether that information is in 200-BP-5 documents, and if so, where.	In progress. See action 2015-10-28-2.
2015-10-28-2	Ryan Beach	Develop a path forward for the groundwater integration approach.	In progress. RL and ORP meetings are ongoing. See Expectation 2.
2015-10-28-3	Cindy Tabor	Regarding WMA C tank and soil inventory/leak information, WRPS/DOE will prepare a table with values to be used as the basis for corrective action decision making and will provide the basis information (e.g., reference documents) as footnotes/supporting information. Information in the table will be reviewed in a future meeting, the table incorporated into the meeting notes, and the notes entered into the HFFACO Administrative Record.	The soil inventory report (RPP-RPT-42294, Rev. 2) was issued 03/29/16 and will be placed in the HFFACO Admin Record. Closed 3/29/16.

ACTIONS (2 pages)			
Action Number	**Actionee**	**Description**	**Status**
2016-01-21-1	Cindy Tabor/Julie Robertson	Identify and report back regarding where WMA C RFI Report provides information on the currently agreed-to RFI/CMS process.	Open. Ms. Robertson will contact Mr. Caggiano with the response.
2016-01-21-5	Ryan Beach	Track DOE-RL responses to Ecology comments related to groundwater (200-BP-5) and report back at future WMA C RFI Report meetings.	In progress. See Expectation 2.
2016-03-29-1	Marcel Bergeron	Identify and report back on correct citation to respond to WMA C RFI Report comment Joe 36.	New.

Attachment (6 pages)
Responses to Select Ecology Comments on the WMA C RFI Report

Comment From (ECY)	Item	Page #/ section # Line #	Comment (s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/ problem indicated.)	*Chapter*	Response
Joe	29	Pg. 6-2, Lines 1-17	RCRA does not distinguish between primary and secondary sources. A RCRA TSD facility includes the facility, the waste therein, and ALL media contaminated by releases from the facility. Using the term,"Secondary Sources", implies that these are less important to consider in the CMS and will not be treated the same. If these "Secondary Sources" are ancillary equipment, then they are part of the SST system and must be treated on equal footing with all other sources in the SST system. Please either explain or delete the use of this term and this concept.	6	Concur. RFI Report will be modified to remove reference to primary and secondary sources and instead refer to the sources using more appropriate descriptive terms.
Joe	30	Pg. 9, Table 6-1.	For the Post-Institutional Control Period, please define what the "Facility" is for clarity. Is it the area under any barrier? Or something else? Please clarify. Also, explain whether "Water Resources" in this table includes groundwater. If not, then specify these points of assessment for groundwater.	6	Comment is assumed to pertain to Pg. 6-5 not Pg. 9. Yes, "water resources" includes groundwater. This will be clarified in the RFI report. The "Facility" is the area that encompasses tanks and ancillary equipment that will contain residual waste at closure. A footnote will be added to the RFI Report.
Joe	31	Pg. 6-4, lines 38-44.	This section discusses "anticipated closure actions." Other than landfill closure, these closure actions haven't been addressed, but presumably will under the CMS. Will these be factored back into the C Farm IPA? Please clarify.	6	If the CMS selects an alternative, which will result in closure actions that remove contaminated equipment, an evaluation will be conducted to determine whether the impacts of the selected alternative should be incorporated into a revision of the IPA.
Joe	32	Pg. 6-6, Sect. 6.2.2.2	Is the plane 100 m downgradient from the facility the only compliance point that will be used for both hazardous and radioactive waste contaminants in groundwater? If not, what other compliance point(s) will be used and will these comply with the RCRA POC? Please clarify.	6	We anticipate that the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* , will include model results at 100 m down gradient of the WMA C fenceline. The latter document will also include additional results at the fenceline. The following sentence will be inserted before the last sentence in the paragraph: "In addition, the hazardous chemical impacts will be evaluated at the fenceline."
Joe	33	Pg. 6-6, Sect. 6.2.2.3	What about a time period equal to the time it takes for the longest-lived isotope and/or waste to reach peak concentration? Is this being considered? Please clarify.	6	The base case in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* (435.1 PA) and *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* will examine peak concencentration and impacts out to 10,000 yrs post-closure. A sensitivity case in the 435.1 PA will examine peak radiouclide concentrations out to 400,000 yrs.

Attachment (6 pages)
Responses to Select Ecology Comments on the WMA C RFI Report

Joe	34	Pg. 6-9, Alternative Conceptual Models.	Some mention should be made that at least one additional conceptual model considering the heterogeneity of the stratigraphy is being investigated and will be incorporated in the site analyses should it be deemed significant after investigation. Please add.	6	The heterogeneity issue is addressed through the two geologic models described in Section 6.3.1.2. The existence of the geologic models will be noted in the Section 6.3 intro (e.g., page 6-9, line 26, insert new 2nd sentence into paragraph after bullets). A heterogeneous model was developed for the Performance Assessment of Waste Management Area C, Hanford Site, Washington (435.1 PA) to take into account observed moisture content information. This model is being used for all evaluations in the IPA (radionuclides and hazardous chemicals in tanks residuals as well as past leaks)
Joe	35	Pg. 6-9, Lines 29-44.	How will these analyses be run if characterization to date hasn't found high levels of contamination in the shallow vadose and none in the deep vadose zone? The same could be said for preferential pathways. Please explain how these analyses will be done.	6	The analysis *of past leaks for WMA C* will make use of all information available including the limited amount of Tc-99 contamination in the vadose zone and the historical observations of concentrations of Tc-99 and other contaminants seen in groundwater.
Joe	36	Pg. 6-19, lines 21-22	This sentence should be modified to indicate that poor or no annular seals could lead to open spaces between the casing and formation which could accelerate vertical movement of fluids. Please clarify.	6	Comment is assumed to pertain to Pg 6-17 (not Pg 6-19). Sentence will be rewritten to state "Poorly constructed wells (e.g., those with poor or no annular seals) may be associated with annular spaces between the casing and formation, which could accelerate vertical movement of fluids. However, closure actions will be compliant with WAC requirements for wells (WAC 173-160-261), which provide protection against future migration down these boreholes as preferential pathways"
Joe	37	Pg. 6-18, Lines 6-8.	Will these be used to approximate the contaminants and the timing of their arrival in groundwater to the extent possible? Please clarify.	6	Yes, these digital models will be used to approximate the timing of the arrival of contaminants in groundwater.
Joe	38	Pg. 6-18, lines 18-21	Will this include the heterogeneities within the stratigraphic column with WMA C and their effects on lateral spread of infiltrating contaminants? Please clarify.	6	Yes, the possible influence of heterogeneities in vadose zone soils on lateral movement of contaminants will be evaluated using the geologic models discussed in Section 6.3.1.2.
Joe	39	Pg. 6-20, Source Term Inventory	The only dangerous waste mentioned is Cr. How are other radionuclides and dangerous wastes being considered? Please clarify.	6	The table lists examples of key constituents; however, all constituents identified in RPP-RPT-42323 will be evaluated. Text will be clarified.
Joe	40	Pg. 6-21, Table 6-2.	Are these estimates based on sampling results from residuals and assuming a final waste inventory of 360 cu. ft? Are they final residual inventory estimates? What about tanks that have yet to be retrieved; is a default 360 cu. ft. being used? Please clarify.	6	The text in Table 6-2 and accompanying explanation in Section 6.5.4 will be modified to clarify the basis for the volume and contaminant inventory inputs to the models.

Attachment (6 pages)
Responses to Select Ecology Comments on the WMA C RFI Report

Joe	41	Pg. 6-23, Lines 38-43.	Does an "inactive node" mean that the properties of these nodes remains constant during the analyses, or something else? Do they contribute to the analyses? Please clarify.	6	Clarifying text will be added to the RFI report. Inactive nodes are used to apporoximate the presence and effect of the very low permeability of SSTs and some of the more prominent components of the ancillary equipment (diversion boxes, CR-Vault, and the C-301 catch tank) relative to the surrounding high permeability sands and gravels in the back fill materials. Inactive nodes in this sense means that these parts of the model domain have no specific hydraulic properties assigned and represent internal areas of no flow.
Joe	42	Pg. 6-25, lines 7,8.	I assume that this language means that the sloping top of basalt is a vertical no flow boundary. If true, could you clarify this? Please consider.	6	Your interpretation is correct. Clarification will be provided.
Joe	43	Pg. 6-25, lines1-18	Please justify the flux assumptions made in the WMA C model.	6	The basis for boundary conditions used in the combined vadose and saturated zone model will be discussed in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* and the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington.*
Joe	44	Pg. 6-26, Sect. 6.5.2	No mention is made of two other possible conceptual models that may be run pending the outcome of model development and sensitivity studies. 1) An artificial recharge model to account for the various methods of adding water to the ground other than natural recharge, and 2) A model that will be used to evaluate the effect of heterogeneities within the vadose zone and their effect on flow and transport. To not include them is to pre-judge each as inconsequential. Please include	6	Modeling addressing the effects of both artificial recharge during operations and heterogeneities are discussed in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* and the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .
Joe	45	Pgs. 6-29 and 6-31.	Is this discretization fine enough in the z direction to permit the meaningful evaluation of silty strata and the effects of these heterogeneities on flow and transport? And if so, how will the parameters to populate these cells be selected? Please address.	6	The design, development, and implementation of the heterogeneous model will be included in an appendix of the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* . This model will be used as a sensitivity case in the aforementioned documents.
Joe	46	Pg 6-33, lines 6-8.	Justify or delete this statement. With all the uncertainty, this to me is an unjustified label. Please correct.	6	The sentence will be deleted.
Joe	47	Sect. 6.5.5.1	No mention is made of the volume of artificial recharge added to the soil by various means that served to accelerate the drive of contaminants to groundwater or deeper into the vadose zone. This will be needed for sensitivity cases for scenarios of different recharge rates during operations. Please provide.	6	The effects of recharge (including artificial recharge during operations) will be provided in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .
Joe	48	Pg. 6-37, lines 23-30	Given the experience with recharge on the side slopes of the prototypical Hanford barrier (over the B-57 crib), justify the statement that the impact of the side slopes on recharge is relatively minor. Please explain and justify.	6	The effects of recharge (including incremental recharge outside of the barrier area) will be provided in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .

Attachment (6 pages)
Responses to Select Ecology Comments on the WMA C RFI Report

Joe	49	Pg. 6-37, lines 1-2	Design of a barrier can't progress without identifying the area to be covered (i.e., the footprint of the barrier). If this is to be in the CMS report, then that information should be present and isn't. Please comment.	6	The modeling of the impacts of tank residuals described in this section of the RFI report assumes an anticipated closure scenario that includes a barrier. The CMS will evaluate potential corrective measures. Detailed barrier design will occur as needed following issuance of the CMS.
Joe	50	Pg. 6-42, Table 6-10	Please provide the transverse dispersivity to be used in the Denominator Case modeling for WMA C.	6	The table will be revised to incorporate transverse dispersivity.
Joe	51	Pg. 6-46, Table 6-12.	Several contaminants have already arrived in groundwater in 50 years, indicating that these assumptions of Kd or the amount of recharge are incorrect. Please address.	6	The constituent identification process described here will be used to support the analysis of the tank waste residual impacts rather than impacts related to past leaks.
Joe	82	Pg. 6-9, lines 7-9.	While all these alternatives may be partial contributors, in reality, all these elements may have contributed in some composite "model". Will this be investigated in addition to the separate effects of each alternate? Is this all part of Section 6.4? Please address.	6	Needs discussion and clarification
Joe	83	Pg. 6-19, lines 34-39.	Where is the contaminant inventory, areal and vertical extent, and depth distribution of groundwater contaminants? Will this be in the next revision of this RFI? Please address.	6	This section addresses modeling of tank residuals as opposed soil contamination from past leaks.
Joe	84	Pg. 6-20, Groundwater Domain	Where is the information/data on the areal and vertical extent of the groundwater contaminant plumes? Please include.	6	This section addresses modeling of tank residuals as opposed soil contamination from past leaks.
Joe	85	Pg. 6-23, Sect. 6.5.1	Please describe the process you will use to populate these various cells with data. Will it be actual field data, assumptions with uncertainties, Monte Carlo simulations where data are insufficient? Please include.	6	Additional information about the development of the numerical model parameters and related uncertainties will be included in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* .
Joe	86	Pg. 6-36, Table 6-6.	These are presumably natural recharge rates which are fine for pre- and post-operational time periods, but artificial recharge estimates during site operations need to be factored in, as these may have been orders of magnitude greater than natural recharge. Please discuss.	6	The effects of recharge (including incremental recharge outside of the barrier area) will be provided in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .
Joe	87	Pg. 6-37, lines 14-21.	One scenario I would suggest evaluating is one where the designed closure barrier does not function for as long as is assumed; i.e., useful life of say 200 or 300 years. Please consider.	6	Sensitivity cases evaluating of the effects of different assumptions about assumed engineered surface barrier life will be evaluated in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .

Attachment (6 pages)
Responses to Select Ecology Comments on the WMA C RFI Report

Joe	88	Pg. 6-40, lines 20-22.	Define what is meant by the "vertical anisotropy ratio of 0.1". Are you saying that the vertical flow is estimated to be ~300 m/d, or ??? Please clarify.	6	Anisotropy is defined the ratio of vertical to horizontal hydraulic conductivity.
Joe	90	Pg. 6-44, bullet 2.	While I understand why these constituents would not be included in estimating future PA results, they do provide useful information (where known) about the possible location of release points and the areal and vertical extent of non-gamma and dangerous waste constituents. Please elaborate on this discussion to provide a more complete description.	6	The statement pertains to the inventory evaluation for residual wastes left in tanks and equipment.
Joe	91	Pg. 6-44, lines 35-37.	What is the basis for this statement? If it's based only on estimated natural recharge, then it may not be true considering the enhanced artificial recharge during site operations. Please provide the basis for this statement.	6	The basis for this statement will be addressed in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .
Joe	92	Pg. 6-45, Table 6-11	I would suggest you use variable recharge rates for the operational period until you can approximate an estimated arrival time of arrival of mobile constituents in groundwater that approximates actual site history. Please discuss.	6	The operational recharge rate defined in the table is used in the screening analysis. The basis for this information will be addressed in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .
Joe	93	Pg. 6-46, lines 1-8.	What is the location of any receptor in this evaluation? For a RCRA TSD facility, the point of compliance is a vertical plane at the downgradient margin of the facility. Please elaborate where you are making this claim.	6	The screening analysis that will be included in the *Performance Assessment of Waste Management Area C, Hanford Site, Washington* and in the *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* assumes a point of analysis at 100 m down gradient of the WMA C fenceline.
Joe	103	Pg. 8-4, line 24.	Explain what assumptions may be made in the IPA if characterization of this release site (C-105) is not possible.	8	The analysis of past leaks will evaluate the plausibility of both conceptual models proposed for C-105 against available vadose characterization data and groundwater monitoring information.
Beth	20	RFI Chapter 6 p. 6-6, lines 14-21.	The point of compliance for DOE O 435.1, 100 m from the down-gradient boundary of WMA C, is not consistent with the state groundwater point of compliance, which is 'throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the site' (WAC 173-340-720(8)(b)). Please add discussion of this point of compliance and how it will be addressed. Using a point of evaluation at the fenceline (as was previously intended for the WMA C Performance Assessment) would be close to the state's point of compliance.	6	We anticipate that the Performance Assessment of Waste Management Area C, Hanford Site, Washington, and RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington, will include model results at 100 m down gradient of the WMA C fenceline. The latter document will also include additional results at the fenceline. The following sentence will be inserted before the last sentence in the paragraph: "In addition, the hazardous chemical impacts will be evaluated at the fenceline."

Attachment (6 pages)
Responses to Select Ecology Comments on the WMA C RFI Report

Beth	21	RFI Chapter 6 p. 6-22, Table 6-2, and p. 6-45, Table 6-11	Table 6-2 presents parameters for the 'denominator case'. As a reminder, Ecology is not satisfied with the recharge assumptions for this case, as it does not consider disturbance of the barrier and associated higher recharge. The least of such disturbances is fire and invasive species, which could reset recharge rates to greater than 20 mm/y for decades (Norton, JB, TA Monaco, JM Norton, DA Johnson, TA Jones. 2004. *Soil morphology and organic matter dynamics under cheatgrass and sagebrush-steppe plant communities.* J. of Arid Environments 57:445-466). Larger disturbances such as construction activities of inadvertent intruders would cause significantly greater changes by potentially removing large portions of the barrier, possibly leaving the remainder more prone to erosion (consider that no person living now or contemporary agency can ensure that the land will not be used in unexpected ways after a century or more). Table 6-11 also does not consider common or more drastic barrier disturbances.	6	Recharge rates used in the denominator case (Table 6-2) and in the sensistivty cases provided in Table 6-6 were agreed to with Ecology during scoping. Case 3 in Table 6-6 evaluates a recharge rate of 100 mm/yr during the post-closure period, which would bound the conditions identified in the comment.
Beth	22	RFI Chapter 6 p. 6-22, Table 6-2	The table gives sorption characteristics for only 3 of the contaminants of concern. The document should give sorption characteristics for all of the contaminants of potential concern.	6	Table 6-2 contains examples of key constituents. The *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* , will include additional constituents.
Beth	23	RFI Chapter 6 p. 6-44, lines 39-40	The document states that chemicals with Kd values greater than 3 mL/g were excluded because their arrival times at the water table would be beyond the 10,000 year time period under future recharge conditions. Please re-evaluate this using sensitivity case 3 on Table 6-6, and include all contaminants that would reach groundwater under those conditions.	6	Case 3 on Table 6-6 is a sensitivy analysis that will be used with limited constituents of higher mobility to evaluate the effects of variations in recharge. Additional information will be provided in *Performance Assessment of Waste Management Area C, Hanford Site, Washington* , and *RCRA Closure Analysis of Waste Management Area C, Hanford Site, Washington* .