

**MEETING NOTES**

**Waste Management Area C RCRA Facility Investigation Report**

**MEETING DATE:** August 26, 2015

**LOCATION:** Washington State Department of Ecology Office, Richland, WA

**ATTENDEES:**

Mike Barnes (Ecology)	Jeff Lyon (Ecology)	Beth Rochette (Ecology)
Ryan Beach (DOE-ORP)	Dan Parker (WRPS)	Maria Skorska (Ecology)
Joe Caggiano (Ecology)	Andrea Prignano (WRPS)	Harold Sydnor (WRPS)
Rebecca Gerhart (EPA)	Anna Radloff (WRPS)	Cindy Tabor (WRPS)
Andrea Hopkins (WRPS)	Julie Robertson (Freestone)	Becky Wiegman (WRPS)

**PURPOSE OF MEETING:** The meeting was called to promote 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). 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. Lists of expectations, agreements, and actions (including the status of any actions) will be documented in the meeting notes.

**STATUS OF PRIOR MEETING NOTES:** Ms. Robertson reported that the meeting notes from the May 20, 2015 meeting are in the HFFACO Administrative Record.

**SCHEDULE AND TIMELINE OVERVIEW:** Ms. Tabor handed out an informal timeline covering the period from July 2015 through December 2016 (Attachment 1). The timeline identified a subset of key letters and documents related to WMA C closure and expected document delivery schedules. Ms. Tabor walked the attendees through the planned schedule. Ecology noted that the list excluded some of the required documentation (e.g., RCRA closure documents), and Ms. Tabor agreed.

**DISCUSSION OF SELECT ECOLOGY COMMENTS:** On July 7, 2015, Ecology transmitted comments on the Phase 2 WMA C RFI report (RPP-RPT-58339 Rev. A Draft). Ms. Tabor provided a hand-out (Attachment 2) listing a subset of the Ecology comments and proposed resolutions for discussion. There was general acknowledgement that the proposed resolutions reflect an acceptable path forward.

**EXPECTATIONS, AGREEMENTS, AND ACTIONS:** Refer to the tables below.

**NEXT MEETING:** The next meeting is tentatively set for September 30, 2015, at 10:00 am.

Ryan E. Beach  
DOE Project Manager (print)

Ryan E Beach  
DOE Project Manager (signature)

10/7/2015  
Date

Michael W Barnes  
Ecology Project Manager (print)

Michael W Barnes  
Ecology Project Manager (signature)

10-7-2015  
Date

DATE	AGREEMENTS
04/15/2015	<p>1. Regarding references in RPP-RPT-58339, Rev. A Draft <i>Phase 2 RCRA facility investigation Report for Waste Management Area C</i> to RPP-PLAN-37243 <i>Phase 2 RCRA Facility Investigation/Corrective Measures Study Master Work Plan for Single-Shell Tank Waste Management Areas</i>:</p> <ul style="list-style-type: none"> <li>• References in the draft RFI report are adequate as is and do not require modification.</li> <li>• The HFFACO milestone (M-045-58) associated with the Master Work Plan is complete.</li> <li>• It would be beneficial to continue discussion on the topics covered in the Master Work Plan.</li> </ul>
04/15/2015	<p>2. 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.</p>

ACTIONS			
Action Number	Actionee	Description	Status
2015-03-11-2	Mike Barnes	Compile Ecology WMA C RFI report questions/concerns for discussion at future meetings.	Completed 7/7/15. Closed 8-26-15.
2015-05-20-1	Marcel Bergeron	Provide Ecology the dataset used for the groundwater screening report, <i>Screening-Level Evaluation of Groundwater Monitoring Data Collected in Vicinity of WMA C, RPP-RPT-58297</i> .	Completed 6/3/15. Closed 8-26-15.
2015-05-20-2	Cindy Tabor	Identify where 1970s drywell data is discussed in the Rev. A WMA C RFI report.	Completed 5/21/15. Closed 8-26-15.
2015-08-26-1	Cindy Tabor	Evaluate whether internet links to reference documents can be added to the RFI report.	New.
2015-08-26-2	Mike Barnes	Provide well screen interval information for inclusion in the RFI report.	New.
2015-08-26-3	Julie Robertson	Provide EPA with a pdf of the hand-out showing status of open actions.	New.

## Attachment 1

### WMA C Schedule and Timeline Overview (Since May 2015)

#### July 2015

DOE-ORP Received Ecology Comments on WMA C RFI

#### August 2015

DOE-ORP Requested Extension on Responding to Ecology Comments on WMA C RFI

DOE-ORP Received Ecology Comments of Soil Inventory Report

*DRAFT to Ecology*

200-BP-5 RI

200-PO-1 RI

#### September 2015

*FINAL to Ecology*

Tier 1 RCRA Single-Shell Tank System Closure Plan

#### Fall 2015

*REVISED Document to Ecology*

Soil Inventory Report

#### December 2015

*FINAL to Ecology*

WMA C RFI Comment Responses

#### September 30, 2016

*FINAL to Ecology*

IPA (Consisting of: Residual Waste, Past Leaks, Baseline Risk Assessment)

*DRAFT to Ecology*

200-BP-5 FS

200-PO-1 FS

#### December 30, 2016

*FINAL to Ecology*

WMA C Phase 2 RFI/CMS

## Attachment 2 (2 pages)

### Informal Responses to a Subset of Ecology Comments on RPP-RPT-58339, Rev. A Draft

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.)	Response
Mike	3	2.4.5.9 Clastic Dikes	These were discussed at the WMA C PA meetings. I agree with your summation on clastic dikes but would note clastic are very well seen at the submarine storage pit in 200East area.	Agree - Text from the Flow and Transport in the Natural System at Waste Management Area C will be pulled into document
Joe	7	Pg. 1-2, lines 17- 19.	This statement is incorrect, as drywell logging has been performed since the 1970s in C Farm. None of that information is here. Drywell logging could identify release dates and/or migration of contaminants, including non-gamma emitting radionuclides and dangerous waste chemicals. Please include that information and correct this omission.	Disagree (email to Joe on June 10, 2015)
Joe	12	Pg. 2-11, lines 41- 45.	Much of the BWIP research was focused on suitability of the Columbia River basalts to host a high-level nuclear waste repository, which included characterizing the various basalt stratigraphic units and the behavior of the confined aquifer system within the basalts. Previous waste management activities characterized the supra-basalt geology, with focus on its suitability for waste management activities. Please consider.	Agree - Text from the Flow and Transport in the Natural System at Waste Management Area C will be pulled into document
Joe	13	Pg. 2-18, lines 26 - 28	The varying grain sizes of strata/lamina within the Hanford fm. create significant heterogeneity that leads to lateral flow. This heterogeneity results in lateral flow that leads to a "stair step" process of infiltration of natural precipitation or any artificial recharge. Please discuss this heterogeneity and the anisotropic flow phenomena within the vadose zone. Please add.	Agree - Text from the Flow and Transport in the Natural System at Waste Management Area C will be pulled into document
Joe	20	Pg. 2-35, lines 1- 7.	Most drywells, to this day, have no annular seals, but a few around T Farm have a second casing. Care was not common prior to ~2000 to assure that drywells were immediately capped after each use. Open drywells provide a conduit for floodwaters to infiltrate deeper into the vadose zone. Also, most drywells are open at the bottom; only a few have a concrete plug at the base. Please add.	Agree - Text will be added about drywell construction
Joe	62	Pg. 5-63, line 40.	What is meant by "rapid-scan gamma surveys"? Does this refer to rate of withdrawal from the hole or something else? Does this reduce detection limit for various radionuclide species? Please clarify.	Term will be removed and updated information will be provided (Harold to discuss)
Joe	63	General Comment	Whenever you discuss geophysical logging, you should specify the tool, the withdrawal rate, and the detection limit for the various species. Or at least somewhere in the document. Please consider.	Appendix G will be updated with logging information (e.g. detect limits). Section 4 will be updated to specify what tool was used at various times. (Harold to discuss)
Joe	64	General Comment-- Geophysical logging	For logs that are not readily accessible online, please include the logs (e.g., C4297 and all the logging done at the lettered sites) or a link to the logs. A graphic is preferred to bulleted summary descriptions.	Appendix T has all the logs and Harold will be sorting through to better organized
Joe	70	Pg. 5-106, lines 9- 10.	These 12 wells have different screen length, placements and locations relative to the water table. Please clarify this information for each of the 12 wells.	Construction Diagrams will be provided for the wells and screen information will be discuss
Joe	81	Pg. 6-3, Sect. 6.3	There is no mention here or in Section 2 of the extreme heterogeneity in the vadose zone that is currently being investigated as to its potential effect on infiltrating fluids and contaminants in the WMA C vadose zone. Sounds like this investigation is not being treated seriously. Please include.	Text from the Flow and Transport in the Natural System at Waste Management Area C will be pulled into document

**Attachment 2 (2 pages)**

**Informal Responses to a Subset of Ecology Comments on RPP-RPT-58339, Rev. A Draft**

<i>Comment From (ECY)</i>	<i>Item</i>	<i>Page #/ section # Line #</i>	<i>Comment (s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/ problem indicated.)</i>	<i>Response</i>
Joe	96	Pg. 8-2, lines 1-2	Given the degree of anisotropy and heterogeneity that exists in the glaciofluvial sediments of the vadose zone, please justify this statement.	Text from the Flow and Transport in the Natural System at Waste Management Area C will be pulled into document
Joe	113	Appendix S General Comment	Why is there no information from historical logs? They provide information on approximate time of release and arrival at a drywell as well as indicate depths where gamma-emitting radionuclides were once present (and thus other radionuclides and dangerous wastes were also released). Please include, or at least discuss. There aren't references or links to the historical logs.	Appendix T has all the logs and Harold will be sorting through to better organized