

MEETING NOTES**WMA A-AX Focus Area 1 Sample Interval Selection Meeting – C9388**

Meeting Date: June 19, 2019

Location: 2440 Stevens Center Boulevard, Room 1200, Richland, WA

ATTENDEES:

Cindy Tabor (WRPS)
Dave Becker (WRPS)
Rod Lobos (DOE-ORP)
Mike Barnes (Ecology)
Kim Schuyler (Freestone)
Maria Skorska (Ecology)
Jon Lindberg (Ecology)

BACKGROUND:

This meeting was part of the continuing effort to ensure communication between the Washington State Department of Ecology (Ecology), the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy Office of River Protection (DOE-ORP), and Washington River Protection Solutions (WRPS) representatives regarding characterization activities in Waste Management Area A-AX. Specifically RPP-PLAN-62041, *Sampling and Analysis Plan for WMA A-AX Focus Area 1 (Tanks 241-A-104 and 241-A-105)* states that “geophysical logging data along with any available quick turnaround analysis results (“quick turn”) for two mobile contaminants (technetium-99 and nitrate) will be used to aid in determining subsurface sample depths. The subsurface sampling horizons will be selected in an open meeting to which WRPS staff, DOE-ORP, Ecology, U.S. Environmental Protection Agency (EPA), and other site contractors shall be invited.”

Purpose of Meeting: This meeting was called to review geophysical logging data results from direct push location C9387, discuss the sample depth selection process, and agree upon sample depth intervals for C9388.

Discussion:

Ms Tabor started the meeting by discussing and action from previous sample depth selection meeting:

Action: Ms. Tabor will obtain a figure with pipelines around Tank 241-A-105 and coordinate with Mr. Barnes (“WMA A-AX Focus Area 1 Sample Depth Meeting #3”, held on April 11, 2019).

It was identified that Mike Barnes closed out the action item himself on June 11 by forwarding a figure with the pipelines to Ms. Tabor. Additional discussion on pipelines included the general depth of pipelines (15 ft below ground surface) and that the Nuclear Regulatory Commission was expressing an interest in pipelines.

Ecology was provided information on exploratory direct push location C9387. This location had been pushed and geophysically logged. Logging results, which included total gamma, moisture, temperature, and spectral gamma (potassium, uranium, and thorium data, and historical information were used to select sample depths. A map of WMA A-AX was presented and Ms. Tabor and Ms. Schuyler identified C9387/C9388 as the location in which sample depths were to be selected. Tank 241-A-104 is the target of characterization for this location.

Sample Selection at C9387 location:

A hard copy plot of C9391 gross gamma and moisture geophysical logging data was presented. Sample depths were overlain on the geophysical data plot. It was noted that sample depths are measured in ft length of piperun as opposed to ft below ground surface. The piperun measurement is the reference point used by the field sampling crew identify sample depth intervals in the field. A map view depicting the actual direct push paths of C9392, C9394, and C9396 and sample depths was shown to provide a brief update on field progress. To facilitate sample depth selection, the map also showed the approximate extent of contamination, maximum temperature and depth seen at five of the direct push locations, and the apparent surface location of proposed samples at C9388.

Per RPP-PLAN-62041, three shallow depths will be collected: surface, 9 to 11 ft of piperun (equivalent to 7 to 9 ft bgs), and 15 to 17 ft of piperun (equivalent to 12 to 14 ft bgs). The depths and rationale identified in Table 1 of Attachment 1 were discussed and agree upon for sampling.

Table 1: Sample Depth Recommendations for C9387/C9388

Judgmental		Stratigraphy
Recommended Sample Depth (ft <u>piperun</u>)	Reason	
63-65	High moisture peak ^a and contact between backfill/H1 (undifferentiated) and H2.	H2
124-126	Below area of contamination noted in RPP-PLAN-62041 ^b .	
141-143	Beneath tank A-104 and near area of contamination noted in RPP-PLAN-62041 ^b .	
161-163	High moisture signature, H2 upper/lower contact, below area of contamination noted in RPP-PLAN-62041 ^b .	
184-186	Beneath tank A-104, determine if contamination is present at deep depth.	
203-205	Below edge of the tank A-104, determine if contamination is present at deep depth.	
290-292	High moisture peak ^a .	

Note: The following are the stratigraphic units identified from logging location C9387 (in ft piperun):

Backfill/H1 undifferentiated = 0 - 63, H2 = 63 – 296.

- Moisture measurement approximately 22%.
- See Figure 1-2 in RPP-PLAN-62041, *Sampling and Analysis Plan for WMA A-AX Focus Area 1 (Tanks 241-A-104 and 241-A-105)*.

There was a general discussion on the various recommended sample depths including the possibility of sampling at 281-283 ft piperun rather than the deeper depth of 290-292 ft piperun. Ultimately, the group agreed upon sampling at the deeper depth where the log showed a higher moisture peak. It was also identified that the highest temperature in the log was near the recommended sample depth of 63-65 ft piperun.

<u>ROD LOBOS</u>		<u>7-11-19</u>
DOE Project Manager (print)	DOE Project Manager (signature)	Date
<u>Michael W Barnes</u>	<u>Michael W Barnes</u>	<u>7-9-19</u>
Ecology Project Manager (print)	Ecology Project Manager (signature)	Date

Attachment 1

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Sampling Hole

C9388: Surface, 7-9 ft bgs, and 12-14 ft bgs sample collected.

Data Evaluated to Help Determine Possible Sample Depths:

- Gamma, moisture, and temperature data for C9387 (35° angle push)
Note: Plots are available in Vertical Depth (ft bgs) and Piperun Depth for C9387 since this is angle push.
- Vertical profile and cross section view of sample depths for C9387 (for depth perspective and relationship to tank)
- Sample depth information from C9386, C9392, C9394, and C9396.
- Logs from C9385, C9391, C9393, and C9395.

General Notes:

- The basis for standard sampling is described in RPP-RPT-60227, DQO Report WMA A-AX, Rev. 0 (Focus Area 1), which indicates that these samples are to be collected from:
 - Recommending 10 sample depths: 3 sample depths of - surface, 7-9, and 12-14 ft bgs (vertical depths) and 7 deeper samples (intervals recommended are identified in Table 1).
 - Specific information on shallower intervals for the 35° angle of C9388:
 1. 7 to 9 ft bgs is equivalent to 9 to 11 ft of piperun
 2. 12 to 14 ft bgs is equivalent to 15 to 17 ft of piperun

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63-65	High moisture peak ^a and contact between backfill/H1 (undifferentiated) and H2.	H2
124-126	Below area of contamination noted in RPP-PLAN-62041 ^b .	
141-143	Beneath tank A-104 and near area of contamination noted in RPP-PLAN-62041 ^b .	
161-163	High moisture signature, H2 upper/lower contact, below area of contamination noted in RPP-PLAN-62041 ^b .	
184-186	Beneath tank A-104, determine if contamination is present at deep depth.	
203-205	Below edge of the tank A-104, determine if contamination is present at deep depth.	
290-292	High moisture peak ^a .	

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c. Moisture measurement approximately 22%.

d. See Figure 1-2 in RPP-PLAN-62041, *Sampling and Analysis Plan for WMA A-AX Focus Area 1 (Tanks 241-A-104 and 241-A-105)*.

Action from previous sample depth selection meeting:

Ms. Tabor will obtain a figure with pipelines around Tank 241-A-105 and coordinate with Mr. Barnes (“WMA A-AX Focus Area 1 Sample Depth Meeting #3”, held on April 11, 2019).