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TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 641	TPA CHANGE NOTICE FORM	Date: October 29, 2014
Document Number, Title, and Revision: DOE/RL-2010-72, Sampling Analysis Plan for Remediation Wells in the 200-ZP-1 Operable Unit, Revision 2		Date Document Last Issued: June 4, 2014
Originator: Mark Byrnes		Phone: 509 373-3996

Description of Change:
Tables 1-1 and 3-1, Estimated Depth of Each Proposed Extraction, Injection, and Monitoring Well and Well Sample/Measurement Locations and Depth, of the Sampling Analysis Plan need to be revised to reflect sampling requirements in new monitoring wells.

Briant Charboneau (DOE) and Emerald Laija (Lead Regulatory Agency) agree that the proposed change modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

Sampling requirements for Wells MW-1 and MW-2 will be implemented during drilling of new wells

Inserted text in Table 1-1 on page 1-6 is indicated by double underline.

The deleted text is indicated by ~~strikethrough~~ in Table 3-1 on page 3-2 and inserted text is indicated by double underline.

Note: Include affected page number(s)

Justification and Impacts of Change:

New monitoring wells are needed in areas without wells to monitor contaminant plume migration and to define plume boundaries.

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Approvals:

DOE Project Manager	10-30-2014 Date	[X] Approved [ ] Disapproved
EPA Project Manager	10-30-2014 Date	[X] Approved [ ] Disapproved
N/A		[ ] Approved [ ] Disapproved
Ecology Project Manager	Date	

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Table 1-1. Estimated Depth of Each Proposed Extraction, Injection, and Monitoring Well

Well Name	Extraction (YE) Injection Well(YJ) Monitoring Well (MW)	Estimated Depth to Water (ft bgs)	Estimated Depth to Upper Caliche (ft bgs)	Estimated Depth to Upper Ringold Unit (ft bgs)	Estimated Depth to Ringold Unit E (ft bgs)	Estimated Depth to Ringold Lower Mud (ft bgs)	Estimated Depth to Basalt (ft bgs)
299-W6-13	YJ-1	273	56	69	108	NP	450
299-W6-14	YJ-2	256	59	NA	95	NP	465
299-W10-36	YJ-3	246	98	105	131	432	505
299-W15-228	YJ-7	232	160	NA	164	448	561
299-W18-41	YJ-8	219	113	NP	159	443	560
699-49-69	YJ-9	261	10?	NP	173	NP	372
699-45-67B	YJ-10	292	NA	148*	195	314	437
699-44-67	YJ-12	312	105	NP	220	338	472
699-42-67	YJ-14	321	120	270	280	381	535
699-40-67	YJ-15	325	120	270	403	384	530
699-38-64	YJ-16	338	235	NA	286	387	513
699-43-67B	YJ-17	325	118	NP	210	363	495
699-46-68	YJ-23	280	61	NP	193	306	433
299-W15-229	YJ-24	256	158	NA	183	459	564
299-W7-13	YJ-25	252	61	105	134	NP	460
299-W19-111	YE-11	261	144	138	163	437	545
299-W11-97	YE-13	294	152	NA	117?	426?	535
299-W6-15	YE-14	293	110	NA	157?	NP	475
299-W5-1	YE-17	295	100*	NA	159?	NP	460
299-W14-22	YE-20	303	150	NP	180	NP	515
299-W5-2	MW-1	281	100*	NP	179	NP	460
299-W13-2	MW-2	313	152	156	249	411	535

Sources: PNNL-13858, *Revised Hydrogeology for the Suprabasalt Aquifer System, 200-West Area and Vicinity, Hanford Site, Washington*, was used to estimate Ringold Unit E outside of the 200 West Area (Plate 7), Ringold lower mud (Plate 5), and top of basalt (Plate 2).

Water levels are estimated from Figure 2.8-2 of DOE/RL-2008-66, *Hanford Site Groundwater Monitoring for Fiscal Year 2008*; March 2008 data.

WHC-SD-EN-TI-014, *Hydrogeologic Model of the 200 West Groundwater Aggregate Area*, was used to estimate the top of the caliche (Figure 2-12), top of upper Ringold (Figure 2-10), and Ringold Unit E (Figure 2-8) in the 200 West Area.

* May not be present.

bgs = below ground surface NA = not available NP = not present ? = questionable selection

YE = extraction well YJ = injection well MW = Monitoring Well

Table 3-1. Well Sample/Measurement Locations and Depth

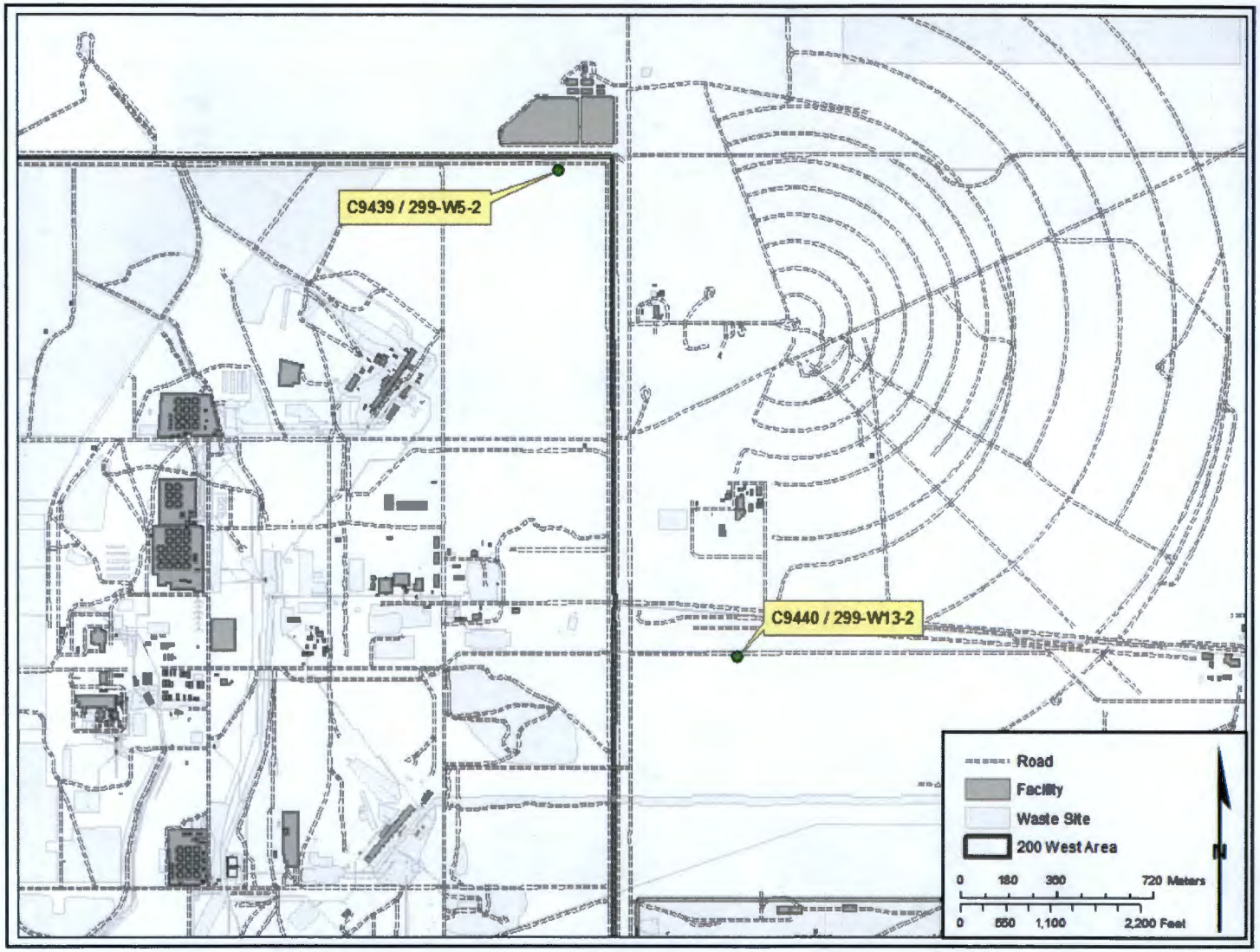
Sampling Location	Vadose Zone Sampling Depth, Frequency, and Analysis (ft bgs)	Aquifer Sampling Depth, Frequency, and Analysis (ft bgs)	
		Water Samples	Soil Samples (Sediment) Below Water Table[a]
YE-11, YE-13, YE-14, YE-17, YE-20, YJ-1, YJ-2, YJ-3, YJ-7, YJ-8, YJ-9, YJ-10, YJ-12, YJ-14, YJ-15, YJ-16, YJ-17, ~~and~~ YJ-23, MW-1, and MW-2	**Ground surface to water table at each of the new wells:** During drilling, archive grab samples for geological purposes will be collected every 5 ft and where lithology changes occur in one-pint jar and a chip tray from the drill cuttings.	During drilling, water samples to be collected (in accordance with Section 3.5.6) at 20 ft intervals throughout aquifer, unless visual observation in aquifer material change by the field geologist calls for 10 ft intervals for further clarification: • Carbon tetrachloride for quick-turnaround samples[b] • Table 1-2 constituents at standard turnaround time • Field screening parameters (temperature, pH, dissolved oxygen, specific conductance, and NTU)	During drilling, soil samples to be collected: • Every 5 ft, grab archive samples will be collected and where lithology changes occur in one-pint jar and a chip tray from the drill cuttings. • Every 20 ft, in correlation with aquifer water samples, grab two composite soil samples in pint jars from drill cuttings over the 20 ft interval for field screening grain-size (sieve) analysis
YJ-24 and YJ-25	**Ground surface to water table at each of the new wells:** During drilling, archive grab samples for geological purposes will be collected every 5 ft and where lithology changes occur in one-pint jar and a chip tray from the drill cuttings.	During drilling, water samples to be collected (in accordance with Section 3.5.6) as follows: one sample just below the water table, one sample at about the middle of the aquifer (~390 ft bgs), and one sample just above the Ringold lower mud unit. Each sample will be analyzed for volatile organic compounds only.	During drilling, soil samples to be collected: • Every 5 ft, grab archive samples will be collected and where lithology changes occur in one-pint jar and a chip tray from the drill cuttings. • Every 20 ft, in correlation with aquifer water samples, grab two composite soil samples in pint jars from drill cuttings over the 20 ft interval for field screening grain-size (sieve) analysis

a. If field screening instruments indicate radiological contamination above background at a given interval, grab two additional pint jar samples. Send one pint jar for 24-hour turnaround gamma-energy analysis and one additional jar for testing based on the gamma-energy analysis results (as determined by the groundwater remediation manager).

b. If samples have elevated organic concentrations, an "E" flag may be applied to the data due to a lack of time for dilutions and re-runs on a quick-turnaround time. The standard turnaround time sample will account for dilutions and re-runs, as applicable.

c. Samples not used should be disposed in accordance with Section 3.6.

bgs = below ground surface YE = extraction well YJ = injection well MW = monitoring well NTU = nephelometric turbidity unit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Road
Facility
Waste Site
200 West Area
N
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0 550 1,100 2,200 Feet