Appendix A

Supporting Information for CERCLA Groundwater Operable Units

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Appendix A — Supporting Information for CERCLA Groundwater Operable Units

C.J. Martin

Under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA), the groundwater beneath contaminated portions of the Hanford Site are divided into eleven groundwater operable units. Figure 1-2 in Chapter 1.0 shows the locations of these units and related groundwater interest areas on the Hanford Site. The interest areas are defined informally to aid in planning, scheduling, and data interpretation.

The tables provided in this appendix list the constituents, monitoring wells, and the sampling frequency for each operable unit, as required by their respective sampling and analysis plans or other documentation. The tables also indicate whether the wells were sampled as scheduled during the reporting period (January1, 2010, through December 31, 2010).

In many cases, wells are sampled for additional constituents not strictly required by the plans. Those constituents are not listed in the tables of this appendix, but data files accompanying this report include all of the required and supplemental data.

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Table A-1. Monitoring Wells and Constituents for the 100-BC-5 Operable Unit

Well	Hydrologic Unit Monitored	Alkalinity	Alpha/Beta	Anions	Hexavalent Chromium	Metals	Sr-90	Tritium	Tc-99	Sampled as Scheduled in Reporting Period
199-B2-12	Ringold aquitard	BO	--	BO	BO	BO	BO	BO	--	Not scheduled
199-B2-13[a]	Top of unconfined	BE	--	BE	BE	BE	BE	BE	--	Yes
199-B2-14[b]	Top of unconfined	Q	Q	Q	Q	Q	Q	Q	--	Yes
199-B3-1[a]	Top of unconfined	BE	--	BE	A	BE	A	A	--	Yes
199-B3-46[a]	Top of unconfined	BO	--	BO	A	BO	A	A	--	Yes
199-B3-47[a]	Top of unconfined	BE	--	BE	A	BE	A	A	--	Yes
199-B3-50[b]	Top of unconfined	Q	Q	Q	Q	Q	Q	Q	--	Yes
199-B4-1	Top of unconfined	BE	--	BE	A	BE	BE	A	--	Yes
199-B4-4[a]	Top of unconfined	--	--	--	--	--	BE	BE	--	Yes
199-B4-7	Top of unconfined	BO	--	BO	BO	BO	BO	BO	--	Not scheduled
199-B4-8[a]	Top of unconfined	BE	--	BE	BE	BE	BE	BE	--	Yes
199-B5-1[a]	Top of unconfined	BE	--	BE	A	BE	BE	A	--	Yes
199-B5-2[a]	Top of unconfined	--	--	--	A	--	BO	A	--	Yes
199-B5-5[b]	Bottom of unconfined	Q	Q	Q	Q	Q	Q	Q	--	Yes
199-B5-6[b]	Bottom of unconfined	Q	Q	Q	Q	Q	Q	Q	--	Yes
199-B8-6[a]	Top of unconfined	BO	BO	BO	A	BO	BO	A	--	Yes
199-B8-7	Top of unconfined	Q	Q	Q	Q	Q	--	Q	--	No[c]
199-B8-8	Top of unconfined	Q	Q	Q	M/Q	Q	--	Q	--	No[c]
199-B9-2	Top of unconfined	--	BE	--	BE	--	--	BE	--	Yes
199-B9-3[a]	Top of unconfined	BO	BO	BO	BO	BO	--	BO	--	Not scheduled
699-63-90	Unconfined	BE	BE	BE	--	BE	--	BE	--	Yes
699-65-83[a]	Unconfined	--	--	--	--	--	--	BE	--	Yes
699-67-86[a]	Unconfined	--	--	--	--	--	--	BO	--	Not scheduled
699-68-105	Unconfined	BO	--	BO	--	BO	--	BO	--	Not scheduled
699-71-77[a]	Unconfined	BO	--	BO	--	BO	--	BO	BO	Not scheduled
699-72-73	Unconfined	BE	--	BE	--	BE	--	BE	BE	Yes
699-72-92	Unconfined	BO	--	BO	--	BO	--	BO	--	Not scheduled
199-B2-15	Ringold aquitard	Q	--	Q	Q	Q	Q	Q	--	New wells to be sampled 2011
199-B2-16	Bottom of unconfined	Q	--	Q	Q	Q	Q	Q	--	
199-B3-51	Bottom of unconfined	--	--	--	Q		Q	Q	--	
199-B4-14	Top of unconfined	Q	--	Q	Q	Q	Q	Q	--	
199-B5-8	Top of unconfined	Q	Q	Q	Q	Q	Q	Q	Q	
199-B8-9	Top of unconfined	Q	Q	Q	Q	Q	Q	Q	--	

Notes: Requirements are from the following:

- DOE/RL-2003-38, *100-BC-5 Operable Unit Sampling and Analysis Plan*, Rev. 1
- TPA-CN-240, *TPA Change Notice for Modifying 100-BC-5 Operable Unit Sampling and Analysis Plan, DOE/RL-2003-38, Rev. 1* (dated December 8, 2008)
- TPA-CN-293, *TPA Change Notice for Modifying 100-BC-5 Operable Unit Sampling and Analysis Plan, DOE/RL-2003-38, Rev. 1* (dated October 6, 2009).

a. Wells sampled three times in 2010 for RI/FS to evaluate spatial and temporal uncertainty. Analyzed for RI/FS COPCs.

b. New wells added to sampling schedule beginning in April 2010; not in DOE/RL-2003-38, TPA-CN-240, or TPA-CN-293.

c. Wells 199-B8-7 and 199-B8-8 were sampled in January 2010 and then decommissioned to allow for remediation of the 100-C-7 waste site.

A = to be sampled annually

BE = to be sampled biennially, even fiscal years

BO = to be sampled biennially, odd fiscal years

Table A-2. Monitoring Wells and Constituents for the 100-KR-4 Pump-and-Treat Systems

Well	Monitoring Purpose	Hexavalent Chromium	Sr-90	Tritium	C-14	Sampled as Scheduled in 2010 (12 months)	Comment
116-K-2 Trench Wells							
199-K-18	Monitoring	Q	S	S	S	No; Sr-90 and C-14 only analyzed in December 2010 sample	Sampled in April, June, August, and December 2010.
199-K-19	Monitoring	S	A	A	A	Yes	Sampled in July and December 2010.
199-K-20	Compliance	Q	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in March, June, and August 2010.
199-K-21	Monitoring	S	A	A	A	Yes	Sampled in July and December 2010.
199-K-22	Monitoring	S	A	A	A	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010.
199-K-37	Monitoring	S	A	A	A	Yes	Sampled in June and December 2010.
199-K-113A	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010. Well offline October 2010 to January 2011 for system upgrades.
199-K-114A	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010. Well offline October 2010 to January 2011 for system upgrades.
199-K-115A	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010. Well offline October 2010 to January 2011 for system upgrades.
119-K-116A	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010. Well offline October 2010 to January 2011 for system upgrades.
199-K-117A	Monitoring	Q	S	S	S	No; Sr-90 and tritium only analyzed in December 2010 sample	Sampled in March, June, August, and December 2010.
199-K-119A	Monitoring	Q	S	S	S	No; Sr-90 and C-14 only analyzed in December 2010 sample	Sampled in July and December 2010.
199-K-120A	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium (1 sample), and C-14 missed in 2010	Sampled in July 2010. Well offline October 2010 to January 2011 for system upgrades.
199-K-124A	Monitoring	S	A	A	A	Yes	Sampled in July and December 2010.
199-K-125A	Compliance	Q	S	S	S	No; Sr-90, tritium (1 sample), and C-14 missed in 2010	Replaces well 199-K-118. Sampled in March, July, and August 2010. Well offline October 2010 to January 2011 for system upgrades.
199-K-127	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium (1 sample), and C-14 missed in 2010	Sampled in July 2010.
199-K-129	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium (1 sample), and C-14 missed in 2010	Sampled in June 2010. Well offline October 2010 to January 2011 for system upgrades.
199-K-130	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 not analyzed in June 2010 sample	Sampled in June and November 2010.
199-K-131	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010.
199-K-141	Extraction	S	S	S	S	Yes	Sampled in February and July 2010.
199-K-142	Performance	S	S	S	S	Yes	Sampled in March, June, September, and December 2010.
199-K-144	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010.
199-K-145	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium (1 sample), and C-14 missed in 2010	Sampled in June 2010.
199-K-146	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010.
199-K-147	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 not analyzed in June 2010 sample	Sampled in June and November 2010.
199-K-148	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 not analyzed in June 2010 sample	Sampled in June and November 2010.

Table A-2. (Cont.)

Well	Monitoring Purpose	Hexavalent Chromium	Sr-90	Tritium	C-14	Sampled as Scheduled in 2010 (12 months)	Comment
199-K-149	Extraction/ compliance	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010. Well disconnected in December 2010.
199-K-150	Extraction/ compliance	S	S	S	S	No; well not sampled in 2010	Well disconnected in December 2010.
199-K-151	Performance	S	A	A	A	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010.
199-K-152	Performance	S	A	A	A	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in June 2010.
199-K-153	Extraction	S	S	S	S	No; Sr-90, tritium, and C-14 not analyzed in August 2010 sample	Well activated on 3/25/2010. Sampled in August and November 2010.
199-K-157	Performance	S	S	S	S	No; Sr-90 and C-14 only analyzed in December 2010 sample	Sampled in February, March, April, June, July, September, and December 2010.
199-K-161	Extraction/ compliance	S	S	S	S	No; tritium and C-14 not analyzed in June 2010 sample	Sampled in June and November 2010.
199-K-162	Extraction	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in July 2010.
199-K-163	Extraction	S	S	S	S	No; Sr-90, tritium, and C-14 not analyzed in June 2010 sample	Sampled in June and November 2010.
199-K-178	Extraction	S	S	S	S	Yes	Sampled in April, June, July, August, and November 2010. Well offline due to sand plugging; redeveloped in June 2011.
199-K-181	Performance	S	S	S	S	No; Sr-90, tritium, and C-14 only analyzed in August 2010 sample	Sampled in January, February, March, April, May, and August 2010.
199-K-182	Monitoring	S	S	S	S	No; Sr-90 only analyzed in June 2010 sample	Sampled in June and August 2010.
KW Wells							
199-K-34	Performance	Q	A	A	A	Yes	Sampled in April, June, September, and December 2010.
199-K-106A	Performance	Q	A	A	A	No; fourth sampling event missed in 2010	Sampled in March, June, and September 2010.
199-K-107A	Performance	Q	A	A	A	No; hexavalent chromium not analyzed in January and July 2010 samples	Sampled in January, April, July, and December 2010.
199-K-132	Extraction/ compliance	Q	S	S	S	No; Sr-90, tritium, and C-14 only analyzed in November 2010 sample	Sampled in February, June, August, and November 2010.
199-K-138	Extraction/ compliance	Q	S	S	S	No; Sr-90, tritum, and C-14 only analyzed in November 2010 sample	Sampled in February, June, August, and November 2010.
199-K-139	Extraction/ compliance	Q	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in February, June, and August 2010.
199-K-140	Monitoring	S	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in February 2010. Converted to monitoring well after April 15, 2010.
199-K-137	Extraction	Q	S	S	S	No; Sr-90, tritium, and C-14 (1 sample) missed in 2010	Sampled in February, June, and August 2010.
199-K-165	Extraction	Q	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in February, June, and August 2010.
199-K-166	Extraction	Q	S	S	S	No; Sr-90, tritium, and C-14 only analyzed in November 2010 sample	Sampled in April, June, August, and November 2010.

Table A-2. (Cont.)

Well	Monitoring Purpose	Hexavalent Chromium	Sr-90	Tritium	C-14	Sampled as Scheduled in 2010 (12 months)	Comment
199-K-168	Extraction	Q	S	S	S	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in February, June, and August 2010.
199-K-173	Monitoring	Q	A	A	A	No; Sr-90, tritium, and C-14 missed in 2010	Sampled in March, April, June, August, and September 2010.

Notes:

1. Requirements from *The KW Pump and Treat System Remedial Design and Remedial Action Work Plan, Supplement to the 100-KR-4 Groundwater Operable Unit Interim Action* (DOE/RL-2006-52) and the *Supplement to the 100-HR-3 and 100-KR-4 Remedial Design Report and Remedial Action Workplan for the Expansion of the 100-KR-4 Pump and Treat System* (DOE/RL-2006-75). Wells 199-K-130 through 199-K-162 (116-K-2 Trench) monitored under "pre-startup" phase.

2. TPA-CN-273,dated May 21, 2009, revised DOE/RL-2006-75 by specifying semi-annual sampling at KR4 and KX pump-and-treat wells for hexavalent chromium, tritium, strontium-90, carbon-14, technetium-99, and nitrate.

A = to be sampled annually

Q = to be sampled quarterly

S = to be sampled semiannually

W = to be sampled weekly (field analysis)

M = to be sampled monthly (field analysis)

Table A-3. Monitoring Wells and Constituents for 100-KR-4 Operable Unit Long-Term Monitoring

Well or Seep	Alpha	Anions	Beta	C-14	Gamma	Hexavalent Chromium	Mercury	Metals	Sr-90	Tc-99	Tritium	Sampled as Scheduled in 2010
199-K-11	--	A	A	A	--	A	--	A	--	--	A	Yes; sampled in December 2010
199-K-18	--	A	--	--	--	Q	--	A	A	A	A	Yes; sampled in April, June, August, and December 2010
199-K-19	A	A	A	A	A	S	--	A	A	A	A	Yes; sampled in July and December 2010.
199-K-20	A	A	A	A	A	Q	--	A	A	A	A	No; sampled in March, June, and August 2010
199-K-21	A	A	A	A	A	S	--	A	A	A	A	Yes; sampled in July and December 2010
199-K-22	A	A	A	A	A	A	--	A	A	A	A	No; sampled in June 2010, only analyzed for hexavalent chromium
199-K-23	--	BO	BO	--	--	A	--	BO	--	--	BO	No; not sampled in 2010
199-K-30	Q	Q	Q	S	--	Q	--	Q	Q	S	Q	No; sampled in January, April, and December 2010. Decommissioned in December 2010
199-K-31	S	A	S	A	--	A	--	A	A	A	S	Yes; sampled in March and June 2010
199-K-32A	--	A		A	--	Q	--	A	A	A	A	Yes; sampled in March, June, September, and December 2010
199-K-32B	--	A		A	--	A	--	A	A	A	A	Yes; sampled in December 2010
199-K-34	--	Q		A	--	Q	--	Q	A	A	Q	Yes; sampled in April, June, September, and December 2010
199-K-35	--	--	--	W	--	--	W	W	--	--	--	Yes; sampled weekly until decommissioned in April 2010
199-K-36	A	S	A	A	A	Q	Q	Q	A	A	S	No; sampled in March, June, and December 2010
199-K-37	--	A		A	--	S	--	A	A	A	A	Yes; sampled in March, June, September, and December 2010
199-K-106A	Q	Q	Q	A	--	Q	--	Q	A	A	Q	No; sampled in March and June 2010
199-K-107A	Q	Q	Q	A	--	Q	--	Q	A	A	Q	Yes; sampled in January, April, July, and December 2010
199-K-108A	S	S	S	Q	--	Q	--	S	Q	A	Q	Yes; sampled in January, March, June, August, September, and December 2010
199-K-110A	S	S	S	A	--	A	--	S	A	A	S	Yes; sampled in April and December 2010
199-K-111A	Q	Q	Q	Q	--	A	--	Q	A	A	Q	Yes; sampled in February, March, April, June, July, September, and December 2010
699-70-68	--	A	--	--	--	--	--	A		A	A	Yes; sampled in April, July, and November 2010
699-72-73	BO	BO	--	BO	--	BO	--	BO	BO	BO	BO	Yes; sampled in March and June 2010
699-73-61	--	BO	--	--	--	BO	--	BO	--	--	BO	Yes; sampled in May, June, and September 2010
699-78-62	--	--	--	--	--	--	--	--	--	--	--	Not sampled in 2010; adjacent to active injection well 199-K-172; no useful data
Aquifer tubes (21 tubes sampled)												
SK-057-3	A	A	A	--	A	--	--	A	--	--	A	No
SK-077-1	A	A	A	--	A	--	--	A	--	--	A	No
SK-082-2	A	A	A	--	A	--	--	A	--	--	A	No

Note: Requirements from NPL Agreement/Change Control Form 108, *Modifications to the Groundwater Sampling and Analysis Schedules for the 100-KR-4 Groundwater Sampling Project* (dated November 20, 1996), as modified by *Sampling Changes to the 100-HR-3 and 100-KR-4 Operable Units* (Wanek, 1998); further modified in subsequent years.

A = to be sampled annually

BE = to be sampled biennially, in even fiscal years

BO = to be sampled biennially, in odd fiscal years

M = to be sampled monthly

Q = to be sampled quarterly

S = to be sampled semiannually

Table A-4. Monitoring Wells and Constituents for 100-NR-2 Interim Action

Well Name	Field Parameters	Alkalinity	Alpha	Anions	Beta	Gamma	Metals	Oil and Grease	Sr-90	Total Petroleum Hydrocarbons	Tritium	Sampled as Scheduled in 2009
199-N-2	A	A	--	A	A	--	A	--	A	--	A	No
199-N-3	A	A	--	A	A	--	A	--	A	A	A	Yes
199-N-14	A	A	--	A	A	--	A	--	A	--	A	Yes
199-N-16	A	A	--	A	A	--	A	A	A	A	--	Yes
199-N-18	A	A	--	A	A	--	A	A	A	A	A	Yes
199-N-19	A	--	--	A	--	--	A	--	A	A	A	Yes
199-N-21	A	--	--	A	--	--	A	--	--	A	--	Yes
199-N-26	A	A	--	A	--	--	A	--	--	A	--	Yes
199-N-27	A	--	--	A	--	A	A	--	A	--	A	Yes
199-N-28	A	A	--	A	--	--	A	--	A	--	--	Yes
199-N-32	S	--	--	S	S	S	S	--	S	--	S	Yes
199-N-34	A	A	--	A	--	--	A	--	A	--	A	Yes
199-N-41	A	A	--	A	--	--	A	--	A	--	A	Yes
199-N-46	S	S	S	S	S	S	S	--	S	--	S	Yes
199-N-50	A	--	--	--	A	--	--	--	A	--	A	Yes
199-N-51	A	--	--	--	A	--	--	--	A	--	A	Yes
199-N-56	A	A	A	A	A	A	A	--	A	A	A	Yes
199-N-57	A	A	A	A	A	A	A	--	A	A	A	Yes
199-N-64	A	A	A	A	A	--	A	--	A	--	A	Yes
199-N-67	A	A	A	A	A	--	A	--	A	--	A	Yes
199-N-69	A	A	A	A	A	A	A	--	A	--	A	Yes
199-N-70	A		A	A	A	A	A	--	A	--	A	Yes
199-N-73	A	A	--	A	--	--	A	--	--	--	--	Yes
199-N-74	A	--	A	--	A	A	A	--	--	--	--	Yes
199-N-75	A	A	--	A	A		A	--	A	--	A	Yes
199-N-76	S	S	--	S	S	S	S	--	S	--	S	Yes
199-N-80	A	--	A	A	A	A	A	--	A	--	A	Yes
199-N-81	A	A	--	A	A	A	A	--	A	--	A	Yes
199-N-92A	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-96A	A	--	--	A	A	--	A	A	A	A	A	Yes
199-N-99A	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-103A	A	A	A	A	A	A	A	--	A	--	A	Yes
199-N-105A	A	A	A	A	A	A	A	--	A	--	A	Yes
199-N-106A	A	A	A	A	A	A	A	--	A	--	A	No
199-N-119	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-120	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-121	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-122	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-123	A	--	--	A	A	--	A	--	A	--	A	Yes

Table A-4. (Cont.)

Well Name	Field Parameters	Alkalinity	Alpha	Anions	Beta	Gamma	Metals	Oil and Grease	Sr-90	Total Petroleum Hydrocarbons	Tritium	Sampled as Scheduled in 2009
199-N-146	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-147	A	--	--	A	A	--	A	--	A	--	A	Yes
199-N-173	A	A	A	A	A	--	A	--	A	A	A	Yes

Notes:

1. Monitoring requirements have been modified (expanded) from *Remedial Design Report/Remedial Action Work Plan for the 100-NR-2 Operable Unit* (DOE/RL-2001-27).

2. TPA-CN-256 (*TPA Change Notice for Modifying Remedial Design Report/Remedial Action Work Plan for the 100-NR-2 Operable Unit, DOE/RL-2001-27 and Interim Action Waste Management Plan for the 100-NR-2 Operable Unit, DOE/RL-2000-41, Rev. 1*) modified the monitoring requirements, including updating analyses and removing decommissioned wells.

3. Field parameters include pH, temperature, conductivity, and turbidity; with dissolved oxygen and oxidation-reduction potential on some wells.

A = to be sampled annually

S = to be sampled semiannually

Table A-5. Monitoring Wells and Constituents for 100-NR-2 Shoreline Monitoring

Well or Tube Name	Alkalinity	Anions	Beta	Dissolved Oxygen	Gamma	Metals	Sr-90	Total Organic Carbons, Total Petroleum Hydrocarbons	Tritium	Sampled as Scheduled in 2010
NVP1-1	--	--	Q	Q	--	--	--	--	--	May and June
NVP1-2	--	--	Q	Q	--	--	--	--	--	January, May, and June
NVP1-3	--	--	Q	Q	--	--	--	--	--	May and June
NVP1-4	--	--	Q	Q	--	--	--	--	--	March and June
NVP1-5	--	--	Q	Q	--	--	--	--	--	March, June, and September
NVP2-116.3	--	--	Q	Q	--	--	--	--	--	March and June
NVP2-116.0	Q	Q	M	M	Q	Q	Q	--	Q	February, March, April, May, June, July, December (2)
NVP2-115.7	--	--	Q	Q	--	--	--	--	--	March, June, and September
NVP2-115.4	--	--	Q	Q	--	--	--	--	--	March, June, and September
NVP2-115.1	--	--	Q	Q	--	--	--	--	--	March, June, and September
Array-0A	A	A	Q	Q	A	A	Q	Q	A	March, June, and September
Array-1A	A	A	Q	Q	A	A	Q	Q	A	January, March, June, and September
Array-2A	A	A	Q	Q	A	A	Q	Q	A	January, March, June, and September
Array-3A	Q	Q	M	M	Q	Q	Q	--	Q	February, March, April. May, June, August, September, December (2)
Array-4A	Q	Q	M	M	Q	Q	Q	--	Q	February, March, April. May, June, July, August, September, December (2)
Array-6A	Q	Q	M	M	Q	Q	Q	--	Q	February, March, April, May, June, August, September, December (2)
Array-7A	A	A	Q	Q	A	A	A	--	A	Unable to sample tube, putting in replacement
Array-8A	A	A	Q	Q	A	A	A	--	A	March, June, and September
Array-8.5A	A	A	Q	Q	A	A	A	--	A	March, June, and September
Array-9A	A	A	Q	Q	A	A	A	--	A	March and June
Array-10A	A	A	Q	Q	A	A	A	--	A	March, June, and September
Array-11A	A	A	Q	Q	A	A	A	--	A	March, June, and September
Array-12A	A	A	Q	Q	A	A	A	--	A	March and June
Array-13A	A	A	Q	Q	A	A	A	--	A	March
Array-14A	A	A	Q	Q	A	A	A	--	A	March and June
Array-15A	A	A	Q	Q	A	A	A	--	A	March, June, and September
Array-16A	A	A	Q	Q	A	A	A	--	A	No
C6132	A	A	Q	Q	A	A	Q	Q	A	March and September
C6135	A	A	Q	Q	A	A	Q	Q	A	March and September

Note: Requirements from DOE/RL-2000-59, *Sampling and Analysis Plan for Aquifer Sampling Tubes*, Rev. 1.

A = to be sampled annually

Q = to be sampled quarterly

S = to be sampled semiannually

Table A-6. Monitoring Wells and Constituents for the 100-NR-2 Apatite Treatability Test Plan

Well Name	Well Type	Anions	Beta	Metals	Sr-90	Sampled as Scheduled in 2010
199-N-122	Compliance	Q	Q	Q	P	Yes; February, May, and August
199-N-123	Compliance	BM/Q	BM/Q	BM/Q	P	Yes; February, May, and August
199-N-126	Monitoring	FQ	FQ	FQ	P	August only
199-N-127	Monitoring	FQ	FQ	FQ	P	Unable to sample in August
199-N-128	Monitoring	Q	Q	Q	P	Yes; February, May, and August
199-N-129	Monitoring	FQ	FQ	FQ	P	May only
199-N-130	Monitoring	FQ	FQ	FQ	P	August only
199-N-131	Monitoring	FQ	FQ	FQ	P	Unable to sample in August
199-N-132	Monitoring	Q	Q	Q	P	February (early March), May, and August
199-N-133	Monitoring	FQ	FQ	FQ	P	May only
199-N-136	Barrier	FQ	FQ	FQ	P	August only
199-N-137	Barrier	FQ	FQ	FQ	P	August only
199-N-138	Barrier	FQ	FQ	FQ	P	August only
199-N-139	Barrier	FQ	FQ	FQ	P	August only
199-N-140	Barrier	FQ	FQ	FQ	P	August only
199-N-141	Barrier	FQ	FQ	FQ	P	August only
199-N-142	Barrier	Q	Q	Q	P	Yes; February, May, and August
199-N-143	Barrier	FQ	FQ	FQ	P	August only
199-N-144	Barrier	FQ	FQ	FQ	P	August only
199-N-145	Barrier	Q	Q	Q	P	Yes; February, May, and August
199-N-146	Compliance	Q	Q	Q	P	Yes; February, May, and August
199-N-147	Compliance	Q	Q	Q	P	Yes; February, May, and August
199-N-148	Monitoring	Q	Q	Q	P	Yes; February, May, and August
199-N-149	Monitoring	Q	Q	Q	P	February and May; unable to sample in August
199-N-150	Monitoring	Q	Q	Q	P	February and May; unable to sample in August
199-N-151	Monitoring	BM/Q	BM/Q	BM/Q	P	Yes; February, May, and August
199-N-152	Monitoring	FQ	FQ	FQ	P	August only
199-N-153	Monitoring	FQ	FQ	FQ	P	August only
199-N-154	Monitoring	FQ	FQ	FQ	P	August only
199-N-155	Monitoring	Q	Q	Q	P	February and May; unable to sample in August
199-N-156	Monitoring	Q	Q	Q	P	Yes; February, May, and August
199-N-159	Barrier	FQ	FQ	FQ	P	August only
199-N-160	Barrier	Q	Q	Q	P	Yes; February, May, and August
199-N-161	Barrier	FQ	FQ	FQ	P	August only
199-N-162	Barrier	FQ	FQ	FQ	P	August only
199-N-163	Barrier	FQ	FQ	FQ	P	August only
199-N-164	Barrier	Q	Q	Q	P	Yes; February, May, and August

Notes: Requirements from *100/300 Area Unit Managers Meeting Minutes*, Attachment 2 (FH, 2008). Additional requirements are applied during injection.

P = periodic splits for strontium-90 during performance monitoring period; full set at least once a year

Q = schedule changed to February, May, August, and November quarterly monitoring in accordance with TPA-CN-271 (*TPA Change Notice for Modifying Approved Documents/Workplans in Accordance with the Tri-Party Agreement Action Plan, Section 9.0, Documentation and Records Treatability Test Plan Addendum for the 100-NR-2 Groundwater Operable Unit DOE/RL-2005-96 Addendum*)

FQ = final quarterly performed under TPA-CN-27; future performance monitoring will be twice each year (at high and low river stages)

Table A-7. Monitoring Wells and Constituents for the 100-HR-3 Operable Unit In Situ Redox Manipulation System

Well	Purpose	Anions	Cations	Arsenic	Hexavalent Chromium	Metals	Sulfate	Uranium	Tritium	Sampled as Scheduled in Reporting Period
199-D2-6	Monitoring	A	--	A	A	A	A	A	A	Yes
199-D2-8	Monitoring	--	--	--	M	--	--	--	--	Yes
199-D3-2	Monitoring	Q	--	A	Q	A	Q	--	A	No
199-D4-1	Monitoring	Q	--	A	Q	A	Q	A	--	No
199-D4-13	Barrier performance	Q	--	A	Q	A	Q	--	A	No
199-D4-14	Barrier performance	Q	--	A	Q	A	Q	--	A	No
199-D4-15	Monitoring	A	--	A	Q	A	A	A	A	No
199-D4-19	Barrier performance	Q	--	A	Q	A	A	A	A	No
199-D4-20	Monitoring	Q	--	A	Q	A	Q	A	A	No
199-D4-22	Monitoring	Q	--	A	Q	A	Q	--	A	No
199-D4-23	Compliance	Q	--	A	Q	A	Q	A	A	No
199-D4-26	Monitoring	Q	--	A	Q	A	Q	A	--	No
199-D4-31	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-32	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-38	Compliance	A	Q	A	Q	Q	Q	A	--	No
199-D4-39	Compliance	Q	--	A	Q	A	Q	A	--	No
199-D4-4	Monitoring	Q	--	A	Q	A	Q	A	--	No
199-D4-48	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-5	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-6	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-62	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-7	Barrier performance	Q	--	A	Q	A	Q	A	--	No
199-D4-78	Barrier performance	--	--	--	--	--	--	--	A	Yes
199-D4-83	Compliance	Q	--	A	Q	A	Q	A	--	No
199-D4-84	Compliance	--	--	--	--	--	--	--	A	Yes
199-D4-85	Compliance	--	--	--	--	--	--	--	A	Yes
199-D4-86	Compliance	--	--	--	--	--	--	--	A	Yes
199-D5-36	Monitoring	Q	--	A	Q	A	Q	A	A	No
199-D5-38	Monitoring	Q	--	A	Q	A	Q	A	A	No
199-D5-39	Monitoring	Q	--	A	Q	A	Q	A	A	No
199-D5-43	Monitoring	Q	--	A	Q	A	Q	A	A	No
DD-39	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
199-D4-25	Barrier performance	Q	Q	Q	Q	Q	Q	Q	--	No
199-D4-27	Barrier performance	Q	Q	Q	Q	Q	Q	Q	--	No
199-D4-92	Barrier performance	Q	Q	Q	Q	Q	Q	Q	--	No
199-D4-93	Barrier performance	Q	Q	Q	Q	Q	Q	Q	--	No
DD-41	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
DD-42	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
DD-43	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
DD-44	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
Redox-1	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
Redox-2	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
Redox-3	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
Redox-4	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No
TD-39	Aquifer tube	Q	Q	Q	Q	Q	Q	Q	--	No longer in use

Notes: Requirements from *Remedial Design Report and Remedial Action Work Plan for the 100-HR-3 Groundwater Operable Unit In Situ Redox Manipulation* (DOE/RL-99-51).

A = to be sampled annually

M = to be sampled monthly

Q = to be sampled quarterly

S = to be sampled semiannually

Table A-8. Monitoring Wells and Constituents for the 100-HR-3 Pump-and-Treat Systems

Well	Monitoring Purpose	Hexavalent Chromium	Nitrate	Sr-90	Tc-99	Tritium	Uranium	Sampled as Scheduled in CY 2010
199-D8-53	Extraction	Q	--	S	--	S	--	Yes
199-D8-54A	Extraction	Q	--	S	--	S	--	Yes
199-D8-54B	Performance	S	--		--	--	--	Not sampled
199-D8-68	Extraction	Q	--	S	--	S	--	Yes
199-D8-69	Compliance	Q	--	A	--	A	--	Hexavalent chromium missed last three quarters, no strontium-90 or tritium
199-D8-70	Compliance	Q	--	A	--	A	--	Hexavalent chromium missed last two quarters
199-D8-71	Performance	S	--	--	--	--	--	Yes
199-D8-72	Extraction	Q	--	S	--	S	--	Hexavalent chromium missed last quarter*
199-H3-2A	Former extraction well	S	S	S	S	S	S	Yes
199-H3-2C	New extraction well	A	A	A	A	A	A	Sampled only for hexavalent chromium
199-H3-3	Former injection well	S	A	S	--	S	--	Yes
199-H3-4	Former injection well	S	A	S	--	S	--	Yes
199-H3-5	Former injection well	S	A	S	--	S	--	Yes
199-H4-3	Extraction/performance	Q	S	S	S	S	S	Yes
199-H4-4	Extraction/compliance	Q	S	S	S	S	S	Hexavalent chromium missed first quarter, not sampled second half of year
199-H4-5	Compliance	M	A	A	A	A	A	Hexavalent chromium missed February and October through December*
199-H4-6	Performance	S	--	--	--	--	--	Yes
199-H4-8	Performance	S	--	--	--	--	--	Yes
199-H4-10	Performance	S	--	--	--	--	--	Yes
199-H4-11	Performance/former extraction well	Q	S	S	S	S	S	Hexavalent chromium missed third quarter
199-H4-12A	Extraction	Q	S	S	S	S	S	Hexavalent chromium missed third quarter
199-H4-12B	Performance	S	--	--	--	--	--	Yes
199-H4-12C	Extraction/performance	S	S	S	S	S	S	Not sampled first half of year, no strontium-90
199-H4-13	Performance	S	--	--	--	--	--	Yes
199-H4-15A	Extraction	Q	S	S	S	S	S	Yes
199-H4-15B	Performance	S	--	--	--	--	--	Yes
199-H4-15CS	Performance	S	--	--	--	--	--	Not sampled second half of year*
199-H4-16	Performance	S	--	--	--	--	--	Yes
199-H4-45	Performance	S	--	--	--	--	--	Yes
199-H4-46	Performance	S	--	--	--	--	--	Yes
199-H4-48	Performance	S	--	--	--	--	--	Yes
199-H4-49	Performance	S	--	--	--	--	--	Not sampled first half of year
199-H4-63	Extraction/compliance	M	A	A	A	A	A	Hexavalent chromium missed March, July, August, November, and Deember
199-H4-64	Extraction/compliance	M	A	A	A	A	A	Hexavalent chromium missed January, February, and August through December No co-contaminants sampled*
199-H4-65	Former extraction well	S	--	--	--	--	--	Yes
199-H5-1A	Performance	S	--	--	--	--	--	Yes

Note: Requirements from *Interim Action Monitoring Plan for the 100-HR-3 and 100-KR-4 Operable Units* (DOE/RL-96-90), as modified by the *Remedial Design and Remedial Action Work Plan for 100-HR-3 and 100-KR-4 Groundwater Operable Units' Interim Action* (DOE/RL-96-84), further modified in subsequent years.

* Some monthly, quarterly, and annual samples missed in fall 2010 because of inclement weather and process-related issues.

A = to be sampled annually

M = to be sampled monthly

Q = to be sampled quarterly

S = to be sampled semiannually

Table A-9. Monitoring Wells and Constituents for 100-HR-3 Operable Unit Long-Term Monitoring

Well	Alpha	Anions	Beta	Hexavalent Chromium	Metals	Sulfate	Tritium	Sampled as Scheduled in CY 2010
199-D2-11	--	A	--	M	--	--	--	Hexavalent chromium missed October through December*
199-D4-1	--		--		--	--	--	Not scheduled
199-D5-102	--	A	--	M	--	--	--	No anions; hexavalent chromium missed October through December*
199-D5-103	--	A	--	M	A	A	--	Hexavalent chromium missed October through December*
199-D5-104	--	--	--	M	--	--	--	Hexavalent chromium missed January, June, and December
199-D5-119	--	A	--	M	A	A	--	Hexavalent chromium missed October through December*
199-D5-120	--	--	--	M	--	--	--	Hexavalent chromium missed October and November*
199-D5-121	--	--	--	M	--	--	--	Hexavalent chromium missed October through December*
199-D5-122	--	--	--	M	--	--	--	Hexavalent chromium missed October through December*
199-D5-123	--	--	--	M	--	--	--	Hexavalent chromium missed October through December*
199-D5-125	--	--	--	M	--	--	--	Hexavalent chromium missed August through November
199-D5-126	--	--	--	M	--	--	--	Hexavalent chromium missed October and November*
199-D5-13	A	A	A	S	A	A	A	Hexavalent chromium missed second half of year*
199-D5-14	A	A	A	S	A	A	A	Hexavalent chromium missed second half of year*
199-D5-15	A	A	A	S	A	A	A	Yes
199-D5-16	A	A	A	S	A	A	A	Yes
199-D5-17	A	A	A	A	A	A	A	Yes
199-D5-18	--	--	--	A	--	--	--	Yes
199-D5-19	--	--	--	A	--	--	--	Yes
199-D5-20	--	--	--	A	A	--	A	Not sampled
199-D5-32	--	A	--	A	--	A	S	Only hexavalent chromium sampled
199-D5-33	--	--	--	Q	--	--	--	Hexavalent chromium missed last quarter *
199-D5-34	--	A	--	Q	A	A	--	Hexavalent chromium missed last quarter *
199-D5-36	A	Q	A	Q	A	A	A	No alpha/beta or tritium, no hexavalent chromium or anions last two quarters
199-D5-37	--	S	--	S	--	S	--	No samples taken last half of year*
199-D5-38	A	Q	A	Q	A	Q	A	Hexavalent chromium and anions missed last quarter*
199-D5-39	A	A	A	A	A	A	S	Only hexavalent chromium sampled*
199-D5-40	A	Q	A	Q	A	Q	A	Yes
199-D5-41	--	A	--	A	--	--	--	Not sampled
199-D5-43	A	Q	A	Q	A	Q	A	Last quarter not sampled*
199-D5-44	--	A	--	A	--	--	--	Yes
199-D5-92	--	A	--	A	--	A	A	No anions or sulfate
199-D5-93	--	A	--	A	A	--	--	Yes
199-D5-97	--	A	--	Q	--	--	--	Hexavalent chromium missed last quarter*
199-D5-98	--	A	--	Q	--	--	--	No anions, hexavalent chromium missed last quarter*
199-D5-99	--	A	--	M	--	--	--	Hexavalent chromium missed October through December*
199-D8-4	A	A	A	S	A	A	A	Only hexavalent chromium sampled first half of year*
199-D8-5	A	A	A	Q	A	A	A	Yes
199-D8-54B	A	A	A	A	A	A	A	Not sampled*
199-D8-55	--	--	--	A	--	--	--	Yes
199-D8-6	A	A	A	A	A	A	A	Not sampled*
199-H4-10	A	A	A	S	A	A	A	Yes
199-H4-13	A	A	A	S	A	A	A	Yes
199-H4-15CP	--	--	--	S	--	--	--	Missed second half of year*
199-H4-15CQ	--	--	--	S	--	--	--	Missed second half of year*
199-H4-15CR	--	--	--	S	--	--	--	Missed second half of year*
199-H4-45	A	A	A	S	A	A	A	Yes
199-H4-46	A	A	A	S	A	A	A	Hexavalent chromium missed second half of year*
199-H4-47	--	--	--	--	--	--	--	Not scheduled
199-H4-48	--	--	--	S	--	--	--	Hexavalent chromium missed second half of year*

Table A-9. (Cont.)

Well	Alpha	Anions	Beta	Hexavalent Chromium	Metals	Sulfate	Tritium	Sampled as Scheduled in CY 2010
199-H4-49	--	--	--	S	--	--	--	Hexavalent chromium missed first half of year
199-H4-5	A	A	A	M	A	A	A	Hexavalent chromium missed last quarter*
199-H4-6	A	A	A	S	A	A	A	Yes
199-H4-9	A	A	A	A	A	A	A	Yes
199-H5-1A	--	--	--	S	--	--	--	Yes
199-H6-1	A	A	A	--	A	A	A	Yes
699-86-42	--	--	--	A	--	--	--	Not sampled*
699-87-42A	--	--	--	A	--	--	--	Not sampled*
699-88-41	--	--	--	A	--	--	--	Not sampled*
699-90-45	--	--	--	A	--	--	--	Yes
699-91-46A	--	--	--	A	--	--	--	Not sampled*
699-93-48A	--	--	--	A	--	--	--	Yes
699-94-41	Q	A	Q	A	A	A	A	Yes
699-94-43	Q	A	Q	A	A	A	A	Yes
699-95-45	Q	A	Q	A	A	A	A	Yes
699-95-48	Q	A	Q	A	A	A	A	Yes
699-95-51	Q	A	Q	A	A	A	A	Yes
699-96-43	A	A	A	A	A	A	A	Not sampled*
699-96-49	A	A	A	A	A	A	A	Not sampled*
699-96-52B	Q	A	Q	A	A	A	A	Alpha/beta missed last quarter*
699-97-41	Q	A	Q	A	A	A	A	Not sampled
699-97-43	--	--	--	--	--	--	--	Not scheduled
699-97-43B	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-97-43C	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-97-45	Q	A	Q	A	A	A	A	Yes
699-97-45B	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-97-48B	Q	A	Q	A	A	A	A	Alpha/beta missed last quarter*
699-97-48C	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-97-51A	A	A	A	A	A	A	A	Yes
699-98-43	Q	A	Q	A	A	A	A	Yes
699-98-46	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-98-49A	--	--	--	A	--	--	--	Yes
699-98-51	Q	A	Q	A	A	A	A	Yes
699-99-41	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-99-42B	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
699-99-44	Q	A	Q	A	A	A	A	Only alpha, beta, and hexavalent chromium sampled*
Seep SD-102-1	--	--	--	A	--	--	--	Not sampled*
Seep SD-110-1	--	--	--	A	--	--	--	Not sampled*
Seep SD-110-2	--	--	--	A	--	--	--	Not sampled*
Seep SD-098-1	--	--	--	A	--	--	--	Not sampled*
Seep SH-144-1	--	--	--	A	--	--	--	Not sampled*
Seep SH-145-1	--	--	--	A	--	--	--	Not sampled*
Seep SH-150-1	--	--	--	A	--	--	--	Not sampled*
Seep SH-152-2	--	--	--	A	--	--	--	Not sampled*
Seep SH-153-1	--	--	--	A	--	--	--	Not sampled*

Notes: Monitoring requirements have been modified (expanded) from *Sampling Changes to the 100-HR-3 and 100-KR-4 Operable Units* (CCN 062039).

* Some monthly, quarterly, and annual samples missed in fall 2010 due to inclement weather and process-related issues.

A = to be sampled annually

M = to be sampled monthly

S = to be sampled semi-annually

Q = to be sampled quarterly

Table A-10. Monitoring Wells and Constituents for the 100-FR-3 Operable Unit

Well	Alkalinity	Alpha	Anions	Hexavalent Chromium	Metals	Sr-90	Tritium	TCE (VOA)	Uranium	Sampled as Scheduled in Reporting Period
199-F1-2[a]	BO	--	BO	--	BO	--	--	--	--	Yes
199-F5-1[a]	A	BE	A	--	A	BE	BE	--	--	Yes
199-F5-4[a]	BO	BO	BO	--	BO	--	BO	BO	--	Yes
199-F5-6[a]	A	BE	A	--	A	BE	BE	--	--	Yes
199-F5-42[a]	BO	BO	BO	--	BO	BO	BO	--	--	Yes
199-F5-43A[a]	BE	BE	BE	--	BE	BE	BE	--	--	Not scheduled
199-F5-43B	BE	BE	BE	--	BE	BE	--	--	--	Not scheduled
199-F5-44[a]	BE	BE	BE	--	BE	BE	BE	--	--	Not scheduled
199-F5-45[a]	BO	BO	BO	--	BO	BO	BO	BO	BO	Yes
199-F5-46[a]	BE	A	BE	--	BE	BE	A	BE	A	Yes
199-F5-47	BE	BE	BE	--	BE	--	BE	--	BE	Not scheduled
199-F5-48[a]	BO	BO	BO	--	BO	--	BO	--	BO	Yes
199-F6-1[a]	BO	BO	BO	--	BO	BO	BO	--	--	Yes
199-F7-1[a]	BE	--	BE	--	BE	--	--	BE	--	Yes[b]
199-F7-2[a]	BE	BE	BE	--	BE	--	BE	BE	--	Not scheduled
199-F7-3[a]	BE	BE	BE	--	BE	--	BE	BE	--	Yes[b]
199-F8-2[a]	BO	BO	BO	--	BO	--	BO	--	BO	Yes
199-F8-3[a]	BE	BE	BE	--	BE	BE	BE	BE	BE	Not scheduled
199-F8-4[a]	BE	BE	BE	--	BE	--	BE	--	BE	Not scheduled
199-F8-7[a]	A	--	A	A	A	A	A	A	A	Yes
699-58-24	BE	--	BE	--	BE	--	--	--	--	Not scheduled
699-60-32	BO	--	BO	--	BO	--	--	--	--	Yes
699-62-31	BO	--	BO	--	BO	--	--	--	--	Yes
699-62-43F	BE	--	BE	--	BE	--	BE	--	--	Not scheduled
699-63-25A	BO	--	BO	--	BO	--	BO	--	--	Yes
699-63-55	BO	--	BO	--	BO	--	BO	--	--	Yes
699-64-27	BE	--	BE	--	BE	--	--	--	--	Not scheduled
699-66-23	BE	--	BE	--	BE	--	BE	--	--	Not scheduled
699-67-51	BO	--	BO	--	BO	--	BO	--	--	Yes
699-71-30	BO	BO	BO	--	BO	--	BO	--	--	Yes
699-74-44	BO	--	BO	--	BO	--	--	BO	--	Yes
699-77-36[a]	BE	--	BE	--	BE	--	--	BE	--	Not scheduled
699-77-54[a]	BO	--	BO	--	BO	--	--	--	--	Yes
699-81-38	BE	--	BE	--	BE	--	--	--	--	Not scheduled
699-83-47	BE	--	BE	--	BE	--	--	BE	--	Not scheduled
199-F5-52	Q	Q	Q	Q	Q	Q	Q	Q	Q	New wells to be sampled 2011
199-F5-53	Q	Q	Q	Q	Q	Q	Q	Q	Q	
199-F5-54	Q	Q	Q	Q	Q	Q	Q	Q	Q	

Notes:

1. Requirements from *100-FR-3 Operable Unit Sampling and Analysis Plan* (DOE/RL-2003-49, Rev. 1), as modified by TPA-CN-241 (*TPA Change Notice for Modifying 100-FR-3 Operable Unit Sampling and Analysis Plan, DOE/RL-2003-49, Rev. 1*).

2. All wells are screened in the unconfined aquifer, except wells 199-F5-43B and 199-F5-53, which are screened in the Ringold Formation aquitard.

a. Wells sampled three times in 2010 for RI/FS to evaluate spatial and temporal uncertainty. Analyzed for RI/FS COPCs.

b. Sampling not required for these wells in odd fiscal year, but sampled to check rising TCE concentrations from previous year.

A = to be sampled annually

BE = to be sampled biennially, even fiscal years

BO = to be sampled biennially, odd fiscal years (note that fiscal year 2011 sampling was scheduled for October 2010; sampling occurred between late September and November 2010)

Q = new well; sampled quarterly first year after installation

VOA = volatile organic analyte

Table A-11. Monitoring Wells and Constituents for the 200-ZP-1 Operable Unit

Well	Anions	Arsenic	I-129	Metals	Sr-90	Tc-99	Tritium	Uranium	VOA	Sampled as Scheduled in CY 2010
299-W6-10	--	--	--	--	--	--	--	--	--	Dry
299-W7-4	--	--	--	--	--	--	--	--	--	Not sampled
299-W8-1	--	--	--	--	--	--	--	--	--	Dry
299-W10-1	A	--	--	A	--	--	A	--	A	Yes
299-W10-4	S	S	S	--	--	S	S	--	S	Yes
299-W10-5	A	--	--	A	--	A	A	--	A	Missed (November)
299-W10-22	S	--	--	S	--	S	S	--	S	Yes
299-W10-23	S	--	--	S	--	S	S	--	S	Yes
299-W10-24	Q	--	Q	Q	--	Q	Q	--	Q	Yes
299-W10-33	S	--	S	--	--	S	S	--	S	Yes
299-W11-3	S	--	S	S	--	--	S	--	S	Missed (November)
299-W11-6	S	--	S	--	--	S	--	--	S	Missed (November)
299-W11-7	A	--	A	A	--	A	A	--	A	Yes
299-W11-10	S	--	--	--	--	--	--	--	S	Yes
299-W11-13	S	--	S	--	--	S	S	--	S	Yes
299-W11-18	A	--	A	--	--	A	A	--	A	Yes
299-W11-34P	S	--	S	S	--	S	S	--	S	Missed (December)
299-W11-37	S	--	S	--	--	--	S	S	S	Yes
299-W11-39	Q	--	Q	Q	--	Q	Q	--	Q	Yes
299-W11-40	Q	--	--	Q	--	Q	Q	--	Q	Yes
299-W11-42	Q	--	Q	Q	--	Q	Q	--	Q	Yes
299-W11-43	S	--	S	S	--	--	S	S	S	Missed (November)
299-W11-45	Q	--	Q	Q	--	Q	Q	--	Q	Missed (October)
299-W11-46	Q	--	Q	Q	--	Q	Q	--	Q	Yes
299-W11-47		--	--	--	--	--	--	--	--	Not sampled
299-W11-48	S	--	S	S	--	S	S	--	S	Missed (November)
299-W11-87	A	--	A	A	--	A	A	--	A	Missed (November)
299-W11-88	S	--	--	S	--	--	S	--	S	Missed (November)
299-W12-1	A	--	A	A	--	--	A	--	A	
299-W13-1	S	--	--	S	--	S	S	--	S	Missed (November)
299-W14-14	A	--	A	A	--	A	A	--	A	Yes
299-W14-16	A	--	A	A	--	A	A	--	A	Yes
299-W14-71	A	--	--	A	--	--	A	--	A	Yes
299-W14-72	A	--	--	A	--	--	A	--	A	Yes
299-W15-1	S	--	--	--	--	--	--	--	S	Yes
299-W15-2	A	--	--	A	--	--	A	--	A	Yes
299-W15-7	S	--	--	--	--	S	--	--	S	Missed (November)
299-W15-11	S	--	--	--	--	S	S	--	S	Missed (November)
299-W15-15	--	--	--	--	--	--	--	--	--	dry
299-W15-17	S	--	--	S	--	S	--	--	S	Yes
299-W15-30	S	--	--	S	--	S	--	--	S	Yes
299-W15-31A	S	--	--	--	--	S	--	--	S	Yes
299-W15-34	A	--	--	--	--	A	--	--	A	Yes
299-W15-35	A	A	A	--	A	A	--	A	A	Yes

Table A-11. (Cont.)

Well	Anions	Arsenic	I-129	Metals	Sr-90	Tc-99	Tritium	Uranium	VOA	Sampled as Scheduled in CY 2010
299-W15-36	A	--	--	--	--	--	--	--	A	Missed (May)
299-W15-38	--	--	--	--	--	--	--	--	--	Dry
299-W15-39	--	--	--	--	--	--	--	--	--	Dry
299-W15-40	A	--	A	A	--	A	A	--	A	Yes
299-W15-41	S	--	--	S	--	S	S	--	S	Yes
299-W15-42	S	--	--	S	--	S	--	--	S	Yes
299-W15-43	S	--	--	S	--	S	S	--	S	Yes
299-W15-44	S	--	S	S	--	S	S	--	S	Yes
299-W15-45	A	--	--	--	--	A	--	--	A	Missed (November)
299-W15-46	Q	--	--	--	--	Q	--	--	Q	Missed (November)
299-W15-47	S	S	S	--	S	S	S	S	S	Missed (November)
299-W15-49	S	--	--	--	--	S	--	--	S	Missed (November)
299-W15-50	S	--	--	S	--	S	--	--	S	Missed (November)
299-W15-152	A	--	--	--	--	--	--	--	A	Missed (January)
299-W15-763	--	--	Q	--	--	Q	--	--	Q	Yes
299-W15-765	Q	--	Q	Q	--	Q	Q	--	Q	Yes
299-W17-1	S	--	--	S	--	S	S	--	S	Yes
299-W18-1	Q	--	--	Q	--	--	Q	--	Q	Missed (September)
299-W18-16	S	--	--	--	--	--	--	--	S	Missed (November)
299-W18-23	--	--	--	--	--	--	--	--	--	Dry
699-43-69	S	--	--	--	--	--	--	--	S	Yes
699-43-89	A	A	A	A	A	A	A	A	A	Yes
699-44-64	A	--	A	--	--	A	--	A	A	Yes
699-45-69A	A	--	A	--	--	--	--	--	A	Yes
699-45-69C	A	--	--	--	--	--	A	--	A	Yes
699-48-71	S	S	S	S	--	S	S	--	S	Yes
699-48-77A	A	A	A	--	A	A	A	A	A	Yes
699-50-74	S	--	S	S		S	S	S	S	Yes
699-55-60A	A	A	A	--	A	A	A	A	A	Yes

Notes:

1. Requirement have been modified (expanded) from DOE/RL-2003-55.
2. The following wells (from DOE/RL-2003-55) have gone dry: 299-W7-12, 299-W10-13, 299-W10-20, 299-W10-21, 299-W11-14, and 299-W18-27.
3. Samples were not collected during September, October, and November 2010 due to a stop work.

A = to be sampled on an annually
BE = to be sampled biennially, even years
BO = to be sampled biennially, odd years
S = to be sampled semiannually
Q = to be sampled quarterly
VOA = volatile organic analyte

Table A-12. Monitoring Wells and Constituents for the 200-UP-1 Operable Unit

Well	Arsenic	Cadmium	C-14	Chromium	I-129	Iron	Manganese	Nitrate and Fluoride	Se-79	Sr-90	Tc-99	Tritium	Uranium	VOA	Sampled as Scheduled in 2010
299-W15-37[a]	A	A	--	--	--	--	--	A	--	--	--	--	A	S	Yes
299-W18-15	S	--	--	--	--	--	--	S	--	--	--	--	S	S	Yes
299-W18-21[a]	A	--	--	--	--	--	--	A	--	--	A	--	A	S	Second sampling not successful; well is dry
299-W18-22[a]	A	--	--	--	--	--	--	A	--	--	A	--	A	S	Yes
299-W18-30	A	--	--	--	A	--	--	A	--	--	--	--	A	A	Yes
299-W19-4	--	--	--	--	BO	--	--	BO	--	--	BO	--	BO	BO	Not scheduled
299-W19-18[b]	--	--	--	--	A	--	--	A	--	--	A	--	A	A	Yes
299-W19-101[c]	--	--	--	--	Q	--	--	Q	--	--	Q	Q	Q	Q	No; three samples missed due to maintenance issues
299-W19-105[g]	--	--	--	--	S	--	--	S	--	--	S	S	S	S	Yes
299-W19-107[g]	--	--	--	--	S	--	--	S	--	--	S	--	S	S	Yes
299-W19-34A	A	--	--	--	A	--	--	A	--	--	A	--	A	A	Yes
299-W19-34B	BE	--	--	--	BE	--	--	BE	--	--	BE	--	BE	BE	Yes
299-W19-35	--	S	--	--	S	--	--	S	--	--	S	--	S	S	No; second sampled delayed until 2011
299-W19-36[d]	--	--	--	--	A	--	--	Q	--	--	Q	--	Q	Q	No; three samples missed due to system outages and stop work
299-W19-43[e]	--	--	--	--	S	--	--	Q	--	--	Q	--	Q	Q	No; three samples missed due to system outages and stop work
299-W19-46	--	S	--	--	S	--	S	S	--	--	S	S	S	S	Yes
299-W19-48	--	--	--	--	Q	--	--	Q	--	--	Q	Q	Q	Q	No; one sample missed due to stop work
299-W19-49[f,g]	--	--	--	--	S	--	--	S	--	--	S	S	S	S	Yes
299-W21-2[g]	--	--	--	--	S	--	--	S		S	S	S	S	S	No; one sample missed due to stop work
299-W22-26	--	A	--	--	A	--	--	A	A	--	A	A	A	A	Yes
299-W22-45	--	A	--	--	A	--	--	A	--	A	--	A	A	A	Yes
299-W22-48	S	S	--	--	S	--	S	S	--	S	--	S	S	S	Yes
299-W22-49	--	S	--	--	S	S	S	S	--	S	S	S	S	S	Yes
299-W22-69[g]	--	--	--	--	A	--	--	A	--	--	A	A	--	A	Yes
299-W22-72[g]	--	--	S	--	S	--	--	S	--	S	S	S	S	S	Yes
299-W22-83	--	Q	--	--	Q	--	--	Q	Q	Q	Q	Q	Q	Q	Yes
299-W22-86[g]	--	--	--	S	S	--	--	S	S	--	--	S	--	S	Yes
299-W22-87[g]	--	--	--	--	S	--	--	S	--	--	S	S	S	S	Yes
299-W22-88[g]	--	--	--	--	S	--	--	S	--	--	S	S	S		Yes
299-W23-4	S	--	--	--	--	--	--	S	--	--	--	S	S	S	Yes
299-W23-15	--	--	--	--	--	S	--	S	--	--	S	S	S	S	Yes
299-W23-21	--	--	--	--	--	--	--	Q	--	--	Q	Q	Q	Q	Yes
299-W26-13	--	--	--	--	BO	--	--	BO	--	--	--	BO	BO	BO	Not scheduled
299-W26-14	--	--	--	--	BE	--	BE	BE	--	--	BE	BE	BE	BE	Yes
699-30-66[g]	--	--	--	S	S	--	--	S	--	--	--	S	S	S	No; second sample delayed until 2011 due to stop work
699-32-62	--	--	--	BO	BO	--	--	BO	--	--	--	BO	--	--	Not scheduled
699-32-72A	--	--	--	--	BO	--	--	BO	--	--	--	BO	--	BO	Not scheduled
699-32-76[g]	--	--	--	BO	BO	--	--	BO	--	--	--	--	--	BO	Not scheduled

Table A-12. (Cont.)

Well	Arsenic	Cadmium	C-14	Chromium	I-129	Iron	Manganese	Nitrate and Fluoride	Se-79	Sr-90	Tc-99	Tritium	Uranium	VOA	Sampled as Scheduled in 2010
699-33-74[g]	--	--	--	A	A	--	--	A	--	--	A	A	A	A	Yes
699-33-75[g]	--	--	--	S	S	--	--	S	--	--	--	S	S	S	Yes
699-33-76[g]	--	--	--	A	A	--	--	A	--	--	--	--	--	A	No; delayed until 2011 due to stop work
699-34-72[g]	--	--	S	--	S	--	--	S	--	S	S	S	S	S	No; second sample missed due to stop work
699-35-66A	--	--		BO	BO	--	--	BO	--	--	--	BO	--	BO	Not scheduled
699-35-70	--	--	BE		BE	--	--	BE	--	--	--	BE	--	BE	Missed; well is dry
699-35-78A	A	--	--	--	--	--	--	A	--	--	--	--	A	A	Yes
699-36-61A	--	--	--	BE	BE	--	--	BE	--	--	--	BE	--	--	Yes
699-36-70A	--	--	--	--	A	--	--	A	--	--	A	A	A	A	Yes
699-36-70B[g]	--	--	--	--	S	--	--	S	--	--	S	S	S	S	No; second sample missed due to stop work
699-38-65	--	--	--	--	A	--	--	A	--	--	--	A	--	--	Yes
699-38-68A	--	--	--	--	BO	--	--	BO	--	--	BO	BO	BO	BO	Not scheduled
699-38-70B	--	--	--	--	S	--	--	S	--	--	S	S	S	S	Yes
699-38-70C	--	--	--	--	S	--	--	S	--	--	S	S	S	S	No; second sample delayed until 2011 due to stop work
699-40-62	--	--	--	--	BO	--	--	BO	--	--	BO	BO	BO	BO	Not scheduled
699-40-65[g]	--	--	--	--	S	--	--	S	--	--	--	S	--	S	No; second sample delayed until 2011 due to stop work

Notes:

1. Requirements modified from *Remedial Investigation/Feasibility Study Work Plan for the 200-UP-1 Groundwater Operable Unit* (DOE/RL-92-76, Rev. 1).

2. Wells listed DOE/RL-92-76 that are now dry include the following: 299-W18-21, 299-W18-33, 299-W19-37, 299-W19-40, 299-W22-9, 299-W22-20, 299-W23-9, 299-W23-10, 299-W23-14 (replaced with well 299-W23-21), 699-35-70, and 699-38-70.

3. Well 299-W19-39 is included in the DOE/RL-92-76 but is no longer sampled; the well is configured as an extraction well but is not operating and cannot be sampled.

a. The VOAs listed as annual in DOE/RL-92-76; sampled semiannually to support the 200-ZP-1 pump-and-treat system.

b. Not listed in DOE/RL-92-76 but sampled annually to support the 200-UP-1 pump-and-treat system.

c. Listed as "299-W19-50 (new well 'L')" in DOE/RL-92-76; was abandoned during drilling and replaced by 299-W19-101.

d. Frequency specified as annual in DOE/RL-92-76; now a pump-and-treat system extraction well sampled quarterly.

e. Frequency specified as semiannual in DOE/RL-92-76; now a pump-and-treat system extraction well sampled quarterly.

f. Listed as "299-W19-47 (new well 'M')" in DOE/RL-92-76; assumed to be a typographical error. New well "M" is 299-W19-49.

g. Frequency reduced from quarterly after first year of sampling.

A = to be sampled annually

BE = to be sampled biennially, even fiscal years

BO = to be sampled biennially, odd fiscal years

CY = calendar year

Q = to be sampled quarterly

S = to be sampled semiannually

VOA = volatile organic analyte

Table A-13. Monitoring Wells and Constituents for the 200-BP-5 Operable Unit

Well	Contaminants of Concern										Supporting Constituents							Sampled as Scheduled in 2010
	Cs-137	Co-60	Cyanide	I-129	Nitrate	Pu-239/240	Sr-90	Tc-99	Tritium	Uranium	Alkalinity	Alpha/Beta	Am-241	Arsenic	Metals (Filtered)	Np-237	TOC/TOX	
299-E24-8	3-10	3-10		3-10	3-10	--	--	--	3-10	--	--	3-10		3-10	--	--	--	Yes
299-E26-10	--	--	--	A	A	--	--	--	A	--	--	--	--	--	--	--	--	Yes
299-E26-11	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	3-10	--	--	--	Yes
299-E27-10	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	3-10	--	--	--	Yes
299-E27-14	--	--	--	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
299-E27-15	--	--	--	--	A	--	--	A	--	--	A	--	--	--	A	--	--	Yes
299-E27-17	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	3-10	--	--	--	Yes
299-E27-18	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	3-10	--	--	--	Yes
299-E27-7	--	--	--	A	A	--	--	A	A	--	--	--	--	A	--	--	--	Yes
299-E27-155*	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	--	No; Am-241, Np-237, Pu-239/240, Sr-90
299-E28-13	--	--	--	3-10	3-10	--	3-10	--	3-10	3-10		3-10	--	--	--	--	--	Yes
299-E28-17	A	--	--	--	A	A	A	--	--	A	--	--	--	--	--	--	--	Yes
299-E28-18	--	--	--	A	A	--	--	--	A	A	--	A	--	A	--	--	--	Not sampled
299-E28-2	A	--	--	A	A	A	A	A	A	--	A	A	--	--	A		--	Yes
299-E28-21	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--	--	Yes
299-E28-23	A	--	--	--	--	A	A	--	--	A	--	A	A	--	--	A	--	Yes
299-E28-24	A	--	--	--	--	A	A	--	A	A	--	A	A	--	--	A	--	Yes
299-E28-25	A	--	--	A	A	A	A	--	A	A	--	A	A	A	--	A	--	Yes
299-E28-26	--	--	--	3-10	A	--	--	A	3-10	A	--	--	--	3-10	--	--	--	Yes
299-E28-27	A	--	--	A	A	A	A	A	3-10	A	--	--	--	--	--	--	--	Yes
299-E28-28	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
299-E28-5	A	--	--	3-10	3-10	A	A	--	3-10	A	--	3-10	--	3-10	--	--	--	No; delayed to January 2011
299-E28-6	A	A	--	3-10	3-10	A	A	--	3-10	A	--	3-10	--	3-10	--	--	--	No; delayed to January 2011
299-E28-8	A	--	--	--	--	A	A	A		A	--	--	--	--	--	--	--	Yes
299-E32-10	--	A	A	3-10	3-10	--	--	A	3-10	A	--	--	--	3-10	--	--	--	Yes
299-E32-2	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
299-E32-4	--	--	--	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
299-E32-5	--	--	--	3-10	3-10	--	--	--	3-10	3-10	--	--	--	--	--	--	--	Yes

Table A-13. (Cont.)

Well	Contaminants of Concern										Supporting Constituents							Sampled as Scheduled in 2010
	Cs-137	Co-60	Cyanide	I-129	Nitrate	Pu-239/240	Sr-90	Tc-99	Tritium	Uranium	Alkalinity	Alpha/Beta	Am-241	Arsenic	Metals (Filtered)	Np-237	TOC/TOX	
299-E32-6	--	--	--	3-10	A	--	--	A	3-10	3-10	--	--	--	--	--	--	--	Yes
299-E32-7	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
299-E32-8	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
299-E32-9	--	--	3-10	A	A	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
299-E33-12	--	--	--	--	--	--	--	3-10	--	--	--	--	--	--	--	--	--	Yes
299-E33-13	--	--	A	--	--	--	--	--	--	A	--	--	--	--	--	--	--	Yes
299-E33-15	--	--	--	--	A	--	--	A	--		--	--	--	--	--	--	--	Yes
299-E33-16	--	--	--	A	A	--	--	A	--	A	--	--	--	--	--	--	--	No I-129
299-E33-18	--	--	--	A	A	--	--	A	--	A	--	--	--	--	--	--	--	No I-129
299-E33-205*	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	--	Only first quarter due to access issues
299-E33-26	--	A	A	3-10	3-10	--	--	A	3-10	A	--	3-10	--	--	--	--	--	No; I-129
299-E33-28	--	--	--	--	A	--	--	A	--	--	--	--	--	--	--	--	--	Yes
299-E33-29	--	--	--	3-10	3-10	--	--	3-10	3-10		--	--	--	--	--	--	--	Yes
299-E33-30	--	--	--	--	A	--	--	A	--	--	--	--	--	--	--	--	--	Yes
299-E33-32	--	--	--	3-10	3-10	--	--	3-10	3-10	--	--	--	--	--	--	--	--	Yes
299-E33-33	--	--	--	3-10	3-10	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	Yes
299-E33-334	--	--	--	--	A	--	--	A	--	A	--	--	--	--	--	--	--	Yes
299-E33-335	--	--	--	--	--	A	--	A	--	--	--	--	--	--	--	--	--	Yes
299-E33-338	--	--	--	--	--	--	--	A	--	A	--	--	--	--	--	--	--	Yes
299-E33-34	--	A	A	A	A	--	--	A	A	A	--	--	--	--	--	--	--	Yes
299-E33-340*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	--	Yes
299-E33-341*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	--	Yes
299-E33-342*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	--	Yes
299-E33-343*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	--	Yes
299-E33-344*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	--	Yes
299-E33-345*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	--	Yes
299-E33-35	3-10	3-10	A	3-10	A	--	--	A	3-10	A	--	--	--	--	--	--	--	Yes
299-E33-37	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes

Table A-13. (Cont.)

Well	Contaminants of Concern										Supporting Constituents							Sampled as Scheduled in 2010
	Cs-137	Co-60	Cyanide	I-129	Nitrate	Pu-239/240	Sr-90	Tc-99	Tritium	Uranium	Alkalinity	Alpha/Beta	Am-241	Arsenic	Metals (Filtered)	Np-237	TOC/TOX	
299-E33-38	--	A	A	A	A	A	A	A	A	A	--	A	--	A	--	--	--	Yes
299-E33-39	--	--	A	A	A	--	--	A	A	A	--	--	--	--	--	--	--	Yes
299-E33-41	3-10	3-10	3-10	3-10	3-10	--	--	A	3-10	A	--	--	--	--	--	--	--	Yes
299-E33-42	--	--	--	A	--	--	--	A	--	A	--	--	--	--	--	--	--	Yes
299-E33-43	--	--	--	A	--	--	--	A	--	A	--	--	--	--	--	--	--	Yes
299-E33-44	--	A	--	--	--	--	--	A	--	A	--	--	--	--	--	--	--	Yes
299-E33-50*	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA		Yes
299-E33-7	A	A	A	A	A	--	--	A	A	A	--	A	--	--	--	--	--	Yes
299-E34-2	--	--	--	A	A	--	--	--	A	--	--	--	--	--	--	--	--	Yes
299-E34-9	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
699-44-39B	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
699-45-42	--	--	--	3-10	3-10	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
699-47-60	--	--	--	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-48-50B*	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	--	Yes
699-49-55A	A	A	A	A	A	A	A	A	A	A	--	A	--	--	--	--	--	Yes
699-49-57A	A	A	A	A	A	--	--	A	A	A	--	--	--	A	--	--	--	Yes
699-49-57B	A	A	A	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-50-56*	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	--	Yes
699-50-59*	--	--	A	A	A	--	--	A	A	A	A	A	--	--	A	--	--	Yes
699-52-55*	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	--	Yes
699-52-55B*	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	--	Yes
699-53-47A	--	--	--	--	A	--	A	--	A	--	--	A	--	--	--	--	--	Yes
699-53-47B	--	--	--	--	3-09	--	3-09	--	--	--	--	--	--	--	--	--	--	Not scheduled
699-53-48A	--	--	--	A	A	--	A	--	A	--	--	A	--	--	A	--	--	Yes
699-53-55A	--	A	A	--	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-53-55B	--	A	A	--	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-53-55C	--	A	A	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-54-45A	--	--	--	--	3-09	--	--	--	--	--	--	--	--	--	--	--	--	Yes
699-54-45B	--	--	--	--	3-09	--	--	--	--	--	--	--	--	--	--	--	--	Not scheduled

Table A-13. (Cont.)

Well	Contaminants of Concern										Supporting Constituents							Sampled as Scheduled in 2010
	Cs-137	Co-60	Cyanide	I-129	Nitrate	Pu-239/240	Sr-90	Tc-99	Tritium	Uranium	Alkalinity	Alpha/Beta	Am-241	Arsenic	Metals (Filtered)	Np-237	TOC/TOX	
699-54-48	--	--	--	--	--	--	3-09	--	--	--	--	--	--	--	--	--	--	Not scheduled
699-54-49	--	--	--	--	A	--	A	--	A	--	--	A	--	--	--	--	--	Yes
699-55-50C	--	--	--	A	A	--	A	A	A	--	--	--	--	--	--	--	--	Yes
699-55-57	--	A	A	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-55-60A	--	A	A	A	A	--	--	A	A	--	--	--	--	--	--	--	--	Yes
699-57-59	A	A	A	A	A	A	A	A	A	A	A	A	--	--	A	--	A	Yes
699-59-58	A	A	A	A	A	A	A	A	A	A	A	A	--	--	A	--	A	Yes
699-60-60	A	A	A	A	A	A	A	A	A	A	A	A	--	--	A	--	A	Yes
699-61-62	A	A	A	A	A	A	A	A	A	A	A	A	--	--	A	--	A	Yes
699-61-66	A	A	A	A	A	A	A	A	A	A	A	A	--	--	A	--	A	Yes
699-64-62	A	A	A	A	A	A	A	A	A	A	A	A	--	--	A	--	A	Yes
699-65-50	--	--	--	--	--	--	--	3-10	--	--	--	--	--	--	--	--	--	Yes
699-65-72	--	--	--	--	--	--	--	--	3-10	--	--	--	--	--	--	--	--	Yes
699-66-58	--	--	--	--	--	--	--	3-10	3-10	--	--	--	--	--	--	--	--	Yes
699-66-64	--	--	--	--	--	--	--	3-10	3-10	--	--	--	--	--	--	--	--	Yes
699-70-68	--	--	--	--	--	--	--	3-10	3-10	--	--	--	--	--	--	--	--	Yes
699-72-73	--	--	--	--	3-10	--	--	3-10	3-10	--	--	--	--	--	--	--	--	Yes
699-73-61	--	--	--	--	--	--	--		3-10	--	--	--	--	--	--	--	--	Yes

Notes: Requirements from *Groundwater Sampling and Analysis Plan for the 200-BP-5 Operable Unit* (DOE/RL-2001-49).

* Well not listed in DOE/RL-2001-49 but added to sampling schedule per the *Remedial Investigation/Feasibility Study Work Plan for the 200-BP-5 Groundwater Operable Unit* (DOE/RL-2007-18, Rev. 1). Note that wells were also sampled and analyzed for volatile organic analytes and semivolatile organic analytes.

3-xx = to be sampled triennially (every 3 years); xx indicates the fiscal year of sampling for specified analyte

A = to be sampled annually

Q = to be sampled quarterly

SA = to be sampled semiannually

TOC = total organic carbon

TOX = total organic halides

Table A-14. Monitoring Wells and Constituents for 200-PO-1 Operable Unit Near-Field Wells

Well Number[a]	Contaminants of Concern							Supporting Constituents					Sampled as Scheduled in 2010
	Arsenic	Chromium, Manganese,, and Vanadium (Filtered)	I-129	Nitrate	Sr-90	Tc-99	Tritium	Alpha	Anions[b]	Beta	Metals[c]	Uranium	
299-E16-2	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E17-1	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E17-12	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E17-13	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E17-14	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E17-16	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E17-18	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E17-19	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E17-23[d]	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E17-25[d]	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E18-1[d]	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E23-1	A	A	A	A	--	--	A	A	A	A	A	--	No
299-E24-16	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E24-18	A	A	A	A	A	A	A	A	A	A	A	A	Yes
299-E24-20	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E24-22	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E24-23	A	A	A	A	A	A	A	A	A	A	A	A	No
299-E24-33	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E24-5	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-17	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-18	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E25-19	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-2	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-20	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E25-22	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E25-28	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-29P	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-29Q	A	A	A	A	--	--	A	--	--	A	A	--	Yes
299-E25-236	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-3	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E25-32P	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-32Q	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-34	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-35	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-36	A	A	A	A	A	--	A	A	A	A	A	A	Yes
299-E25-37	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-40	A	A	A	A	A	A	A	A	A	A	A	--	Yes

Table A-14. (Cont.)

Well Number[a]	Contaminants of Concern							Supporting Constituents					Sampled as Scheduled in 2010
	Arsenic	Chromium, Manganese,, and Vanadium (Filtered)	I-129	Nitrate	Sr-90	Tc-99	Tritium	Alpha	Anions[b]	Beta	Metals[c]	Uranium	
299-E25-41	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-42	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-43	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-44	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-47	A	A	A	A	--	--	A	A	A	A	A	--	Yes
299-E25-6	A	A	A	A	A	--	A	A	A	A	A	--	Yes
299-E25-93	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E25-94	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E26-4	A	A	A	A	A	--	A	A	A	A	A	--	Yes
699-37-47A	A	A	A	A	A	A	A	A	A	A	A	A	Yes
699-39-39	A	A	A	A	--	--	A	A	A	A	A	--	Yes
699-41-42	A	A	A	A	--	--	A	A	A	A	A	--	Yes
699-42-40A	A	A	A	A	--	--	A	A	A	A	A	--	No
699-42-42B	A	A	A	A	--	--	A	A	A	A	A	--	Yes
699-43-45[d]	A	A	A	A	--	--	A	A	A	A	A	--	Yes
699-44-39B	A	A	A	A	--	--	A	A	A	A	A	--	Yes

Notes: Requirements from *Sampling and Analysis Plan for the 200-PO-1 Groundwater Operable Unit* (DOE/RL-2003-04).

a. Some wells added in anticipation of revision of DOE/RL-2003-04. Well scheduled and sampled during first quarter of FY 2010.

b. Anions; analytes include, but are not limited to, nitrate.

c. Metals; analytes include, but are not limited to, chromium, manganese, and vanadium.

d. Well sampled in first quarter of FY 2010 and not during CY 2010.

A = to be sampled annually

Table A-15. Monitoring Wells and Constituents for the 200-PO-1 Operable Unit Far-Field Wells

Well or Aquifer Tube Name	Contaminant of Concern			Supporting Constituents										Sampled as Scheduled in 2010
	I-129	Nitrate	Tritium	Alpha	Anions[b]	Beta	Cyanide	Gamma	Metals[c]	Sr-90	Tc-99	Uranium	VOAs	
BC Cribs														
299-E13-14	--	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E13-5	--	A	A	A	A	A	A	A	A	A	A	A	--	Yes
299-E13-11	--	A	A	A	A	A	A	A	A	A	A	A	--	No
299-E13-19	--	A	A	A	A	A	A	A	A	A	A	A	--	Yes
Southeast Transect														
699-10-54A	--	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-24-46	A	A	A	A	A	A	--	A	A	A	--	--	A	No
699-26-33	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-31-31	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-32-22A	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-32-43	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-41-23	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-46-21B	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
River Transect														
699-10-E12	--	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-20-E12O	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-41-1A	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-46-4	A	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-S3-E12	--	A	A	A	A	A	--	A	A	A	--	--	A	Yes
699-S19-E13	--	A	A	A	A	A	--	A	A	A	--	--	A	No
Basalt-Confined Aquifer														
299-E16-1	3-09	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
699-13-1C	--	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
699-24-1P	--	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
699-32-22B	3-09	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
699-42-40C	3-09	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
699-S2-34B	--	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
699-S11-E12AP	--	3-09	3-09	3-09	3-09	3-09	--	--	3-09	--	--	--	--	Not Scheduled
Far-Field General														
499-S0-7	A	A	A	A	A	A	--	A	A	A	A	A	A	Yes
499-S0-8 a	A	A	A	A	A	A	--	A	A	A	A	A	A	Yes
499-S1-8J a	A	A	A	A	A	A	--	A	A	A	A	A	A	Yes
699-12-4D	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-13-1A	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-13-3A	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-14-38	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-17-5	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-19-43	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-20-20	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-20-E12S	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-20-E5A	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes

Table A-15. (Cont.)

Well or Aquifer Tube Name	Contaminant of Concern			Supporting Constituents										Sampled as Scheduled in 2010
	I-129	Nitrate	Tritium	Alpha	Anions[b]	Beta	Cyanide	Gamma	Metals[c]	Sr-90	Tc-99	Uranium	VOAs	
699-21-6	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-2-3	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-22-35	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes[d]
699-24-34C	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes[d]
699-26-15A	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-26-35A	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes[d]
699-2-6A a	--	A	A	--	A	--	--	--	--	--	--	--	--	Yes
699-2-7 a	--	A	A	--	A	--	--	--	--	--	--	--	--	Yes
699-28-40	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-29-4	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-31-11	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-33-56	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-34-41B	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-34-42	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	No
699-35-9	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-37-43	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-37-E4	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-38-15	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-40-1	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-40-33A	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-40-36	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-41-40	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-41-42 a	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-42-12A	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-42-39A	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-42-39B	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-42-40A a	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	No
699-43-3	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-45-42	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes[d]
699-47-5	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-48-7A	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-49-13E	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-50-28B	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-52-19	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-8-17	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes[d]
699-8-25	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-9-E2	3-10	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	No
699-S12-3	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	No
699-S19-E14	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-S3-25	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-S6-E14A	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-S6-E4A	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes

Table A-15. (Cont.)

Well or Aquifer Tube Name	Contaminant of Concern			Supporting Constituents										Sampled as Scheduled in 2010
	I-129	Nitrate	Tritium	Alpha	Anions[b]	Beta	Cyanide	Gamma	Metals[c]	Sr-90	Tc-99	Uranium	VOAs	
699-S6-E4B	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes
699-S8-19	--	3-10	3-10	--	3-10	--	--	--	--	--	--	--	--	Yes

Notes: Requirements from *Sampling and Analysis Plan for the 200-PO-1 Groundwater Operable Unit* (DOE/RL-2003-04).

a. Some wells added in anticipation of revision of DOE/RL-2003-04.

b. Anions; analytes include, but are not limited to, nitrate.

c. Metals; analytes include, but are not limited to, chromium, manganese, and vanadium.

d. Well sampled in first quarter of fiscal year 2010 and not sampled during CY 2010.

3-xx = to be sampled triennially (every three years); xx indicates the fiscal year of sampling for specified analyte

A = to be sampled annually

VOA = volatile organic analyte

Table A-16. Monitoring Wells and Constituents for the 300-FF-5 Operable Unit, 300 Area

Well Name	Hydrologic Unit Monitored	Contaminants of Concern			Contaminants of Potential Concern				Supporting Measurements						Sampled as Scheduled in 2010
		cis-1,2-Dichloroethene	Trichloroethene	Uranium, Total (Unfiltered)	Tetrachloroethene	Sr-90	Tritium	Nitrate	Anions	Alkalinity	Metals	VOCs	Alpha/Beta	Uranium, Isotopic	
Near-River Well Group															
399-1-1	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-10A[a]	TU	S	S	Q/M	S	--	A	Q	Q/M	Q/M	S	S	S	A	No; missed June
399-1-10B	LU	S	S	S	S	--	--	S	S	S	S	S	--	--	Yes
399-1-16A[a]	TU	S	S	Q/M	S	--	A	Q	Q/M	Q/M	S	S	S	A	Yes
399-1-16B	LU	S	S	S	S	--	--	S	S	S	S	S	--	--	Yes
399-1-16C	C	A	A	A	A	--	--	A	A	A	A	A	--	--	No; not sampled
399-2-1	TU	S	S	Q	S	--	A	Q	Q	Q	S	S	S	A	Yes
399-2-2	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-3-1	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-3-9	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-3-10	TU	S	S	Q	S	--	A	Q	Q	Q	S	S	S	A	Yes
399-3-18[b]	TU	S	S	Q/M	S	--	A	Q	Q/M	Q/M	S	S	S	A	No; missed October, November, December
399-4-7	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-4-9	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-4-10	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
Central Region — Uranium Plume Transport Corridor Well Group															
399-1-2[c]	TU	S	S	S/M	S	--	--	S	S/M	S/M	S	S	S/M	--	No; missed January
399-1-6	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-7	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-8	LU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-9	C	A	A	A	A	--	--	A	A	A	A	A		--	Yes
399-1-11	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-12	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-17A[a]	TU	S	S	Q/M	S	--	A	Q	Q/M	Q/M	S	S	S	A	No; missed June, August, September
399-1-17B	LU	S	S	S	S	--	--	S	S	S	S	S	S	--	No; missed June
399-1-17C	C	A	A	A	A	--	--	A	A	A	A	A	--	--	Yes
399-1-21A[c]	TU	S	S	Q/M	S		A	Q	Q/M	Q/M	S	S	S/M	A	Yes
399-1-21B	LU	S	S	S	S	--		S	S	S	S	S	S	--	Yes
399-1-23	TU	S	S	Q	S	--	A	Q	Q	Q	S	S	S	A	No; missed June and December
399-2-5	TU	Q	Q	Q	Q	--	A	Q	Q	Q	Q	Q	Q	A	No; missed December
399-3-11	TU	S	S	Q	S	A	A	Q	Q	Q	S	S	S	A	Yes; decommissioned in March
399-3-12	TU	S	S	S	S	--	--	S	S	S	S	S	--	--	Yes

Table A-16. (Cont.)

Well Name	Hydrologic Unit Monitored	Contaminants of Concern			Contaminants of Potential Concern				Supporting Measurements						Sampled as Scheduled in 2010
		cis-1,2-Dichloroethene	Trichloroethene	Uranium, Total (Unfiltered)	Tetrachloroethene	Sr-90	Tritium	Nitrate	Anions	Alkalinity	Metals	VOCs	Alpha/Beta	Uranium, Isotopic	
399-3-20	TU	S	S	Q	S	A	A	Q	Q	Q	S	S	S	A	Yes
399-3-21	LU	Q	Q	Q	Q	--	A	Q	Q	Q	Q	Q	Q	--	No; missed December
399-3-22	LU	Q	Q	Q	Q	--	A	Q	Q	Q	Q	Q	Q	--	No; missed December
Northwest Region — Upgradient Conditions Well Group															
399-1-15	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
399-1-18A	TU	--	--	S	--	--	S	S	S	S	S	--	--	--	Yes
399-1-18B	LU	--	--	S	--	--	S	S	S	S	S	--	--	--	Yes
399-1-18C	C	--	--	A	--	--	--	A	A	A	A	--	--	--	Yes
399-8-1[d]	TU	Q	Q	Q	Q	--	--	Q	Q	Q	Q	Q	Q	--	Yes
399-8-3[d]	TU	Q	Q	Q	Q	--	--	Q	Q	Q	Q	Q	Q	--	Yes
399-8-5A[d]	TU	S	S	S	S	--	--	S	S	S	S	S	S	--	Yes
699-S20-E10	TU	--	--	S	--	--	S	S	S	S	S	--	--	--	No; missed December
Southwest Region — Upgradient Conditions Well Group															
399-3-2	TU	S	S	S	S	--	--	S	S	S	S	S	--	--	No; missed December
399-3-6	TU	S	S	S	S	--	--	S	S	S	S	S	--	--	No; missed December
399-3-19	TU	S	S	Q	S	--	A	Q	Q	Q	S	S	S	A	No; missed December
399-4-1	TU	S	S	S	S	--	--	S	S	S	S	S	--	--	Yes
399-4-12	TU	S	S	S	S	--	--	S	S	S	S	S	--	--	Yes
399-4-14	LU	Q	Q	Q	Q	--	A	Q	Q	Q	Q	Q	Q	--	Yes
399-5-4B	TU	S	S	S	S	--	--	S	S	S	S	S	--	--	Yes
699-S27-E14	TU	A	A	A	A	--	--	A	A	A	A	A	--	--	Yes

Notes: Requirements from *300-FF-5 Operable Unit Sampling and Analysis Plan* (DOE/RL-2002-11, Rev. 2).

a. CERCLA supplements RCRA sampling to provide a full year of monthly monitoring for uranium.

b. Special sampling frequency at near-river well to provide more detailed record of seasonal fluctuations in uranium.

c. Frequency increased to monthly during and following remedial action at former 618-1 Burial Ground.

d. Additional well coverage and sampling frequency to monitor plume that developed downgradient of former 618-7 Burial Ground.

A = to be sampled annually

C = uppermost confined aquifer

LU = lower portion of unconfined aquifer

Q = to be sampled quarterly

S = to be sampled semiannually during seasonal high water table and seasonal low water table

TU = upper portion of unconfined aquifer, including water table

Table A-17. Monitoring Wells and Constituents for the 300-FF-5 Operable Unit, 618-11 Subregion

Well	Contaminants of Potential Concern						Supporting Measurements			Sampled as Scheduled in 2010
	Tritium	Gross Beta	Uranium, Total (Unfiltered)	Tc-99	Gross Alpha	Nitrate	Anions	Alkalinity	Metals	
Downgradient of 618-11 Burial Ground (Near-Field)										
699-12-2C	Q	Q	S	S	Q	S	S	S	S	Yes
699-13-2D	Q	Q	S	S	Q	S	S	S	S	Yes
699-13-3A	Q	Q	S	S	Q	S	S	S	S	Yes
Upgradient Conditions (Near-Field)										
699-12-4D	A	A	A	A	A	A	A	A	A	Yes
Downgradient of 618-11 Burial Ground (Far-Field)										
699-13-0A	S	S	--	--	S	S	S	S	S	Yes
699-13-1E	S	S	--	--	S	S	S	S	S	Yes

Notes: Requirements from the *300-FF-5 Operable Unit Sampling and Analysis Plan* (DOE/RL-2002-11, Rev. 2).

A = to be sampled annually

Q = to be sampled quarterly

S = to be sampled semiannually

Table A-18. Monitoring Wells and Constituents for the 300-FF-5 Operable Unit, 618-10/316-4 Subregion

Well	Contaminants of Potential Concern					Supporting Measurements						Sampled as Scheduled in 2010
	Uranium, Total (Unfiltered)	Tributyl Phosphate	Gross Alpha	Gross Beta	Nitrate	Alkalinity	Metals	VOC and SVOC	Tritium	Tc-99	Uranium, Isotopic	
Downgradient of 618-10 Burial Ground (Near-Field)												
699-S6-E4K	S	S	S	S	S	S	S	S	S	S	A	Yes
699-S6-E4L	Q	S	Q	Q	Q	S	S	S	S	S	A	Yes
Downgradient of 618-10 Burial Ground, Within 316-4 Crib Footprint (Near-Field)												
699-S6-E4A	Q	S	Q	Q	Q	S	S	S	S	S	A	Yes
Background, 618-10 Burial Ground/316-4 Cribs												
699-S6-E4D	A		A	A	A	A	A	--	A	A	--	No; not sampled
Downgradient of 618-10 Burial Ground/316-4 Crib												
699-S6-E4B	S	--	S	S	S	S	S	--	S	--	--	No; missed December sample
699-S6-E4E	S	--	S	S	S	S	S	--	S	--	--	Yes

Notes:

1. Requirements from *300-FF-5 Operable Unit Sampling and Analysis Plan* (DOE/RL-2002-11, Rev. 2).
2. Wells completed at the top of the unconfined aquifer.

A = to be sampled annually

Q = to be sampled quarterly

S = to be sampled semiannually

Table A-19. Monitoring Wells and Constituents for the Former 1100-EM-1 Operable Unit

Well	1,1-Dichloroethene	Trichloroethane	Vinyl Chloride	Anions[a]	Sampled as Scheduled in 2010
699-S28-E12	A	A	A	A	No[b]
699-S31-E10A	A	A	A	A	No[b]
699-S31-E10C	A	A	A	A	No[b]

Notes: Requirements from TPA-CN-163, *Change Notice for Modifying Approved Documents/Work Plans in Accordance with TPA Action Plan Section 9.0, Documentation and Records, PNNL-12220, Sampling and Analysis Plan Update for Groundwater Monitoring 1100-EM-1 OU*.

a. Supplemental analyses.

b. The final semiannual sampling event was canceled due to the site-wide stop work.

A = to be sampled annually

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