LMS/RFS/S11738

Surface Water Configuration Adaptive Management Plan Quarterly Report for the Rocky Flats, Colorado, Site

First Quarter Calendar Year 2014

April 2014

U.S. DEPARTMENT OF ENERGY | Legacy Management

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Abbreviations

AMP	Adaptive Management Plan
CY	calendar year
DOE	U.S. Department of Energy
EA	*Rocky Flats Surface Water Configuration Environmental Assessment*
POC	point of compliance
Site	Rocky Flats Site

1.0 Introduction

The Proposed Action assessed in the *Rocky Flats Surface Water Configuration Environmental Assessment* (EA) is to breach the remaining retention pond dams at the Rocky Flats Site (the Site) to allow surface water flow to return to the approximate conditions that prevailed before the retention ponds were constructed. As stated in the EA, based on extensive water quality monitoring data and thorough environmental review, the U.S. Department of Energy (DOE) Office of Legacy Management has determined that the Proposed Action does not present a significant impact on the environment under the National Environmental Policy Act evaluation criteria.

Some members of the public have commented that additional information must be collected prior to implementing the final steps of the Proposed Action to help reduce uncertainty as to whether completion of the Proposed Action will adversely impact the quality of water flowing from the Site and into downstream communities. In response to the requests, DOE initiated a cooperative effort with neighboring community representatives and other interested stakeholders to develop and implement an Adaptive Management Plan (AMP) to provide additional information. The AMP group is composed of these representatives and stakeholders. The resulting AMP reflects DOE's long-term commitment to implementing the activities that the AMP describes.

The AMP provides for a monitoring and data evaluation program to assist DOE in deciding whether to implement the final steps of the Proposed Action by breaching the terminal dams during the planned time frame of 2018–2020, or to delay the completion of the Proposed Action to gather additional information for evaluation. The terminal dams will be operated in a flow-through condition during the period leading up to the completion of the Proposed Action, which will provide data similar to what can be expected post-breach. In addition to the AMP monitoring program, this AMP identifies certain performance indicators that DOE will consider in deciding whether to adjust the time frame for completing the Proposed Action.

This AMP Quarterly Report for the first quarter of calendar year (CY) 2014 is provided according to Section 5.0, "Reporting," in the AMP. Section 3.0 provides the first quarter data summary tables, which include all validated analytical data available as of March 31, 2014. Subsequent AMP reports will include data that were not tabulated in previous AMP reports.

AMP monitoring objectives, locations, and sampling criteria are itemized in Table 2 of the AMP. Additional field implementation for the AMP monitoring objectives can be found in the *Rocky Flats Site Operations Guide*, Appendix I, "Additional Field Implementation Detail for Selected Monitoring Objectives." Analytical data for the following AMP monitoring objectives are included in this report:

- Pre-discharge sampling (Item 1, AMP Table 2)
- Targeted groundwater monitoring (Item 2, AMP Table 2)
- Monitoring to evaluate flow-through operations at Terminal Ponds A-4, B-5, and C-2 (Item 4, AMP Table 2)
- Storm-event monitoring (Item 5, AMP Table 2)
- Continuous flow-paced composite sampling to evaluate uranium transport (Item 6, AMP Table 2)

- Grab sampling for uranium in North and South Walnut Creeks (Item 7, AMP Table 2)
- Grab sampling for nitrate + nitrite as N in Walnut Creek (Item 8, AMP Table 2)

2.0 AMP Highlights: First Quarter CY 2014

- Six informal e-mails were transmitted to AMP participants providing notification that composite samples from the downstream-most points of compliance (POCs) had been retrieved from the field (WOMPOC—Woman Creek at COU Boundary and WALPOC—Walnut Creek at COU Boundary).
- Three informal e-mails were transmitted to AMP participants providing notification of Geospatial Environmental Mapping System postings of validated analytical results for the downstream-most POCs.
- During the quarter, 97 samples were collected in support of AMP monitoring objectives.

3.0 Analytical Data: First Quarter CY 2014

Table 1, "Analytical Results for Water Samples," is available at the end of this report.

Table 2, "Water Sampling Events: First Quarter CY 2014," is available at the end of this report.

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
A1EFF	SL	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	62	mg/L		F	0.38			G	STD
A1EFF	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	45	mg/L		F	0.19			G	STD
A1EFF	SL	12/11/2013	13125820	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	56	mg/L		F	0.19			G	STD
A1EFF	SL	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	46	mg/L		F	0.19			G	STD
A1EFF	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	35	mg/L		F	0.019			G	STD
A1EFF	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	47	mg/L		D	0.19			G	STD
A1EFF	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	25	ug/L		F	0.05			G	STD
A1EFF	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	21	ug/L	B	F	0.05			G	STD
A1EFF	SL	12/11/2013	13125820	07440-61-1	Uranium	N001	35	ug/L	B	F	0.05			G	STD
A1EFF	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	25	ug/L		F	0.05			G	STD
A1EFF	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	25	ug/L		F	0.05			G	STD
A1EFF	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	25	ug/L		D	0.05			G	STD
A2EFF	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	42	mg/L		F	0.38			G	STD
A2EFF	SL	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	49	mg/L		F	0.38			G	STD
A2EFF	SL	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	48	mg/L		F	0.19			G	STD
A2EFF	SL	12/11/2013	13125820	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	40	mg/L		F	0.095			G	STD
A2EFF	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	39	mg/L		F	0.19			G	STD
A2EFF	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	42	mg/L		D	1.9			G	STD
A2EFF	SL	12/11/2013	13125820	07440-61-1	Uranium	N001	42	ug/L	B	F	0.05			G	STD
A2EFF	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	31	ug/L		F	0.05			G	STD
A2EFF	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	33	ug/L		F	0.05			G	STD
A2EFF	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	36	ug/L		F	0.05			G	STD
A2EFF	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	27	ug/L	B	F	0.05			G	STD
A2EFF	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	31	ug/L		D	0.05			G	STD
A3EFF	SL	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	45	mg/L		F	0.38			G	STD
A3EFF	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	34	mg/L		F	0.19			G	STD
A3EFF	SL	12/11/2013	13125820	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	61	mg/L		F	0.095			G	STD
A3EFF	SL	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	38	mg/L		F	0.095			G	STD
A3EFF	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	37	mg/L		F	0.095			G	STD
A3EFF	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	34	mg/L		D	0.19			G	STD
A3EFF	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	36	ug/L		F	0.05			G	STD
A3EFF	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	33	ug/L		F	0.05			G	STD
A3EFF	SL	12/11/2013	13125820	07440-61-1	Uranium	N001	54	ug/L	B	F	0.05			G	STD
A3EFF	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	28	ug/L	B	F	0.05			G	STD
A3EFF	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	36	ug/L		F	0.05			G	STD
A3EFF	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	32	ug/L		D	0.05			G	STD
A4 POND	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	3.8	mg/L		F	0.019			G	STD
A4 POND	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	3.8	mg/L		F	0.019			G	STD
A4 POND	SL	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	5.5	mg/L		F	1.9			G	STD
A4 POND	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	3.8	mg/L		D	0.019			G	STD
A4 POND	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	22	ug/L	B	F	0.05			G	STD
A4 POND	SL	2/13/2014	14025951	07440-61-1	Uranium	N001	20	ug/L		F	0.05			G	STD
A4 POND	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	18	ug/L		F	0.05			G	STD
A4 POND	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	18	ug/L		F	0.05			G	STD
A4 POND	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	18	ug/L		D	0.05			G	STD
B3OUTFLOW	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	21	ug/L		F	0.05			G	STD
B3OUTFLOW	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	22	ug/L		F	0.05			G	STD
B3OUTFLOW	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	23	ug/L		F	0.05			G	STD
B3OUTFLOW	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	18	ug/L	B	F	0.05			G	STD
B3OUTFLOW	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	23	ug/L		D	0.05			G	STD
B5 POND	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	13	ug/L	B	F	0.05			G	STD
B5 POND	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	14	ug/L		F	0.05			G	STD
B5 POND	SL	2/13/2014	14025951	07440-61-1	Uranium	N001	4.6	ug/L		F	0.05			G	STD
B5 POND	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	12	ug/L		F	0.05			G	STD
B5 POND	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	14	ug/L		D	0.05			G	STD
B5INFLOW	SL	12/12/2013	13125821	07440-61-1	Uranium	N001	40	ug/L		F	0.05			G	STD
B5INFLOW	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	19	ug/L		F	0.05			G	STD
B5INFLOW	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	19	ug/L		F	0.05			G	STD
B5INFLOW	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	18	ug/L		F	0.05			G	STD
B5INFLOW	SL	9/25/2013	13125805	07440-61-1	Uranium	N001	15.7	ug/L		F	0.067			C	GEN
B5INFLOW	UN	11/26/2013	13125785	07440-61-1	Uranium	N001	16	ug/L	B	F	0.05			G	STD
B5INFLOW	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	18	ug/L		D	0.05			G	STD
B5INFLOW	SL	9/25/2013	13125844	07440-61-1	Uranium	N002	15.7	ug/L		F	0.067			C	GEN
GS01	SL	10/2/2013	14015856	AM-241	Americium-241	N001	-0.00172	pCi/L	U	F	0.0214	0.00892		C	GEN

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
GS01	SL	10/2/2013	14015856	PU-239,240	Plutonium-239, 240	N001	0.0106	pCi/L	U	F	0.0238	0.00894		C	GEN
GS01	SL	10/2/2013	14015856	07440-61-1	Uranium	N001	3.49	ug/L		F	0.067			C	GEN
GS03	SL	10/25/2013	14015856	AM-241	Americium-241	N002	0.00185	pCi/L	U	F	0.023	0.012		C	GEN
GS03	SL	10/25/2013	14015856	PU-239,240	Plutonium-239, 240	N002	-0.00289	pCi/L	U	F	0.0227	0.00567		C	GEN
GS03	SL	10/25/2013	14015856	07440-61-1	Uranium	N002	8.51	ug/L		F	0.067			C	GEN
GS08	SL	11/14/2013	14015894	AM-241	Americium-241	N001	0.00698	pCi/L	U	F	0.0227	0.0084		C	GEN
GS08	SL	1/16/2014	14025954	AM-241	Americium-241	N001	-0.00181	pCi/L	U	F	0.0276	0.00794		C	GEN
GS08	SL	10/9/2013	13125787	AM-241	Americium-241	N001	0.033	pCi/L		F	0.0309	0.0244	U	C	GEN
GS08	SL	11/14/2013	14015894	PU-239,240	Plutonium-239, 240	N001	0.0125	pCi/L	U	F	0.0227	0.0115		C	GEN
GS08	SL	10/9/2013	13125787	PU-239,240	Plutonium-239, 240	N001	0.00487	pCi/L	U	F	0.0197	0.00844		C	GEN
GS08	SL	1/16/2014	14025954	PU-239,240	Plutonium-239, 240	N001	0	pCi/L	U	F	0.0305	0.00773		C	GEN
GS08	SL	10/9/2013	13125787	07440-61-1	Uranium	N001	13.3	ug/L		F	0.067			C	GEN
GS08	SL	11/14/2013	14015894	07440-61-1	Uranium	N001	15	ug/L		F	0.067			C	GEN
GS08	SL	1/16/2014	14025954	07440-61-1	Uranium	N001	11.6	ug/L		F	0.067			C	GEN
GS10	SL	11/25/2013	13125822	AM-241	Americium-241	N002	0	pCi/L	U	F	0.0189	0.0073		G	GEN
GS10	SL	11/25/2013	13125822	PU-239,240	Plutonium-239, 240	N002	0.00119	pCi/L	U	F	0.0186	0.00838		G	GEN
GS10	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	18	ug/L	B	F	0.05			G	STD
GS10	SL	12/12/2013	13125821	07440-61-1	Uranium	N001	20	ug/L		F	0.05			G	STD
GS10	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	22	ug/L		F	0.05			G	STD
GS10	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	23	ug/L		F	0.05			G	STD
GS10	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	22	ug/L		F	0.05			G	STD
GS10	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	22	ug/L		D	0.05			G	STD
GS10	SL	11/25/2013	13125822	07440-61-1	Uranium	N002	23.7	ug/L		F	0.067			G	GEN
GS11	SL	9/16/2013	13125805	AM-241	Americium-241	N002	0.00664	pCi/L	U	F	0.0171	0.0153		C	GEN
GS11	SL	9/16/2013	13125805	PU-239,240	Plutonium-239, 240	N002	0.0181	pCi/L	U	F	0.0276	0.0189		C	GEN
GS11	SL	9/16/2013	13125805	07440-61-1	Uranium	N002	10.9	ug/L		F	0.067			C	GEN
GS12	SL	10/31/2013	14025915	07440-61-1	Uranium	N001	25	ug/L		F	0.05			C	STD
GS12	SL	1/9/2014	14025954	07440-61-1	Uranium	N001	26	ug/L		F	0.067			C	GEN
GS12	SL	10/4/2013	13125805	07440-61-1	Uranium	N001	21.1	ug/L		F	0.067			C	GEN
GS13	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	52	mg/L		F	0.38			G	STD
GS13	SL	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	55	mg/L		F	0.38			G	STD
GS13	SL	1/2/2014	14015853	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.092	mg/L		F	0.019			G	STD
GS13	SL	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	58	mg/L		F	1.9			G	STD
GS13	SL	12/11/2013	13125820	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	40	mg/L		F	0.19			G	STD
GS13	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	51	mg/L		F	0.38			G	STD
GS13	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	53	mg/L		D	1.9			G	STD
GS13	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	15	ug/L	B	F	0.05			G	STD
GS13	SL	12/11/2013	13125820	07440-61-1	Uranium	N001	26	ug/L	B	F	0.05			G	STD
GS13	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	19	ug/L		F	0.05			G	STD
GS13	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	21	ug/L		F	0.05			G	STD
GS13	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	20	ug/L		F	0.05			G	STD
GS13	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	19	ug/L		D	0.05			G	STD
GS31	SL	10/7/2013	13125844	AM-241	Americium-241	N001	0.00223	pCi/L	U	F	0.0277	0.0116		C	GEN
GS31	SL	9/12/2013	13125844	AM-241	Americium-241	N001	0.00573	pCi/L	U	F	0.0178	0.00889		C	GEN
GS31	SL	9/12/2013	13125844	AM-241	Americium-241	N002	0.0156	pCi/L	U	F	0.0215	0.0163		C	GEN
GS31	SL	10/7/2013	13125844	PU-239,240	Plutonium-239, 240	N001	0.00319	pCi/L	U	F	0.025	0.0146		C	GEN
GS31	SL	9/12/2013	13125844	PU-239,240	Plutonium-239, 240	N001	0.0369	pCi/L		F	0.0242	0.0268	U	C	GEN
GS31	SL	9/12/2013	13125844	PU-239,240	Plutonium-239, 240	N002	0.0453	pCi/L		F	0.0238	0.0187	J	C	GEN
GS31	SL	9/12/2013	13125844	07440-61-1	Uranium	N001	1.41	ug/L		F	0.067			C	GEN
GS31	SL	10/7/2013	13125844	07440-61-1	Uranium	N001	7.89	ug/L		F	0.067			C	GEN
GS31	SL	9/12/2013	13125844	07440-61-1	Uranium	N002	1.11	ug/L		F	0.067			C	GEN
SPOUT	TS	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	410	mg/L		F	1.9			G	STD
SPOUT	TS	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	560	mg/L		F	9.5			G	STD
SPOUT	TS	12/11/2013	13125820	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	250	mg/L		F	9.5			G	STD
SPOUT	TS	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	460	mg/L		F	9.5			G	STD
SPOUT	TS	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	680	mg/L		F	9.5			G	STD
SPOUT	TS	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	560	mg/L		D	9.5			G	STD
SPOUT	TS	12/11/2013	13125820	07440-61-1	Uranium	N001	45	ug/L	B	F	0.05			G	STD
SPOUT	TS	11/26/2013	13125785	07440-61-1	Uranium	N001	40	ug/L	B	F	0.05			G	STD
SPOUT	TS	1/22/2014	14015893	07440-61-1	Uranium	N001	51	ug/L		F	0.05			G	STD
SPOUT	TS	1/9/2014	14015866	07440-61-1	Uranium	N001	47	ug/L		F	0.05			G	STD
SPOUT	TS	12/24/2013	13125842	07440-61-1	Uranium	N001	45	ug/L		F	0.05			G	STD
SPOUT	TS	12/24/2013	13125842	07440-61-1	Uranium	N002	44	ug/L		D	0.05			G	STD
SW093	SL	11/26/2013	13125785	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	46	mg/L		F	1.9			G	STD
SW093	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	12	mg/L		F	0.038		J	G	STD
SW093	SL	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	25	mg/L		F	0.38			G	STD

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
SW093	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.35	mg/L		F	0.019			G	STD
SW093	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	15	mg/L		D	0.19		J	G	STD
SW093	SL	11/26/2013	13125785	07440-61-1	Uranium	N001	13	ug/L	B	F	0.05			G	STD
SW093	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	9.7	ug/L		F	0.05			G	STD
SW093	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	13	ug/L		F	0.05			G	STD
SW093	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	8.6	ug/L		F	0.05			G	STD
SW093	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	10	ug/L		D	0.05			G	STD
WALPOC	SL	1/16/2014	14025956	AM-241	Americium-241	N001	-0.00191	pCi/L	U	F	0.0291	0.00991		C	GEN
WALPOC	SL	12/18/2013	14015879	AM-241	Americium-241	N001	0.00814	pCi/L	U	F	0.0169	0.00843		C	GEN
WALPOC	SL	10/25/2013	13125839	AM-241	Americium-241	N002	-0.00194	pCi/L	U	F	0.0242	0.00852		C	GEN
WALPOC	SL	1/22/2014	14015893	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	2.6	mg/L		F	0.019			G	STD
WALPOC	SL	12/17/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	2.2	mg/L		F	0.019			G	STD
WALPOC	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	1.9	mg/L		F	0.019			G	STD
WALPOC	SL	1/9/2014	14015866	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.12	mg/L		F	0.019			G	STD
WALPOC	SL	1/14/2014	14015879	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	2.29	mg/L		F	0.085			G	GEN
WALPOC	SL	12/24/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	1.8	mg/L		D	0.019			G	STD
WALPOC	SL	12/17/2013	13125842	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	2.3	mg/L		D	0.019			G	STD
WALPOC	SL	1/16/2014	14025956	PU-239,240	Plutonium-239, 240	N001	0.00278	pCi/L	U	F	0.0304	0.0109		C	GEN
WALPOC	SL	12/18/2013	14015879	PU-239,240	Plutonium-239, 240	N001	0.00196	pCi/L	U	F	0.0308	0.0115		C	GEN
WALPOC	SL	10/25/2013	13125839	PU-239,240	Plutonium-239, 240	N002	0.0144	pCi/L	U	F	0.0174	0.00954		C	GEN
WALPOC	SL	1/22/2014	14015893	07440-61-1	Uranium	N001	20	ug/L		F	0.05			G	STD
WALPOC	SL	12/24/2013	13125842	07440-61-1	Uranium	N001	17	ug/L		F	0.05			G	STD
WALPOC	SL	1/9/2014	14015866	07440-61-1	Uranium	N001	22	ug/L		F	0.05			G	STD
WALPOC	SL	1/16/2014	14025956	07440-61-1	Uranium	N001	22.5	ug/L		F	0.067			C	GEN
WALPOC	SL	12/18/2013	14015879	07440-61-1	Uranium	N001	18.7	ug/L		F	0.067			C	GEN
WALPOC	SL	12/24/2013	13125842	07440-61-1	Uranium	N002	16	ug/L		D	0.05			G	STD
WALPOC	SL	10/25/2013	13125839	07440-61-1	Uranium	N002	17.7	ug/L		F	0.067			C	GEN
WOMPOC	SL	12/17/2013	14015879	AM-241	Americium-241	N001	0.0162	pCi/L	U	F	0.0183	0.0112		C	GEN
WOMPOC	SL	11/7/2013	13125839	AM-241	Americium-241	N001	0.00591	pCi/L	U	F	0.0184	0.00821		C	GEN
WOMPOC	SL	1/14/2014	14025969	AM-241	Americium-241	N001	0.00151	pCi/L	U	F	0.0231	0.00785		C	GEN
WOMPOC	SL	11/7/2013	13125839	PU-239,240	Plutonium-239, 240	N001	0.0073	pCi/L	U	F	0.0164	0.00794		C	GEN
WOMPOC	SL	12/17/2013	14015879	PU-239,240	Plutonium-239, 240	N001	0.0134	pCi/L	U	F	0.0176	0.00987		C	GEN
WOMPOC	SL	1/14/2014	14025969	PU-239,240	Plutonium-239, 240	N001	0.00335	pCi/L	U	F	0.0244	0.00902		C	GEN
WOMPOC	SL	11/7/2013	13125839	07440-61-1	Uranium	N001	5.89	ug/L		F	0.067			C	GEN
WOMPOC	SL	12/17/2013	14015879	07440-61-1	Uranium	N001	5.9	ug/L		F	0.067			C	GEN
WOMPOC	SL	1/14/2014	14025969	07440-61-1	Uranium	N001	5.1	ug/L		F	0.067			C	GEN

EXPLANATION

SAMPLE_ID

N00x = Sample was not filtered.
000x = Sample was filtered.

WATER_UNIT_OF_MEASURE

mg/L; ppm = milligrams per liter
pCi/L = picocuries per liter
ug/L = micrograms per liter
C = degrees celsius
mS/cm = milliSiemens per centimeter
NTU = normal turbidity units
s.u. = standard pH units
uS/cm = microSiemens per centimeter
umhos/cm = microSiemens per centimeter

SAMPLE_TYPE

F = Field Sample
D = Duplicate

LAB_QUALIFIERS

*	Replicate analysis not within control limits.
+	Correlation coefficient for MSA < 0.995.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated
M	GFAA duplicate injection precision not met.
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
P	> 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Y	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Z	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE

DATA_VALIDATION_QUALIFIERS

valid	Result is valid.
F	Low flow sampling method used.
G	Possible grout contamination, pH > 9.
J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.
Q	Qualitative result due to sampling technique
R	Unusable result.
U	Parameter analyzed for but was not detected.
X	Location is undefined.
999	Validation not complete

LOCATION_TYPE

SL	SURFACE LOCATION
TS	TREATMENT SYSTEM
WL	WELL

COLLECTION_METHOD

G	Grab
C	Composite

LAB_CODE

GEN	Gel Laboratories
STD	Test America

Table 2. Water Sampling Events: First Quarter CY 2014

	Sampling Dates		Sample Info			Analytes						Sample Tracking Info	
Location Code	**Start**	**End**	**Collection Method**	**Type**	**Filtered**	**VOC**	**U**	**Nitrate**	**Pu/Am**	**SVOC**	**TSS**	**Ticket**	**RIN #**
GS01	10/2/2013 13:42	1/2/2014 15:05	composite	F	No		X		X			MCU 507	14015856
B5INFLOW	10/25/2013 15:01	2/24/2014 12:22	composite	F	No		X					MDR 914	14025964
GS03	10/25/2013 16:35	1/2/2014 14:07	composite	F	No		X		X			MCU 506	14015856
GS12	10/31/2013 11:18	1/9/2014 11:41	composite	F	No		X					MDQ 881	14025915
GS08	11/14/2013 11:44	1/16/2014 13:16	composite	F	No		X		X			MCZ 686	14015894
WOMPOC	12/17/2013 15:35	1/14/2014 12:53	composite	F	No		X		X			MCW 887	14015879
WALPOC	12/18/2013 11:39	1/16/2014 13:27	composite	F	No		X		X			MCW 888	14015879
GS03	1/2/2014 14:07	3/10/2014 12:41	composite	F	No		X		X			MET 988	14036001
GS03	1/2/2014 14:07	3/10/2014 12:41	composite	D	No		X		X			MEU 003	14036001
GS13	1/2/2014 14:13	1/2/2014 14:13	grab	F	No			X				MCU 459	14015853
GS01	1/2/2014 15:05	3/10/2014 12:12	composite	F	No		X		X			MET 987	14036001
SPOUT	1/9/2014 10:13	1/9/2014 10:13	grab	F	No		X	X				MCV 647	14015866
SW093	1/9/2014 10:33	1/9/2014 10:33	grab	F	No		X	X				MCV 648	14015866
A2EFF	1/9/2014 10:56	1/9/2014 10:56	grab	F	No		X	X				MCV 656	14015866
A1EFF	1/9/2014 11:02	1/9/2014 11:02	grab	F	No		X	X				MCV 657	14015866
A3EFF	1/9/2014 11:17	1/9/2014 11:17	grab	F	No		X	X				MCV 655	14015866
GS12	1/9/2014 11:41	2/19/2014 14:04	composite	F	No		X					MDR 821	14025954
GS13	1/9/2014 11:57	1/9/2014 11:57	grab	F	No		X	X				MCV 661	14015866
WALPOC	1/9/2014 12:10	1/9/2014 12:10	grab	F	No		X	X				MCV 662	14015866
B5INFLOW	1/9/2014 12:37	1/9/2014 12:37	grab	F	No		X					MCV 650	14015866
B3OUTFLOW	1/9/2014 13:07	1/9/2014 13:07	grab	F	No		X					MCV 658	14015866
GS10	1/9/2014 13:15	1/9/2014 13:15	grab	F	No		X					MCV 659	14015866
WALPOC	1/14/2014 12:04	1/14/2014 12:04	grab	F	No			X				MCW 889	14015879
WOMPOC	1/14/2014 12:53	2/26/2014 14:49	composite	F	No		X		X			MDS 055	14025969
GS08	1/16/2014 13:16	2/13/2014 11:59	composite	F	No		X		X			MDR 820	14025954
WALPOC	1/16/2014 13:27	2/18/2014 12:39	composite	F	No		X		X			MDR 825	14025956
WALPOC	1/22/2014 10:30	1/22/2014 10:30	grab	F	No		X	X				MCY 944	14015893
A4 POND	1/22/2014 11:11	1/22/2014 11:11	grab	F	No		X	X				MCY 949	14015893
B5 POND	1/22/2014 11:20	1/22/2014 11:20	grab	F	No		X					MCY 947	14015893
B5INFLOW	1/22/2014 11:20	1/22/2014 11:20	grab	F	No		X					MCY 937	14015893
A3EFF	1/22/2014 11:32	1/22/2014 11:32	grab	F	No		X	X				MCY 938	14015893
SW093	1/22/2014 12:31	1/22/2014 12:31	grab	F	No		X	X				MCY 936	14015893
SPOUT	1/22/2014 12:58	1/22/2014 12:58	grab	F	No		X	X				MCY 935	14015893
GS13	1/22/2014 13:10	1/22/2014 13:10	grab	F	No		X	X				MCY 943	14015893
A1EFF	1/22/2014 13:16	1/22/2014 13:16	grab	F	No		X	X				MCY 940	14015893
GS10	1/22/2014 13:18	1/22/2014 13:18	grab	F	No		X					MCY 942	14015893
A2EFF	1/22/2014 13:22	1/22/2014 13:22	grab	F	No		X	X				MCY 939	14015893
B3OUTFLOW	1/22/2014 13:40	1/22/2014 13:40	grab	F	No		X					MCY 941	14015893
B3OUTFLOW	2/4/2014 12:08	2/4/2014 12:08	grab	F	No		X					MDQ 982	14025919
GS10	2/4/2014 12:15	2/4/2014 12:15	grab	F	No		X					MDQ 983	14025919
SPOUT	2/4/2014 12:53	2/4/2014 12:53	grab	F	No		X	X				MDQ 976	14025919
SW093	2/4/2014 13:00	2/4/2014 13:00	grab	F	No		X	X				MDQ 977	14025919
GS13	2/4/2014 13:10	2/4/2014 13:10	grab	F	No		X	X				MDQ 984	14025919
A1EFF	2/4/2014 13:33	2/4/2014 13:33	grab	F	No		X	X				MDQ 981	14025919
A2EFF	2/4/2014 13:40	2/4/2014 13:40	grab	F	No		X	X				MDQ 980	14025919
WALPOC	2/4/2014 13:58	2/4/2014 13:58	grab	F	No		X	X				MDQ 985	14025919
B5 POND	2/4/2014 14:56	2/4/2014 14:56	grab	F	No		X					MDQ 988	14025919
A4 POND	2/4/2014 15:00	2/4/2014 15:00	grab	F	No		X	X				MDQ 990	14025919
A3EFF	2/4/2014 15:11	2/4/2014 15:11	grab	F	No		X	X				MDQ 979	14025919

Table 2. Water Sampling Events: First Quarter CY 2014

	Sampling Dates		Sample Info			Analytes						Sample Tracking Info	
Location Code	Start	End	Collection Method	Type	Filtered	VOC	U	Nitrate	Pu/Am	SVOC	TSS	Ticket	RIN #
B5INFLOW	2/4/2014 15:25	2/4/2014 15:25	grab	F	No		X					MDQ 978	14025919
A4 POND	2/13/2014 11:35	2/13/2014 11:35	grab	F	No		X					MDR 637	14025951
GS08	2/13/2014 11:59	3/10/2014 10:37	composite	F	No		X		X			MET 989	14036001
B5 POND	2/13/2014 12:45	2/13/2014 12:45	grab	F	No		X					MDR 638	14025951
WALPOC	2/18/2014 12:24	2/18/2014 12:24	grab	F	No			X				MDR 705	14025952
WALPOC	2/18/2014 12:39	3/6/2014 10:43	composite	F	No		X		X			MET 902	14035989
A1EFF	2/19/2014 12:26	2/19/2014 12:26	grab	F	No		X	X				MDR 695	14025952
SPOUT	2/19/2014 12:26	2/19/2014 12:26	grab	F	No		X	X				MDR 690	14025952
GS13	2/19/2014 13:10	2/19/2014 13:10	grab	F	No		X	X				MDR 698	14025952
A2EFF	2/19/2014 13:30	2/19/2014 13:30	grab	F	No		X	X				MDR 694	14025952
SW093	2/19/2014 13:30	2/19/2014 13:30	grab	F	No		X	X				MDR 691	14025952
A3EFF	2/19/2014 13:51	2/19/2014 13:51	grab	F	No		X	X				MDR 693	14025952
A4 POND	2/19/2014 14:33	2/19/2014 14:33	grab	F	No		X	X				MDR 704	14025952
B5 POND	2/20/2014 13:25	2/20/2014 13:25	grab	F	No		X					MDR 702	14025952
B3OUTFLOW	2/20/2014 13:32	2/20/2014 13:32	grab	F	No		X					MDR 696	14025952
B5INFLOW	2/20/2014 13:32	2/20/2014 13:32	grab	F	No		X					MDR 692	14025952
GS10	2/20/2014 14:23	2/20/2014 14:23	grab	F	No		X					MDR 697	14025952
WOMPOC	2/26/2014 14:49	3/6/2014 12:34	composite	F	No		X		X			MET 901	14035989
SPOUT	3/4/2014 13:45	3/4/2014 13:45	grab	F	No		X	X				MET 403	14035985
SW093	3/4/2014 13:50	3/4/2014 13:50	grab	F	No		X	X				MET 404	14035985
GS13	3/4/2014 13:59	3/4/2014 13:59	grab	F	No		X	X				MET 411	14035985
A1EFF	3/4/2014 14:08	3/4/2014 14:08	grab	F	No		X	X				MET 408	14035985
A2EFF	3/4/2014 14:13	3/4/2014 14:13	grab	F	No		X	X				MET 407	14035985
A3EFF	3/4/2014 14:23	3/4/2014 14:23	grab	F	No		X	X				MET 406	14035985
A4 POND	3/4/2014 14:31	3/4/2014 14:31	grab	F	No		X	X				MET 417	14035985
B5 POND	3/5/2014 12:07	3/5/2014 12:07	grab	F	No		X					MET 415	14035985
B5INFLOW	3/5/2014 12:15	3/5/2014 12:15	grab	F	No		X					MET 405	14035985
B3OUTFLOW	3/5/2014 12:58	3/5/2014 12:58	grab	F	No		X					MET 409	14035985
GS10	3/5/2014 13:05	3/5/2014 13:05	grab	F	No		X					MFW 126	14046055
WALPOC	3/6/2014 10:30	3/6/2014 10:30	grab	F	No			X				MET 961	14035995
WALPOC	3/6/2014 10:43	3/10/2014 10:24	composite	F	No		X		X			MET 984	14036000
WALPOC	3/6/2014 10:43	3/10/2014 10:24	composite	D	No		X		X			MET 985	14036000
WOMPOC	3/6/2014 12:34	3/10/2014 11:53	composite	F	No		X		X			MET 983	14036000
WOMPOC	3/6/2014 12:34	3/10/2014 11:53	composite	D	No		X		X			MET 986	14036000
GS01	3/10/2014 12:12	3/24/2014 15:28	composite	F	No		X		X			MEU 790	14036034
GS03	3/10/2014 12:41	3/24/2014 15:45	composite	F	No		X		X			MEU 791	14036034
WALPOC	3/10/2014 14:00	3/10/2014 14:00	grab	F	No			X				MET 960	14035995
GS03	3/10/2014 14:00	3/10/2014 14:00	grab	F	No			X				MET 963	14035995
SPOUT	3/20/2014 11:03	3/20/2014 11:03	grab	F	No		X	X				MEU 754	14036030
SW093	3/20/2014 11:11	3/20/2014 11:11	grab	F	No		X	X				MEU 755	14036030
GS13	3/20/2014 11:17	3/20/2014 11:17	grab	F	No		X	X				MEU 762	14036030
A1EFF	3/20/2014 11:23	3/20/2014 11:23	grab	F	No		X	X				MEU 759	14036030
A2EFF	3/20/2014 11:26	3/20/2014 11:26	grab	F	No		X	X				MEU 758	14036030
A3EFF	3/20/2014 11:34	3/20/2014 11:34	grab	F	No		X	X				MEU 757	14036030
A4 POND	3/20/2014 11:50	3/20/2014 11:50	grab	F	No		X	X				MEU 768	14036030
B5 POND	3/20/2014 12:00	3/20/2014 12:00	grab	F	No		X					MEU 766	14036030
B5INFLOW	3/20/2014 12:05	3/20/2014 12:05	grab	F	No		X					MEU 756	14036030
GS10	3/20/2014 12:35	3/20/2014 12:35	grab	F	No		X					MEU 761	14036030
B3OUTFLOW	3/20/2014 12:48	3/20/2014 12:48	grab	F	No		X					MEU 760	14036030
GS03	3/24/2014 11:26	3/24/2014 11:26	grab	F	No			X				MEU 882	14036040
WALPOC	3/24/2014 15:38	3/24/2014 15:38	grab	F	No			X				MEU 883	14036040

Table 2. Water Sampling Events: First Quarter CY 2014

	Sampling Dates		Sample Info			Analytes						Sample Tracking Info	
Location Code	**Start**	**End**	**Collection Method**	**Type**	**Filtered**	**VOC**	**U**	**Nitrate**	**Pu/Am**	**SVOC**	**TSS**	**Ticket**	**RIN #**

EXPLANATION

Sample Info: Type
F = Field Sample
D = Duplicate

Analytes
VOC = volatile organic compounds
U = uranium
Nitrate = nitrate + nitrite as N
Pu/Am = plutonium-239,240 and americium-241
SVOC = semi-volatile organic compounds
TSS = total suspended solids

Sample Tracking Info: Ticket
- tracking identifier

Sample Tracking Info: RIN#
- lab requisition number

Sample Tracking Info: COC Date
- Chain of Custody date