

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

Second Quarter Calendar Year 2022

July 2022



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

Contents

Abbreviations	ii
1.0 Introduction	1
2.0 AMP Highlights: Second Quarter CY 2022.....	2
3.0 Analytical Data: Second Quarter CY 2022	2
4.0 References	2

Tables

Table 1. Analytical Results for Water Samples	At end of report
Table 2. Water Sampling Events: Second Quarter CY 2022.....	At end of report

Abbreviations

AMP	Adaptive Management Plan
COU	Central Operable Unit
CY	calendar year
DOE	U.S. Department of Energy
EA	Environmental Assessment
POC	Point of Compliance

1.0 Introduction

The Proposed Action assessed in the *Rocky Flats Site, Colorado, Surface Water Configuration Environmental Assessment* (DOE 2011), hereafter referred to as the Environmental Assessment (EA), is to breach the remaining retention pond dams at the Rocky Flats Site, Colorado, 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 a 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 should be collected before implementing the final steps of the Proposed Action to help reduce uncertainty about whether completion of the Proposed Action will adversely impact the quality of water flowing from the Site into downstream community watersheds. 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, *Surface Water Configuration Adaptive Management Plan for the Rocky Flats Site, Colorado* (DOE 2021b), first published in 2011, 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 in deciding when to implement the final steps of the Proposed Action, which includes breaching the terminal dams. The terminal dams will be operated in a flow-through condition until the completion of the Proposed Action, which will provide data similar to what can be expected postbreach. In addition to the monitoring program, the 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 second quarter of calendar year (CY) 2022 is provided in accordance with Section 5.0, "Reporting," of the AMP. Section 3.0 of this report describes the second quarter data summary tables, which include all validated analytical data for the AMP monitoring objectives that were available June 30, 2022. 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 *Additional Field Implementation Detail for Selected Monitoring Objectives at the Rocky Flats Site, Colorado* (DOE 2021a).

This report routinely includes analytical data for the following AMP monitoring objectives:

- Predischarge 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 nitrogen in North Walnut Creek (Item 8, AMP Table 2)

2.0 AMP Highlights: Second Quarter CY 2022

- Six informal emails were transmitted to AMP participants providing notification that composite samples had been retrieved from the Points of Compliance (POCs): Woman Creek at the Central Operable Unit (COU) boundary and Walnut Creek at the COU boundary.
- Four informal emails were transmitted to AMP participants providing notification that recent analytical data from the POCs had been validated and would soon be available through the Geospatial Environmental Mapping System (GEMS).
- Two informal emails were transmitted to AMP participants providing notification of individual analytical results from POCs and Points of Evaluation that were above the applicable surface water standard in Attachment 2, Table 1, in the *Rocky Flats Legacy Management Agreement*, which was revised in 2012 (CDPHE et al. 2007).
- During the quarter, 48 samples were collected in support of AMP monitoring objectives.

3.0 Analytical Data: Second Quarter CY 2022

Analytical data for the second quarter of CY 2022 are provided in Tables 1 and 2 (at the end of this report). Table 1 provides the analytical results, and Table 2 lists the water sampling events during the quarter.

4.0 References

CDPHE (Colorado Department of Public Health and Environment), DOE (U.S. Department of Energy), and EPA (U.S. Environmental Protection Agency), 2007. *Rocky Flats Legacy Management Agreement*, executed on March 14, Attachment 2 updated December 2018.

DOE (U.S. Department of Energy), 2011. *Rocky Flats Site, Colorado, Surface Water Configuration Environmental Assessment*, DOE/EA-1747, LMS/RFS/S06335, Office of Legacy Management, May.

DOE (U.S. Department of Energy), 2021a. *Additional Field Implementation Detail for Selected Monitoring Objectives at the Rocky Flats Site, Colorado*, LMS/RFS/S08202, Office of Legacy Management, July.

DOE (U.S. Department of Energy), 2021b. *Surface Water Configuration Adaptive Management Plan for the Rocky Flats Site, Colorado*, LMS/RFS/S07698, Office of Legacy Management, December.

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
A1EFF	SL	2/15/2022	RFS01-04.2202082-003	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	8.8	mg/L		F	0.038			G	STD
A1EFF	SL	2/28/2022	RFS01-04.2202083-003	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	6.2	mg/L		F	0.019			G	STD
A1EFF	SL	2/28/2022	RFS01-04.2202083-003	7440-61-1	Uranium	N	35	ug/L		F	0.05			G	STD
A1EFF	SL	3/16/2022	RFS01-04.2203084-003	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	5.8	mg/L		F	0.038			G	STD
A1EFF	SL	3/31/2022	RFS01-04.2203085-003	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	3.5	mg/L		F	0.019			G	STD
A1EFF	SL	3/31/2022	RFS01-04.2203085-003	7440-61-1	Uranium	N	16	ug/L		F	0.05			G	STD
A1EFF	SL	4/15/2022	RFS01-04.2204087-003	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	1.4	mg/L		F	0.044			G	STD
A2EFF	SL	2/28/2022	RFS01-04.2202083-004	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	5.4	mg/L		F	0.019			G	STD
A2EFF	SL	2/28/2022	RFS01-04.2202083-004	7440-61-1	Uranium	N	34	ug/L		F	0.05			G	STD
A2EFF	SL	3/16/2022	RFS01-04.2203084-004	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	2.7	mg/L		F	0.019			G	STD
A2EFF	SL	3/31/2022	RFS01-04.2203085-004	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	1.9	mg/L		F	0.019			G	STD
A2EFF	SL	3/31/2022	RFS01-04.2203085-004	7440-61-1	Uranium	N	22	ug/L		F	0.05			G	STD
A2EFF	SL	4/15/2022	RFS01-04.2204087-004	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
A2EFF	SL	5/17/2022	RFS01-04.2205090-004	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
A3EFF	SL	3/16/2022	RFS01-04.2203084-005	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	1.6	mg/L		F	0.019			G	STD
A3EFF	SL	3/31/2022	RFS01-04.2203085-005	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
A3EFF	SL	3/31/2022	RFS01-04.2203085-005	7440-61-1	Uranium	N	22	ug/L		F	0.05			G	STD
B3OUTFLOW	SL	2/28/2022	RFS01-04.2202083-006	7440-61-1	Uranium	N	30	ug/L		F	0.05			G	STD
B3OUTFLOW	SL	3/31/2022	RFS01-04.2203085-006	7440-61-1	Uranium	N	24	ug/L		F	0.05			G	STD
B5INFLOW	SL	2/28/2022	RFS01-04.2202083-007	7440-61-1	Uranium	N	20	ug/L		F	0.05			G	STD
B5INFLOW	SL	3/31/2022	RFS01-04.2203085-007	7440-61-1	Uranium	N	16	ug/L		F	0.05			G	STD
GS08	SL	3/31/2022	RFS01-04.2203085-009	7440-61-1	Uranium	N	13	ug/L		F	0.05			G	STD
GS10	SL	2/8/2022	RFS01-13.2203073-006	14596-10-2	Americium-241	N	0.0098	pCi/L	U	F				C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	7440-41-7	Beryllium	N	0.001	mg/L	U	F	0.001			C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	7440-43-9	Cadmium	Y	0.0003	mg/L	U	F	0.0003			C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	7440-47-3	Chromium	N	0.001	mg/L	U	F	0.001			C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	HARD-CACO3	Hardness As CaCO3	N	498	mg/L		F	1.00			C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	13981-16-3	Plutonium-238	N	0.0085	pCi/L	U	F				C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	PU-239,240	Plutonium-239, 240	N	0.00849	pCi/L	U	F				C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	7440-22-4	Silver	Y	0.0003	mg/L	U	F	0.0003			C	GEN
GS10	SL	2/8/2022	RFS01-13.2203073-006	7440-61-1	Uranium	N	14.8	ug/L		F	0.067			C	GEN
GS10	SL	2/28/2022	RFS01-04.2202083-010	7440-61-1	Uranium	N	19	ug/L		F	0.05			G	STD
GS10	SL	3/20/2022	RFS01-13.2204077-006	14596-10-2	Americium-241	N	0.00932	pCi/L	U	F				C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	7440-41-7	Beryllium	N	0.001	mg/L	U	F	0.001			C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	7440-43-9	Cadmium	Y	0.0003	mg/L	U	F	0.0003			C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	7440-47-3	Chromium	N	0.001	mg/L	U	F	0.001			C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	HARD-CACO3	Hardness As CaCO3	N	436	mg/L		F	1.00			C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	13981-16-3	Plutonium-238	N	0.00488	pCi/L	U	F				C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	PU-239,240	Plutonium-239, 240	N	0.00366	pCi/L	U	F				C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	7440-22-4	Silver	Y	0.0003	mg/L	U	F	0.0003			C	GEN
GS10	SL	3/20/2022	RFS01-13.2204077-006	7440-61-1	Uranium	N	18.4	ug/L		F	0.067			C	GEN
GS10	SL	3/31/2022	RFS01-04.2203085-010	7440-61-1	Uranium	N	19	ug/L		F	0.05			G	STD
GS10	SL	4/15/2022	RFS01-13.2205078-006	14596-10-2	Americium-241	N	0.00165	pCi/L	U	F				C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	7440-41-7	Beryllium	N	0.001	mg/L	U	F	0.001			C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	7440-43-9	Cadmium	Y	0.0003	mg/L	U	F	0.0003			C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	7440-47-3	Chromium	N	0.00195	mg/L	B	F	0.001			C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	HARD-CACO3	Hardness As CaCO3	N	470	mg/L		F	1.00			C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	13981-16-3	Plutonium-238	N	-0.00129	pCi/L	U	F				C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	PU-239,240	Plutonium-239, 240	N	0.0142	pCi/L	U	F				C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	7440-22-4	Silver	Y	0.0003	mg/L	U	F	0.0003			C	GEN
GS10	SL	4/15/2022	RFS01-13.2205078-006	7440-61-1	Uranium	N	20.3	ug/L		F	0.067			C	GEN
GS10	SL	4/27/2022	RFS01-04.2204088-010	7440-61-1	Uranium	N	22	ug/L		F	0.05			G	STD
GS12	SL	3/31/2022	RFS01-13.2205078-005	7440-61-1	Uranium	N	22.2	ug/L		F	0.067			C	GEN

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
GS13	SL	2/15/2022	RFS01-04.2202082-012	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	7.9	mg/L		F	0.038			G	STD
GS13	SL	2/28/2022	RFS01-04.2202083-002	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	8.1	mg/L		F	0.095			G	STD
GS13	SL	2/28/2022	RFS01-04.2202083-002	7440-61-1	Uranium	N	18	ug/L		F	0.05			G	STD
GS13	SL	3/16/2022	RFS01-04.2203084-012	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	9.8	mg/L		F	0.038			G	STD
GS13	SL	3/16/2022	RFS01-04.2203084-016	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	9.7	mg/L		D	0.038			G	STD
GS13	SL	3/31/2022	RFS01-04.2203085-012	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	6.4	mg/L		F	0.038			G	STD
GS13	SL	3/31/2022	RFS01-04.2203085-012	7440-61-1	Uranium	N	14	ug/L		F	0.05			G	STD
GS13	SL	4/15/2022	RFS01-04.2204087-002	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	8.6	mg/L		D	0.044			G	STD
GS13	SL	4/15/2022	RFS01-04.2204087-012	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	8.7	mg/L		F	0.044			G	STD
GS13	SL	4/27/2022	RFS01-04.2204088-012	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	6	mg/L		F	0.044			G	STD
GS13	SL	4/27/2022	RFS01-04.2204088-012	7440-61-1	Uranium	N	27	ug/L		F	0.05			G	STD
GS13	SL	5/17/2022	RFS01-04.2205090-012	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
SPOUT	TS	2/15/2022	RFS01-04.2202082-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	2/28/2022	RFS01-04.2202083-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	2/28/2022	RFS01-04.2202083-014	7440-61-1	Uranium	N	65	ug/L		F	0.05			G	STD
SPOUT	TS	3/16/2022	RFS01-04.2203084-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	3/31/2022	RFS01-04.2203085-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.019	mg/L	U	F	0.019			G	STD
SPOUT	TS	3/31/2022	RFS01-04.2203085-014	7440-61-1	Uranium	N	62	ug/L		F	0.05			G	STD
SPOUT	TS	4/15/2022	RFS01-04.2204087-001	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	D	0.044			G	STD
SPOUT	TS	4/15/2022	RFS01-04.2204087-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
SPOUT	TS	4/27/2022	RFS01-04.2204088-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
SPOUT	TS	4/27/2022	RFS01-04.2204088-014	7440-61-1	Uranium	N	27	ug/L		F	0.05			G	STD
SPOUT	TS	5/17/2022	RFS01-04.2205090-014	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
SW093	SL	2/15/2022	RFS01-04.2202082-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.46	mg/L		F	0.019			G	STD
SW093	SL	2/28/2022	RFS01-04.2202083-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.13	mg/L		F	0.019			G	STD
SW093	SL	2/28/2022	RFS01-04.2202083-015	7440-61-1	Uranium	N	4.9	ug/L		F	0.05			G	STD
SW093	SL	3/16/2022	RFS01-04.2203084-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.043	mg/L	J	F	0.019			G	STD
SW093	SL	3/31/2022	RFS01-04.2203085-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.038	mg/L	J	F	0.019			G	STD
SW093	SL	3/31/2022	RFS01-04.2203085-015	7440-61-1	Uranium	N	4	ug/L		F	0.05			G	STD
SW093	SL	4/15/2022	RFS01-04.2204087-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.086	mg/L		F	0.044			G	STD
SW093	SL	4/27/2022	RFS01-04.2204088-001	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.083	mg/L		D	0.044			G	STD
SW093	SL	4/27/2022	RFS01-04.2204088-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.071	mg/L		F	0.044			G	STD
SW093	SL	4/27/2022	RFS01-04.2204088-001	7440-61-1	Uranium	N	4.7	ug/L		D	0.05			G	STD
SW093	SL	4/27/2022	RFS01-04.2204088-015	7440-61-1	Uranium	N	4.5	ug/L		F	0.05			G	STD
SW093	SL	5/17/2022	RFS01-04.2205090-015	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N	0.044	mg/L	U	F	0.044			G	STD
WOMPOC	SL	2/8/2022	RFS01-13.2203072-015	14596-10-2	Americium-241	N	0.0061	pCi/L	U	F				C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-016	14596-10-2	Americium-241	N	0.0046	pCi/L	U	D				C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-015	13981-16-3	Plutonium-238	N	0.00217	pCi/L	U	F				C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-016	13981-16-3	Plutonium-238	N	0.00394	pCi/L	U	D				C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-015	PU-239,240	Plutonium-239, 240	N	0.00433	pCi/L	U	F				C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-016	PU-239,240	Plutonium-239, 240	N	0.00131	pCi/L	U	D				C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-015	7440-61-1	Uranium	N	3.92	ug/L		F	0.067			C	GEN
WOMPOC	SL	2/8/2022	RFS01-13.2203072-016	7440-61-1	Uranium	N	4.01	ug/L		D	0.067			C	GEN
WOMPOC	SL	3/2/2022	RFS01-13.2203073-015	14596-10-2	Americium-241	N	0.0117	pCi/L	U	F				C	GEN
WOMPOC	SL	3/2/2022	RFS01-13.2203073-015	13981-16-3	Plutonium-238	N	0.0111	pCi/L	U	F				C	GEN
WOMPOC	SL	3/2/2022	RFS01-13.2203073-015	PU-239,240	Plutonium-239, 240	N	0.00316	pCi/L	U	F				C	GEN
WOMPOC	SL	3/2/2022	RFS01-13.2203073-015	7440-61-1	Uranium	N	3.44	ug/L		F	0.067			C	GEN
WOMPOC	SL	3/20/2022	RFS01-13.2204075-015	14596-10-2	Americium-241	N	0.00243	pCi/L	U	F				C	GEN
WOMPOC	SL	3/20/2022	RFS01-13.2204075-015	13981-16-3	Plutonium-238	N	0.00262	pCi/L	U	F				C	GEN
WOMPOC	SL	3/20/2022	RFS01-13.2204075-015	PU-239,240	Plutonium-239, 240	N	0.00262	pCi/L	U	F				C	GEN
WOMPOC	SL	3/20/2022	RFS01-13.2204075-015	7440-61-1	Uranium	N	2.77	ug/L		F	0.067			C	GEN
WOMPOC	SL	3/31/2022	RFS01-13.2204077-015	14596-10-2	Americium-241	N	-0.00646	pCi/L	U	F				C	GEN
WOMPOC	SL	3/31/2022	RFS01-13.2204077-015	13981-16-3	Plutonium-238	N	-0.00229	pCi/L	U	F				C	GEN
WOMPOC	SL	3/31/2022	RFS01-13.2204077-015	PU-239,240	Plutonium-239, 240	N	-0.00229	pCi/L	U	F				C	GEN
WOMPOC	SL	3/31/2022	RFS01-13.2204077-015	7440-61-1	Uranium	N	3.37	ug/L		F	0.067			C	GEN
WOMPOC	SL	3/31/2022	RFS01-13.2204077-015	7440-61-1	Uranium		19.1						R	C	GEN

Table 1. Analytical Results for Water Samples

LOCATION CODE	LOCATION TYPE	DATE SAMPLED	SAMPLE CODE	CAS	ANALYTE	FILTRATION STATUS	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCERTAINTY	DATA VALIDATION QUALIFIERS	COLLECTION METHOD	LAB CODE
WOMPOC	SL	4/15/2022	RFS01-13.2205078-015	14596-10-2	Americium-241	N	0.002	pCi/L	U	F				C	GEN
WOMPOC	SL	4/15/2022	RFS01-13.2205078-015	13981-16-3	Plutonium-238	N	0.00289	pCi/L	U	F				C	GEN
WOMPOC	SL	4/15/2022	RFS01-13.2205078-015	PU-239,240	Plutonium-239, 240	N	0.00721	pCi/L	U	F				C	GEN
WOMPOC	SL	4/15/2022	RFS01-13.2205078-015	7440-61-1	Uranium	N	3.7	ug/L		F	0.067			C	GEN

EXPLANATION

FILTRATION STATUS

N = Sample was not filtered.
 Y = Sample was filtered.

UNITS

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

DATA_VALIDATION_QUALIFIERS

<blank> No qualifiers needed for result.
 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

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 compound (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.

LOCATION_TYPE

SL SURFACE LOCATION GEN Gel Laboratories
 TS TREATMENT SYSTEM STD Test America
 WL WELL

LAB_CODE

COLLECTION_METHOD

G Grab
 C Composite

Table 2. Water Sampling Events: Second Quarter CY 2022

Location Code	Sampling Dates		Sample Info			Analytes					Sample Tracking Info
	Start	End	Collection Method	Type	Filtered	VOC	U	Nitrate	Pu/Am	TSS	Sample ID
GS08	1/18/2022 11:55	4/4/2022 11:59	composite	F	No		X		X		RFS01-13.2204076-006
4087	4/14/2022 9:50	4/14/2022 9:50	grab	D	No	X		X			RFS01-10.2204041-019
4087	4/14/2022 9:50	4/14/2022 9:50	grab	D	Yes		X				RFS01-10.2204041-019
4087	4/14/2022 9:50	4/14/2022 9:50	grab	F	No	X		X			RFS01-10.2204041-027
4087	4/14/2022 9:50	4/14/2022 9:50	grab	F	Yes		X				RFS01-10.2204041-027
B206989	4/14/2022 10:15	4/14/2022 10:15	grab	F	No	X		X			RFS01-10.2204041-059
B206989	4/14/2022 10:15	4/14/2022 10:15	grab	F	Yes		X				RFS01-10.2204041-059
SW093	4/15/2022 10:55	4/15/2022 10:55	grab	F	No			X			RFS01-04.2204087-015
SPOUT	4/15/2022 11:01	4/15/2022 11:01	grab	D	No			X			RFS01-04.2204087-001
SPOUT	4/15/2022 11:01	4/15/2022 11:01	grab	F	No			X			RFS01-04.2204087-014
GS13	4/15/2022 11:11	4/15/2022 11:11	grab	D	No			X			RFS01-04.2204087-002
GS13	4/15/2022 11:11	4/15/2022 11:11	grab	F	No			X			RFS01-04.2204087-012
A1EFF	4/15/2022 11:15	4/15/2022 11:15	grab	F	No			X			RFS01-04.2204087-003
A2EFF	4/15/2022 11:18	4/15/2022 11:18	grab	F	No			X			RFS01-04.2204087-004
WOMPOC	3/31/2022 14:29	4/15/2022 12:24	composite	F	No		X		X		RFS01-13.2204077-015
89104	4/21/2022 12:05	4/21/2022 12:05	grab	F	No	X					RFS01-10.2204042-046
10304	4/26/2022 14:15	4/26/2022 14:15	grab	F	No	X					RFS01-10.2204043-010
10304	4/26/2022 14:15	4/26/2022 14:15	grab	F	Yes		X	X			RFS01-10.2204043-010
10304	4/26/2022 14:15	4/26/2022 14:15	grab	D	No	X					RFS01-10.2204043-019
10304	4/26/2022 14:15	4/26/2022 14:15	grab	D	Yes		X	X			RFS01-10.2204043-019
00193	4/26/2022 15:30	4/26/2022 15:30	grab	F	No	X					RFS01-10.2204043-001
00193	4/26/2022 15:30	4/26/2022 15:30	grab	F	Yes		X				RFS01-10.2204043-001
00193	4/26/2022 15:30	4/26/2022 15:30	grab	D	No	X					RFS01-10.2204043-017
00193	4/26/2022 15:30	4/26/2022 15:30	grab	D	Yes		X				RFS01-10.2204043-017
GS13	4/27/2022 10:55	4/27/2022 10:55	grab	F	No		X	X			RFS01-04.2204088-012
SPOUT	4/27/2022 11:03	4/27/2022 11:03	grab	F	No		X	X			RFS01-04.2204088-014
SW093	4/27/2022 11:11	4/27/2022 11:11	grab	F	No		X	X			RFS01-04.2204088-015
SW093	4/27/2022 11:11	4/27/2022 11:11	grab	F	No		X	X			RFS01-04.2204088-001
GS10	4/27/2022 11:48	4/27/2022 11:48	grab	F	No		X				RFS01-04.2204088-010
B5INFLOW	3/31/2022 13:34	5/3/2022 12:12	composite	F	No		X				RFS01-04.2205089-007
11104	5/4/2022 13:40	5/4/2022 13:40	grab	F	No	X					RFS01-10.2205044-012
11104	5/4/2022 13:40	5/4/2022 13:40	grab	F	Yes		X				RFS01-10.2205044-012
42505	5/4/2022 15:10	5/4/2022 15:10	grab	F	No	X					RFS01-10.2205044-028
WOMPOC	4/15/2022 12:24	5/5/2022 12:34	composite	F	No		X		X		RFS01-13.2205078-015
GS12	3/31/2022 15:19	5/9/2022 13:41	composite	F	No		X				RFS01-13.2205078-005
00997	5/12/2022 13:20	5/12/2022 13:20	grab	F	No	X		X			RFS01-10.2205045-005
00997	5/12/2022 13:20	5/12/2022 13:20	grab	F	Yes		X				RFS01-10.2205045-005
SW093	5/17/2022 11:50	5/17/2022 11:50	grab	F	No			X			RFS01-04.2205090-015
SPOUT	5/17/2022 11:55	5/17/2022 11:55	grab	F	No			X			RFS01-04.2205090-014
GS13	5/17/2022 12:05	5/17/2022 12:05	grab	F	No			X			RFS01-04.2205090-012
A2EFF	5/17/2022 12:24	5/17/2022 12:24	grab	F	No			X			RFS01-04.2205090-004
WOMPOC	5/5/2022 12:34	5/24/2022 11:09	composite	F	No		X		X		RFS01-13.2205079-015
B5INFLOW	5/3/2022 12:12	5/24/2022 12:27	composite	F	No		X				RFS01-04.2206091-007
SW093	5/31/2022 14:05	5/31/2022 14:05	grab	D	No		X	X			RFS01-04.2206091-002
SW093	5/31/2022 14:05	5/31/2022 14:05	grab	F	No		X	X			RFS01-04.2206091-015
SPOUT	5/31/2022 14:12	5/31/2022 14:12	grab	F	No		X	X			RFS01-04.2206091-014
GS13	5/31/2022 14:25	5/31/2022 14:25	grab	F	No		X	X			RFS01-04.2206091-009
A2EFF	5/31/2022 14:29	5/31/2022 14:29	grab	F	No		X	X			RFS01-04.2206091-004

Table 2. Water Sampling Events: Second Quarter CY 2022

Location Code	Sampling Dates		Sample Info			Analytes					Sample Tracking Info
	Start	End	Collection Method	Type	Filtered	VOC	U	Nitrate	Pu/Am	TSS	Sample ID
GS10	5/31/2022 15:06	5/31/2022 15:06	grab	F	No		X				RFS01-04.2206091-010
GS12	5/9/2022 13:41	5/31/2022 15:58	composite	F	No		X				RFS01-13.2206080-008
WALPOC	6/1/2022 10:58	6/1/2022 10:58	grab	F	No			X			RFS01-04.2206091-005
GS11	6/1/2022 11:35	6/1/2022 11:35	grab	F	No			X			RFS01-04.2206091-016
10594	6/2/2022 13:30	6/2/2022 13:30	grab	F	No	X		X			RFS01-10.2206047-045
10594	6/2/2022 13:30	6/2/2022 13:30	grab	F	Yes		X				RFS01-10.2206047-045
GS13	6/7/2022 12:40	6/7/2022 12:40	grab	D	No		X	X			RFS01-10.2206047-043
GS13	6/7/2022 12:40	6/7/2022 12:40	grab	F	No		X	X			RFS01-10.2206047-060
WOMPOC	5/24/2022 11:09	6/7/2022 12:41	composite	F	No		X		X		RFS01-13.2206080-015
SPOUT	6/7/2022 14:20	6/7/2022 14:20	grab	F	No		X	X			RFS01-10.2206047-071
B5INFLOW	5/24/2022 12:27	6/7/2022 14:24	composite	F	No		X				RFS01-13.2206080-002
SPOUT	6/16/2022 7:05	6/16/2022 7:05	grab	F	No			X			RFS01-04.2206092-014
SW093	6/16/2022 7:14	6/16/2022 7:14	grab	F	No			X			RFS01-04.2206092-015
GS13	6/16/2022 7:25	6/16/2022 7:25	grab	F	No			X			RFS01-04.2206092-012
WALPOC	1/18/2022 10:45	6/25/2022 9:07	composite	F	No		X		X		RFS01-13.2206081-013
GS12	5/31/2022 15:58	6/25/2022 11:16	composite	F	No		X				RFS01-04.2206093-001
SPOUT	6/28/2022 9:39	6/28/2022 9:39	grab	F	No		X	X			RFS01-04.2206093-014
GS13	6/28/2022 10:26	6/28/2022 10:26	grab	F	No		X	X			RFS01-04.2206093-012

EXPLANATION

FILTRATION STATUS

No = Sample was not filtered.
 Yes = Sample was filtered.

SAMPLE_TYPE

F = Field Sample
 D = Duplicate

ANALYTES

VOC = volatile organic compound
 U = uranium
 Pu/Am = plutonium and americium
 TSS = total suspended solids