ESHID-603710

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Symbol: EPC-DO: 22-186
LA-UR: 22-26639
Locates Action No.: U2200542
Date: JUL 2 8 2022

Justin Ball, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
Santa Fe, NM 87502

Subject: **DP-1132, Quarterly Monitoring Report, Radioactive Liquid Waste Treatment Facility, Second Quarter 2022**

Dear Mr. Ball:

On May 5, 2022, the New Mexico Environment Department (NMED) issued Discharge Permit DP-1132 to the U.S. Department of Energy, National Nuclear Security Administration (NNSA) and Triad National Security, LLC (Triad) for discharges of treated effluent from the Technical Area 50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to Permit Condition Number (No.) 24, NNSA and Triad are required to submit a quarterly monitoring report by August 1, 2022, for the period of April 1st through June 30th, 2022. The following permit conditions are addressed in Attachment 1 through 6 of this report.

- Condition No.13 : Maintenance and Repair
- Condition Nos. 25 and 26: RLWTF Influent Volumes
- Condition No. 27: Discharge Volumes
- Condition No. 29: Effluent Sampling
- Condition No. 30: Soil Moisture Monitoring System for the Solar Evaporation Tank System
- Condition No. 36: Groundwater Monitoring
- Condition No. 41: Stabilization of Specific Units and Systems that have Ceased

Please contact Karen E. Armijo at (505) 665-7314 or karen.armijo@nnsa.doe.gov, or contact Brian M. Iacona at (505) 500-6038 or biacona@lanl.gov if you have questions regarding this quarterly monitoring report.

Sincerely,
STEVEN STORY (Affiliate)
Digitally signed by STEVEN STORY (Affiliate)
Date: 2022.07.22 12:37:46 -06'00'

Steven L. Story
Group Leader
Environmental Compliance Programs
Triad National Security, LLC

Sincerely,
KAREN ARMIJO
Digitally signed by KAREN ARMIJO
Date: 2022.07.26 10:27:33 -06'00'

Karen E. Armijo
Permitting and Compliance Program Manager
National Nuclear Security Administration
U.S. Department of Energy

Attachment(s):
Attachment 1 RLWTF Quarterly Monitoring Report – Second Quarter 2022
Attachment 2 Quarterly Summary of Maintenance and Repair Activities Conducted at the RLWTF
Attachment 3 RLWTF Daily Influent and Effluent Volumes
Attachment 4 Quarterly and Monthly Treated Effluent Results
Attachment 5 Quarterly Groundwater Monitoring Report – Second Quarter 2022
Attachment 6 Monitoring Well Location Map

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ATTACHMENT 1
RLWTF Quarterly Monitoring Report – Second Quarter 2022

EPC-DO: 22-186

LA-UR-22-26639

Date: JUL 2 8 2022

Condition No. 24: Monitoring Reports

Pursuant to permit Condition Number (No.) 24, the U.S. Department of Energy, National Nuclear Security Administration (NNSA) and Triad National Security, LLC (Triad) are required to submit a quarterly monitoring report by August 1, 2022, for the monitoring period of April 1, 2022, through June 30, 2022 (second quarter). The following permit conditions are addressed in Attachments 1 through 6 of this report.

- Quarterly Monitoring Report
  - ✓ Condition No.13: Maintenance and Repair
  - ✓ Condition Nos. 25 and 26: RLWTF Influent Volumes
  - ✓ Condition No. 27: Discharge Volumes
  - ✓ Condition No. 29: Effluent Sampling
  - ✓ Condition No. 30: Soil Moisture Monitoring System for the Solar Evaporation Tank System
  - ✓ Condition No. 36: Groundwater Monitoring
  - ✓ Condition No. 41: Stabilization of Specific Units and Systems that have Ceased

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Condition No. 13: Maintenance and Repair
The Permittees shall submit to NMED a summary and description of the maintenance and repair activities performed on the Facility as part of the quarterly monitoring reports.

✓ **Attachment 2** provides a summary of the maintenance and repair activities conducted at the Radioactive Liquid Waste Treatment Facility (RLWTF) during the second quarter 2022 monitoring period.

Condition No. 25: Influent Volumes: Low-Level Radioactive Waste Water
The total daily and monthly volumes of RLW influent conveyed to the Facility shall be submitted to NMED in the quarterly monitoring reports.

✓ **Attachment 3** provides the total daily and monthly volumes of low-level radioactive wastewater (RLW) received by the RLWTF during the second quarter 2022 monitoring period.

Condition No. 26: Influent Volumes: Transuranic Waste Water
The total daily and monthly volumes of TRU influent received by the Facility shall be submitted to NMED in the quarterly monitoring reports.

✓ **Attachment 3** provides the total daily and monthly volumes of transuranic (TRU) influent wastewater received by the RLWTF during the second quarter 2022 monitoring period.

Condition No. 27: Discharge Volumes
The Permittees shall measure and record the volume of treated wastewater discharged to the SET, MES and Outfall 051 on a daily basis.

- ✓ **Attachment 3** provides the daily volume of treated effluent discharged to the Mechanical Evaporator System (MES) during the second quarter 2022 monitoring period.

- ✓ No treated effluent was discharged to either National Pollutant Discharge Elimination System (NPDES) Outfall 051 or the Solar Evaporative Tank System (SET) during the second quarter 2022 monitoring period.

Condition No. 29: Effluent Sampling
The Permittees shall sample and analyze effluent waste streams discharged to Outfall 051, the SET, and the MES.

- ✓ **MES Sampling.** Treated effluent from the RLWTF was discharged to the MES in April, May, and June 2022. Quarterly sampling for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants as defined in 20.6.2.7.T(2) NMAC was completed on April 5, 2022. These analytical results are provided in **Attachment 4, Table 1.**

  Monthly sampling for total kjeldahl nitrogen (TKN), nitrate (NO_3-N), total dissolved solids (TDS), chloride (Cl), fluoride (F), and perchlorate was completed on May 18 and June 9, 2022. Analytical results from these discharges are provided in **Attachment 4, Tables 2 and 3.**

  All sample results from the MES this quarter were either not detected or less than 20.6.2.3103 NMAC standards and tap water screening levels for 20.6.2.7.T(2) NMAC analytes.

- ✓ The NPDES Outfall 051 sample for acrolein collected on March 2, 2022, reported in the 2022 First Quarter Monitoring Report (EPC-DO-22-109), exceeded the 20.6.7.T NMAC guidance for that analyte. In accordance with Permit Condition No. 18, Effluent Exceedance, acrolein was analyzed in the next discharge from the RLWTF on April 5, 2022, from the MES. Acrolein was not detected in either the regular or field duplicate samples collected from the MES on April 5, 2022. This result is included in **Attachment 4, Table 1.**

- ✓ **NPDES Outfall 051 Sampling**. No treated effluent was discharged to NPDES Outfall 051 during the reporting period. Therefore, no effluent sampling from NPDES Outfall 051 was completed during the second quarter 2022 monitoring period.

- ✓ **SET Sampling.** No treated effluent was discharged to the SET during the reporting period. Therefore, no effluent sampling from the SET was completed during the second quarter 2022 monitoring period.

Condition No. 30: Soil Moisture Monitoring System for the SET

- ✓ No treated effluent was discharged to the SET during the second quarter 2022 monitoring period.
- ✓ In accordance with Permit Condition No. 30, the SET-Soil Moisture Monitoring System Completion Report (EPC-DO: 22-132) was submitted to NMED on June 29, 2022, for review.
- ✓ Baseline monitoring of all SET moisture monitoring boreholes continued with quarterly monitoring completed in May 2022.

Condition No. 36: Ground Water Monitoring
The Permittees shall collect ground water samples from the following ground water monitoring wells: MCA-RLW-1, MCA-RLW-2, and MCOI-6 on a quarterly basis and analyze the samples for TKN, NO3-N, TDS, Cl, F and perchlorate.

- ✓ **Attachment 5** provides the complete ground water monitoring report from the quarterly sampling of perched/intermediate ground water monitoring well MCOI-6 on May 31, 2022. Sample results from MCOI-6 for TKN, NO_3+NO_2-N, TDS, Cl, F, and ClO_4 are provided in **Attachment 5, Table 1**. These samples were submitted to GEL Laboratories, LLC for analysis. All results from the May 31, 2022, sampling event at MCOI-6 were below 20.6.2.3103 NMAC standards and 20.6.2.7.T NMAC guidance, with the exception of the following:
  - NO_3+NO_2-N was detected at a concentration of 27.7 mg/L. The 20.6.2.3103 NMAC standard for NO_3-N is 10 mg/L. The average NO_3+NO_2-N concentration at MCOI-6 during the 5-yr period from 2016 through 2021 was 10.9 mg/L with multiple exceedances of the 10 mg/L standard. Detections of NO_3+NO_2-N at MCOI-6 at concentrations greater than the ground water standard were previously identified and reported to NMED. Monitoring well MCOI-6 will continue to be routinely sampled for NO_3+NO_2-N in support of RLWTF and pursuant to the Compliance Order on Consent, June 2016 (Consent Order), the Chromium Investigation Monitoring Group.
  - ClO_4 was detected at a concentration of 137 µg/L. The 20.6.2.7.T NMAC guidance for ClO_4 is 13.8 µg/L. The average ClO_4 concentration at MCOI-6 during the 5-yr period from 2016 through 2021 was 87.5 µg/L. Detections of ClO_4 at MCOI-6 at concentrations greater than the 20.6.2.7.T NMAC guidance were previously identified and reported to NMED. Monitoring well MCOI-6 will continue to be

routinely sampled for ClO_4 in support of RLWTF and pursuant to the Consent Order, the Chromium Investigation Monitoring Group.

- ✓ A quarterly sample was not collected from MCA-RLW-1 during this period due to the well being dry. Similarly, a quarterly sample was not collected from MCA-RLW-2 due to insufficient water in the well. **Attachment 5** provides the complete ground water monitoring report for these alluvial wells collected on April 28, 2022.
- ✓ A map showing the location of ground water monitoring wells MCA-RLW-1, MCA-RLW-2, MCOI-6, R-1, R-14, R-46 and R-60 is provided in **Attachment 6**.

Condition No. 41: Stabilization of Specific Units and Systems That Have Ceased
The Permittees shall provide NMED quarterly progress reports describing stabilization activities for each quarter in accordance with the time periods and submittal dates required for monitoring reports in Condition 24.

During the reporting period the following actions were completed in accordance with approved stabilization plans and/or work plans:

✓ **Clarifier #1**

- Stabilization activities for Clarifier #1 are being completed under the Stabilization Plan for the Low-Level Clarifier #1 submitted to NMED on December 4, 2018 (EPC-DO: 18-428). This workplan was approved by NMED on December 27, 2018.
- Removal of excess chemicals and process solids was completed during 2019, with notifications to NMED submitted as previously reported.
- The chemical feed system was dismantled in May 2021.
- A Request for an Extension of Time to complete stabilization activities was submitted to NMED on January 27, 2022 (EPC-DO: 22-010). NMED approved the request for extension on March 2, 2022.
- No additional stabilization milestones were completed during the reporting period for this unit. Stabilization progress continued this monitoring period with the west flash mixer piping and effluent and over flow lines being removed.

✓ **Clarifier #2**

- Stabilization activities for Clarifier #2 are being completed under the Stabilization Plan for Low-Level Clarifier #2 Tank submitted to NMED on January 25, 2019 (EPC-DO: 19-007). This workplan was approved by NMED on April 25, 2019.
- Removal of excess chemicals was completed during 2019 reporting periods with notifications to NMED completed as previously reported.
- The chemical feed system was dismantled in May 2021.

- A Request for an Extension of Time to complete stabilization activities was submitted to NMED this reporting period on January 27, 2022 (EPC-DO: 22-011). NMED approved the request for extension on March 2, 2022.

- No additional stabilization milestones were completed during the reporting period for this unit. Progress on process solids removal from this unit continued during this monitoring period. The clarifier is operationally empty with the solids that could be practically removed with the existing infrastructure complete. The remaining solids removal and completion of further stabilization activities will be completed at a future date.

ATTACHMENT 2

Quarterly Summary of Maintenance and Repair Activities Conducted at the RLWTF

EPC-DO: 22-186

LA-UR-22-26639

Date: JUL 2 8 2022

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

			Task Type					
Structures	**Description**	**Built**	**PM**	**CO**	**MD**	**SR**	**UP**	**Total**
Building 1	Original treatment bldg.	1963	38	4	0	0	0	42
Building 2	Original influent storage bldg.	1963	0	0	0	0	0	0
Building 66	TRU influent storage	1982	3	0	0	0	0	3
Building 90	100K Influent Storage tank	1982	0	0	0	0	0	0
Building 248	Low-level bottoms storage	1996	1	2	0	0	0	3
Building 250	Low-level influent storage	2009	14	1	0	0	0	15
Building 257	Mechanical Evaporator System	2010	0	0	0	0	0	0
TA52	Solar Evaporation Tank	2011	10	0	0	0	0	10
	Totals		66	7	0	0	0	73

Task Types: PM - preventive maintenance MD - modification UP= Unplanned
CO - corrective maintenance SR - service request

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

TA-50-0001 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
500001	00702704	01	CO	500001 TROUBLESHOOT AND REPAIR HV-7 AS NEEDED
500001	00655372	01	CO	500001 MICROFILTER SINK BACKING UP
500001	00723902	01	CO	500001 REPAIR HORN ON MASTER CONTROL (CPL-01)
500001	00721752	01	CO	500001 REPLACEMENT OF LIGHT BULBS AND LENS CAPS
500001	00715948	01	PM	50-1 FEXT (1M) PM
500001	00715887	01	PM	50-1 EMERGENCY LIGHTS (M) PM
500001	00715885	01	PM	50-1 TRITIUM EXIT LIGHTS (M) PM
500001	00715866	01	PM	500001 MICROFILTER 3 MONTH PUMP MAINTENANCE
500001	00715864	01	PM	50-1 PH ANALYZER 3MO VERIFICATION 2 EA
500001	00715545	01	PM	500001 TCA 6MO PM, AUTO DUMP
500001	00715544	01	PM	50-1 (A) DAD PM
500001	00711522	01	PM	500001 FAR 3MO PM (9 EA)
500001	00717330	01	PM	50-1 REPLACE 1YR PRE-FILTERS HV-011, HV-012 AND FE-27/EB-27
500001	00715959	01	PM	50-0001 BHW 1MO PM (2 EA)
500001	00715503	01	PM	500001 2YR PRV REPLACEMENT, BOILER (4 EA)
500001	00718698	01	PM	50-1 EMERGENCY LIGHTS (M) PM
500001	00718612	01	PM	50-1 TRITIUM EXIT LIGHTS (M) PM
500001	00713156	01	PM	500001 ASE 6MO PM, EXHAUST STACK PUMP 3 EA
500001	00718660	01	PM	50-0001 BHW 1MO PM (2 EA)
500001	00718621	01	PM	50-1 FEXT (1M) PM
500001	00671053	01	PM	500001 (2 YR) CHEMICAL SKID ASSY, PRV AND PUMP PM (5 EA)
500001	00720384	01	PM	500001 DRE 1YR PM, (MECHANICAL) 6 EA
500001	00718015	01	PM	50-1 RUA (A) MAINTENANCE (TRANE)
500001	00718014	01	PM	500001 EH (1YR) PM, ELEVATOR 3RD PARTY INSP
500001	00723928	01	PM	500001 CA-4 (3 MONTH) AIR COMPRESSOR PM
500001	00720397	01	PM	500001 (A) CA MECHANICAL PM
500001	00718018	01	PM	500001 (6M) DEIONIZED WATER BOTTLE CHANGE OUT
500001	00718665	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00720383	01	PM	500001 (14M) SCALE TEST/CALIBRATION
500001	00722454	01	PM	50-1 RLW FUME HOOD TEST (A)
500001	00722453	01	PM	500001 BHW 1YR PM, SUMMER LAY-UP (SHUTDOWN)
500001	00722449	01	PM	500001 BFP'S 1YR PM, 13 EA (RAD AREAS)
500001	00722448	01	PM	500001 & 500248 WINDSOCK 1YR PM (INSPECTION)
500001	00720811	01	PM	50-0001 BHW 1MO PM (2 EA)
500001	00720776	01	PM	50-1 TRITIUM EXIT LIGHTS (M) PM

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

TA-50-0001 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
500001	00720758	01	PM	50-1 EMERGENCY LIGHTS (M) PM
500001	00720718	01	PM	500001 GFCI (6M) SERVICE INSPECTIONS
500001	00720716	01	PM	500001 PV 3MO PM, (MECHANICAL)
500001	00720714	01	PM	500001 LUBE 6MO PM, OPS EQUIPMENT LUBRICATION
500001	00720713	01	PM	50-1 SPW/SPH (Q) FIRE SUPPRRESSION SYSTEMS PM
500001	00720389	01	PM	500001 SRO PUMPS RM 24
500001	00720386	01	PM	500001 (A) NATURAL GAS SEISMIC SHUTOFF VALVE INSPECT PM 3 EA

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

TA-50-0250 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
500250	00645385	01	CO	500250 TROUBLESHOOT/REPAIR OF RLW-MX-006A
500250	00717343	01	PM	50-250 FEXT (A) PM, PORTABLE FIRE EXTINGUISHERS
500250	00717341	01	PM	50-250 LTE (A) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00715924	01	PM	500250 LTNT (M) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00715895	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00715865	01	PM	500250 SHS 3MO PM, SAFETY SHOWER
500250	00718702	01	PM	500250 LTNT (M) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00718700	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00718632	01	PM	500250 FEXT (M), FIRE EXTINGUISHERS PM
500250	00718611	01	PM	500250 LTE (M) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00720793	01	PM	500250 FEXT (M), FIRE EXTINGUISHERS PM
500250	00720775	01	PM	500250 LTE (M) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00720772	01	PM	500250 LTNT (M) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00720759	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00720717	01	PM	50-250 SPW (3M) PM

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

TA-52-0181 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
				***** NO DATA TO REPORT FOR LISTED PERIOD.**

TA-52-0182 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
520182	00715951	01	PM	520182 (M) FEXT PM
520182	00715874	01	PM	520182 (M) NON TRITIUM LIGHTS PM
520182	00715872	01	PM	520182 (M) EMERGENCY LIGHTS PM
520182	00718657	01	PM	520182 (M) NON TRITIUM LIGHTS PM
520182	00718594	01	PM	520182 (3M) SIGNAGE VERIFICATION FOR FENCE LINE
520182	00718593	01	PM	520182 (3M) FENCE LINE VERIFICATION
520182	00718664	01	PM	520182 (M) EMERGENCY LIGHTS PM
520182	00718656	01	PM	520182 (M) FEXT PM
520182	00720823	01	PM	520182 (M) EMERGENCY LIGHTS PM
520182	00720803	01	PM	520182 (M) FEXT PM

TA-52-0183 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
				***** NO DATA TO REPORT FOR LISTED PERIOD.**

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

TA-50-0002 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
				***** NO DATA TO REPORT FOR LISTED PERIOD.**

TA-50-0090 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
				***** NO DATA TO REPORT FOR LISTED PERIOD.**

TA-50-0066 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
500066	00711521	01	PM	500066 (A) MIXER PANEL LAMP PM
500066	00720395	01	PM	50-66 PDI (A) CAL VERIFICATION
500066	00720385	01	PM	500066 (A) VERIFY & ENSURE ACCURACY TANK LEVEL INDICATOR 4EA

TA-50-0201 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
				***** NO DATA TO REPORT FOR LISTED PERIOD.**

TA-50-0248 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
500248	00707394	01	CO	500248 RESTORE EXTERIOR LIGHTING
500248	00690084	01	CO	500248 TS & REPAIR OF SE TANK LEVEL INDICATION
500248	00718585	01	PM	500248 PUMPS 3MO PM

TA-50-0257 Work Completion Report (04-01-2022 to 06-30-2022)

Unit	Work Order	WO	WO Type	Task Title
				***** NO DATA TO REPORT FOR LISTED PERIOD.**

DP-1132 Report: Second Quarter 2022 RLWTF Maintenance

Acronyms used by LANL Maintenance:

ASE	air sampler, exhaust
BHW	boiler, hot water
CA	compressed air
DAD	dessicant air dryer
EB	exhaust bank
EH	exhaust heater
FAR	filter, air replaceable
FE	fan, exhaust
FEXT	fire extinguisher
HEPA	high-efficiency particulate air
HUE	heater unit, electric
LPT	lightning protection
LTE	lights, emergency
LTET	lights, emergency, tritium
LTNT	lights, non-tritium
PRV	pressure reducing valve
PV	pump, vacuum
RCA	radiological control area
SHS	shower, safety
SPH	sprinkler pipe, dry
SPW	sprinkler pipe, wet
TCA	tank, compressed air

ATTACHMENT 3
RLWTF Daily Influent and Effluent Volumes

EPC-DO: 22-186

LA-UR-22-26639

Date: JUL 2 8 2022

DP-1132 Report: Second Quarter 2022
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
Totals, 2022-Q2	315,177	221,880	0	0	136
Sub-total, April	69,947	116,302	0	0	136
Sub-total, May	85,163	47,475	0	0	0
Sub-total, June	160,068	58,104	0	0	0

All flows are in Liters.

1-Apr	1,779	0	0	0	0
2-Apr	1,363	0	0	0	0
3-Apr	1,249	0	0	0	0
4-Apr	2,990	0	0	0	0
5-Apr	1,022	3,520	0	0	0
6-Apr	3,974	4,610	0	0	136
7-Apr	2,612	11,374	0	0	0
8-Apr	1,779	0	0	0	0
9-Apr	908	0	0	0	0
10-Apr	1,022	0	0	0	0
11-Apr	3,293	16,075	0	0	0
12-Apr	2,574	20,140	0	0	0
13-Apr	2,990	0	0	0	0
14-Apr	2,536	0	0	0	0
15-Apr	2,120	0	0	0	0
16-Apr	757	0	0	0	0
17-Apr	757	0	0	0	0
18-Apr	1,665	17,453	0	0	0
19-Apr	2,725	25,307	0	0	0
20-Apr	3,142	0	0	0	0
21-Apr	3,331	0	0	0	0
22-Apr	1,779	0	0	0	0
23-Apr	1,060	0	0	0	0
24-Apr	946	0	0	0	0
25-Apr	3,558	7,555	0	0	0
26-Apr	4,731	10,269	0	0	0
27-Apr	1,665	0	0	0	0
28-Apr	9,765	0	0	0	0
29-Apr	76	0	0	0	0
30-Apr	1,779	0	0	0	0

DP-1132 Report: Second Quarter 2022
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
1-May	454	0	0	0	0
2-May	9,463	0	0	0	0
3-May	2,120	0	0	0	0
4-May	3,104	0	0	0	0
5-May	5,867	0	0	0	
6-May	4,996	0	0	0	0
7-May	379	0	0	0	0
8-May	606	0	0	0	0
9-May	1,438	0	0	0	0
10-May	3,369	0	0	0	0
11-May	6,813	0	0	0	0
12-May	1,136	0	0	0	0
13-May	1,703	0	0	0	0
14-May	1,855	0	0	0	0
15-May	1,817	0	0	0	0
16-May	2,801	0	0	0	0
17-May	1,930	0	0	0	0
18-May	1,665	8,501	0	0	0
19-May	2,687	14,341	0	0	0
20-May	1,552	7,642	0	0	0
21-May	681	0	0	0	0
22-May	492	0	0	0	0
23-May	1,628	0	0	0	0
24-May	2,271	8,512	0	0	0
25-May	2,650	8,478	0	0	0
26-May	1,817	0	0	0	0
27-May	1,325	0	0	0	0
28-May	4,504	0	0	0	0
29-May	4,996	0	0	0	0
30-May	4,921	0	0	0	0
31-May	4,126	0	0	0	0

DP-1132 Report: Second Quarter 2022
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
1-Jun	2,952	0	0	0	0
2-Jun	2,763	0	0	0	0
3-Jun	3,634	0	0	0	0
4-Jun	3,974	0	0	0	0
5-Jun	3,861	0	0	0	0
6-Jun	5,072	0	0	0	0
7-Jun	3,861	0	0	0	0
8-Jun	3,482	0	0	0	0
9-Jun	3,974	481	0	0	0
10-Jun	1,817	0	0	0	0
11-Jun	8,706	0	0	0	0
12-Jun	19,152	0	0	0	0
13-Jun	10,333	16,491	0	0	0
14-Jun	2,195	28,028	0	0	0
15-Jun	1,741	13,104	0	0	0
16-Jun	3,407	0	0	0	0
17-Jun	2,233	0	0	0	0
18-Jun	3,936	0	0	0	0
19-Jun	4,201	0	0	0	0
20-Jun	5,185	0	0	0	0
21-Jun	2,839	0	0	0	0
22-Jun	11,582	0	0	0	0
23-Jun	6,927	0	0	0	0
24-Jun	908	0	0	0	0
25-Jun	2,687	0	0	0	0
26-Jun	6,170	0	0	0	0
27-Jun	10,182	0	0	0	0
28-Jun	5,110	0	0	0	0
29-Jun	14,534	0	0	0	0
30-Jun	2,650	0	0	0	0

ATTACHMENT 4
Quarterly and Monthly Treated Effluent Results

EPC-DO: 22-186

LA-UR-22-26639

Date: JUL 2 8 2022

Table 1. Analytical Results from the Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES on April 5, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2,3,4,5]	Validation Qualifier[6,7,8,9,10]	Detected[1,12]	Field Preparation Code[13,14]	COC #	Sample Purpose[15,16]	Lab Method	Report Method Detection Limit[17]	Groundwater Limit[18,19,20,21]
RLWTF-22-235994	RLWTF_MES	04/05/2022	107-02-8	Acrolein	1.67	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	1.67	0.04
RLWTF-22-249200	RLWTF_MES	04/05/2022	107-02-8	Acrolein	1.67	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	1.67	0.04
RLWTF-22-235994	RLWTF_MES	04/05/2022	107-13-1	Acrylonitrile	1.67	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	1.67	0.52
RLWTF-22-249200	RLWTF_MES	04/05/2022	107-13-1	Acrylonitrile	1.67	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	1.67	0.52
RLWTF-22-235994	RLWTF_MES	04/05/2022	309-00-2	Aldrin	0.00665	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.00665	0.00198
RLWTF-22-236002	RLWTF_MES	04/05/2022	Al	Aluminum	19.3	ug/L	U	N	F	2022-440	REG	EPA:200.8	19.3	5,000
RLWTF-22-235994	RLWTF_MES	04/05/2022	120-12-7	Anthracene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	1,721.28
RLWTF-22-236042	RLWTF_MES	04/05/2022	120-12-7	Anthracene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	1,721.28
RLWTF-22-236002	RLWTF_MES	04/05/2022	Sb	Antimony	1	ug/L	U	N	F	2022-440	REG	EPA:200.8	1	6
RLWTF-22-235994	RLWTF_MES	04/05/2022	12674-11-2	Aroclor-1016	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-235994	RLWTF_MES	04/05/2022	11104-28-2	Aroclor-1221	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-235994	RLWTF_MES	04/05/2022	11141-16-5	Aroclor-1232	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-235994	RLWTF_MES	04/05/2022	53469-21-9	Aroclor-1242	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-235994	RLWTF_MES	04/05/2022	12672-29-6	Aroclor-1248	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-235994	RLWTF_MES	04/05/2022	11097-69-1	Aroclor-1254	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-235994	RLWTF_MES	04/05/2022	11096-82-5	Aroclor-1260	0.0333	ug/L	U	N	UF	2022-440	REG	SW-846:8082A	0.0333	0.5
RLWTF-22-236002	RLWTF_MES	04/05/2022	As	Arsenic	2	ug/L	U	N	F	2022-440	REG	EPA:200.8	2	10
RLWTF-22-235994	RLWTF_MES	04/05/2022	1912-24-9	Atrazine	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	3
RLWTF-22-236042	RLWTF_MES	04/05/2022	1912-24-9	Atrazine	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	3
RLWTF-22-236002	RLWTF_MES	04/05/2022	Ba	Barium	0.67	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.67	2,000
RLWTF-22-235994	RLWTF_MES	04/05/2022	71-43-2	Benzene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	71-43-2	Benzene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	92-87-5	Benzidine	3.81	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	3.81	0.0011
RLWTF-22-236042	RLWTF_MES	04/05/2022	92-87-5	Benzidine	3.85	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	3.85	0.0011
RLWTF-22-235994	RLWTF_MES	04/05/2022	50-32-8	Benzo(a)pyrene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	0.2
RLWTF-22-236042	RLWTF_MES	04/05/2022	50-32-8	Benzo(a)pyrene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	0.2
RLWTF-22-235994	RLWTF_MES	04/05/2022	205-99-2	Benzo(b)fluoranthene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	0.3432
RLWTF-22-236042	RLWTF_MES	04/05/2022	205-99-2	Benzo(b)fluoranthene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	0.3432
RLWTF-22-235994	RLWTF_MES	04/05/2022	207-08-9	Benzo(k)fluoranthene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	3.432
RLWTF-22-236042	RLWTF_MES	04/05/2022	207-08-9	Benzo(k)fluoranthene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	3.432
RLWTF-22-236002	RLWTF_MES	04/05/2022	Be	Beryllium	0.2	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.2	4
RLWTF-22-235994	RLWTF_MES	04/05/2022	319-84-6	BHC[alpha-]	0.00665	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.00665	0.0693
RLWTF-22-235994	RLWTF_MES	04/05/2022	319-85-7	BHC[beta-]	0.00665	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.00665	0.2425
RLWTF-22-235994	RLWTF_MES	04/05/2022	58-89-9	BHC[gamma-]	0.00665	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.00665	0.4151
RLWTF-22-235994	RLWTF_MES	04/05/2022	111-44-4	Bis(2-chloroethyl)ether	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.14
RLWTF-22-236042	RLWTF_MES	04/05/2022	111-44-4	Bis(2-chloroethyl)ether	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.14
RLWTF-22-235994	RLWTF_MES	04/05/2022	117-81-7	Bis(2-ethylhexyl)phthalate	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	55.64
RLWTF-22-236042	RLWTF_MES	04/05/2022	117-81-7	Bis(2-ethylhexyl)phthalate	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	55.64
RLWTF-22-236002	RLWTF_MES	04/05/2022	B	Boron	27.3	ug/L	J	Y	F	2022-440	REG	EPA:200.7	15.0	750
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-27-4	Bromodichloromethane	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	1.344
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-27-4	Bromodichloromethane	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	1.344
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-25-2	Bromoform	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	32.851
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-25-2	Bromoform	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	32.851
RLWTF-22-235994	RLWTF_MES	04/05/2022	74-83-9	Bromomethane	0.337	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.337	7.545
RLWTF-22-249200	RLWTF_MES	04/05/2022	74-83-9	Bromomethane	0.337	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.337	7.545
RLWTF-22-236002	RLWTF_MES	04/05/2022	Cd	Cadmium	0.3	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.3	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	56-23-5	Carbon Tetrachloride	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	56-23-5	Carbon Tetrachloride	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	57-74-9	Chlordane(alpha/gamma)	0.0765	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.0765	0.4484
RLWTF-22-235651	RLWTF_MES	04/05/2022	Cl(-1)	Chloride	0.628	mg/L	J+	Y	F	2022-441	REG	EPA:300.0	0.067	250
RLWTF-22-235994	RLWTF_MES	04/05/2022	108-90-7	Chlorobenzene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	77.57
RLWTF-22-249200	RLWTF_MES	04/05/2022	108-90-7	Chlorobenzene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	77.57
RLWTF-22-235994	RLWTF_MES	04/05/2022	67-66-3	Chloroform	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	100
RLWTF-22-249200	RLWTF_MES	04/05/2022	67-66-3	Chloroform	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	100
RLWTF-22-235994	RLWTF_MES	04/05/2022	74-87-3	Chloromethane	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	20.32
RLWTF-22-249200	RLWTF_MES	04/05/2022	74-87-3	Chloromethane	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	20.32

Table 1. Analytical Results from the Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES on April 5, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2,3,4,5]	Validation Qualifier[6,7,8,9,10]	Detected[1,12]	Field Preparation Code[13,14]	COC #	Sample Purpose[15,16]	Lab Method	Report Method Detection Limit[17]	Groundwater Limit[18,19,20,21]
RLWTF-22-236002	RLWTF_MES	04/05/2022	Cr	Chromium	3	ug/L	U	N	F	2022-440	REG	EPA:200.8	3	50
RLWTF-22-236002	RLWTF_MES	04/05/2022	Co	Cobalt	0.479	ug/L	J	Y	F	2022-440	REG	EPA:200.8	0.3	50
RLWTF-22-236002	RLWTF_MES	04/05/2022	Cu	Copper	1.83	ug/L	J	Y	F	2022-440	REG	EPA:200.8	0.3	1,000
RLWTF-22-235994	RLWTF_MES	04/05/2022	CN(TOTAL)	Cyanide (Total)	0.00167	mg/L	U	N	UF	2022-440	REG	EPA:335.4	0.00167	0.2
RLWTF-22-235994	RLWTF_MES	04/05/2022	50-29-3	DDT[4,4'-]	0.01	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.01	2.29
RLWTF-22-235994	RLWTF_MES	04/05/2022	106-93-4	Dibromoethane[1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	0.05
RLWTF-22-249200	RLWTF_MES	04/05/2022	106-93-4	Dibromoethane[1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	0.05
RLWTF-22-235994	RLWTF_MES	04/05/2022	74-95-3	Dibromomethane	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	7.997
RLWTF-22-249200	RLWTF_MES	04/05/2022	74-95-3	Dibromomethane	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	7.997
RLWTF-22-235994	RLWTF_MES	04/05/2022	95-50-1	Dichlorobenzene[1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	600
RLWTF-22-249200	RLWTF_MES	04/05/2022	95-50-1	Dichlorobenzene[1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	600
RLWTF-22-235994	RLWTF_MES	04/05/2022	106-46-7	Dichlorobenzene[1,4-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	75
RLWTF-22-249200	RLWTF_MES	04/05/2022	106-46-7	Dichlorobenzene[1,4-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	75
RLWTF-22-235994	RLWTF_MES	04/05/2022	91-94-1	Dichlorobenzidine[3,3'-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1.25
RLWTF-22-236042	RLWTF_MES	04/05/2022	91-94-1	Dichlorobenzidine[3,3'-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1.25
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-71-8	Dichlorodifluoromethane	0.355	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.355	197.20
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-71-8	Dichlorodifluoromethane	0.355	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.355	197.20
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-34-3	Dichloroethane[1,1-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	25
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-34-3	Dichloroethane[1,1-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	25
RLWTF-22-235994	RLWTF_MES	04/05/2022	107-06-2	Dichloroethane[1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	107-06-2	Dichloroethane[1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-35-4	Dichloroethene[1,1-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	7
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-35-4	Dichloroethene[1,1-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	7
RLWTF-22-235994	RLWTF_MES	04/05/2022	156-59-2	Dichloroethene[cis-1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	70
RLWTF-22-249200	RLWTF_MES	04/05/2022	156-59-2	Dichloroethene[cis-1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	70
RLWTF-22-235994	RLWTF_MES	04/05/2022	156-60-5	Dichloroethene[trans-1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	100
RLWTF-22-249200	RLWTF_MES	04/05/2022	156-60-5	Dichloroethene[trans-1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	100
RLWTF-22-235994	RLWTF_MES	04/05/2022	120-83-2	Dichlorophenol[2,4-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	45.3
RLWTF-22-236042	RLWTF_MES	04/05/2022	120-83-2	Dichlorophenol[2,4-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	45.3
RLWTF-22-235994	RLWTF_MES	04/05/2022	78-87-5	Dichloropropane[1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	78-87-5	Dichloropropane[1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	542-75-6	Dichloropropene[cis/trans-1,3-]	0.5	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.5	4.7
RLWTF-22-249200	RLWTF_MES	04/05/2022	542-75-6	Dichloropropene[cis/trans-1,3-]	0.5	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.5	4.7
RLWTF-22-235994	RLWTF_MES	04/05/2022	60-57-1	Dieldrin	0.01	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.01	0.02
RLWTF-22-235994	RLWTF_MES	04/05/2022	84-66-2	Diethylphthalate	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	14800.52
RLWTF-22-236042	RLWTF_MES	04/05/2022	84-66-2	Diethylphthalate	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	14800.52
RLWTF-22-235994	RLWTF_MES	04/05/2022	131-11-3	Dimethyl Phthalate	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	611.56
RLWTF-22-236042	RLWTF_MES	04/05/2022	131-11-3	Dimethyl Phthalate	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	611.56
RLWTF-22-235994	RLWTF_MES	04/05/2022	84-74-2	Di-n-butylphthalate	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	884.80
RLWTF-22-236042	RLWTF_MES	04/05/2022	84-74-2	Di-n-butylphthalate	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	884.80
RLWTF-22-235994	RLWTF_MES	04/05/2022	534-52-1	Dinitro-2-methylphenol[4,6-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1.52
RLWTF-22-236042	RLWTF_MES	04/05/2022	534-52-1	Dinitro-2-methylphenol[4,6-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1.52
RLWTF-22-235994	RLWTF_MES	04/05/2022	51-28-5	Dinitrophenol[2,4-]	4.89	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	4.89	38.67
RLWTF-22-236042	RLWTF_MES	04/05/2022	51-28-5	Dinitrophenol[2,4-]	4.94	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	4.94	38.67
RLWTF-22-235994	RLWTF_MES	04/05/2022	121-14-2	Dinitrotoluene[2,4-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	2.37
RLWTF-22-236042	RLWTF_MES	04/05/2022	121-14-2	Dinitrotoluene[2,4-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	2.37
RLWTF-22-235994	RLWTF_MES	04/05/2022	606-20-2	Dinitrotoluene[2,6-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.49
RLWTF-22-236042	RLWTF_MES	04/05/2022	606-20-2	Dinitrotoluene[2,6-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.49
RLWTF-22-235994	RLWTF_MES	04/05/2022	123-91-1	Dioxane[1,4-]	2.93	ug/L	UJ	N	UF	2022-440	REG	SW-846:8270E	2.93	4.59
RLWTF-22-236042	RLWTF_MES	04/05/2022	123-91-1	Dioxane[1,4-]	2.96	ug/L	UJ	N	UF	2022-440	FD	SW-846:8270E	2.96	4.59
RLWTF-22-235994	RLWTF_MES	04/05/2022	122-39-4	Diphenylamine	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.00167
RLWTF-22-236042	RLWTF_MES	04/05/2022	122-39-4	Diphenylamine	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.00167
RLWTF-22-235994	RLWTF_MES	04/05/2022	959-98-8	Endosulfan I	0.00665	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.00665	98.7
RLWTF-22-235994	RLWTF_MES	04/05/2022	33213-65-9	Endosulfan II	0.01	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.01	98.7
RLWTF-22-235994	RLWTF_MES	04/05/2022	72-20-8	Endrin	0.01	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.01	2.23
RLWTF-22-235994	RLWTF_MES	04/05/2022	100-41-4	Ethylbenzene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	700

Table 1. Analytical Results from the Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES on April 5, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2,3,4,5]	Validation Qualifier[6,7,8,9,10]	Detected[1,12]	Field Preparation Code[13,14]	COC #	Sample Purpose[15,16]	Lab Method	Report Method Detection Limit[17]	Groundwater Limit[18,19,20,21]
RLWTF-22-249200	RLWTF_MES	04/05/2022	100-41-4	Ethylbenzene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	700
RLWTF-22-235994	RLWTF_MES	04/05/2022	206-44-0	Fluoranthene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	802.20
RLWTF-22-236042	RLWTF_MES	04/05/2022	206-44-0	Fluoranthene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	802.20
RLWTF-22-235994	RLWTF_MES	04/05/2022	86-73-7	Fluorene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	287.64
RLWTF-22-236042	RLWTF_MES	04/05/2022	86-73-7	Fluorene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	287.64
RLWTF-22-235651	RLWTF_MES	04/05/2022	F(-1)	Fluoride	0.033	mg/L	U	N	F	2022-441	REG	EPA:300.0	0.033	1.6
RLWTF-22-235994	RLWTF_MES	04/05/2022	76-44-8	Heptachlor	0.00665	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.00665	0.02211
RLWTF-22-235994	RLWTF_MES	04/05/2022	118-74-1	Hexachlorobenzene	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.10
RLWTF-22-236042	RLWTF_MES	04/05/2022	118-74-1	Hexachlorobenzene	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.10
RLWTF-22-235994	RLWTF_MES	04/05/2022	87-68-3	Hexachlorobutadiene	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1.39
RLWTF-22-236042	RLWTF_MES	04/05/2022	87-68-3	Hexachlorobutadiene	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1.39
RLWTF-22-235994	RLWTF_MES	04/05/2022	77-47-4	Hexachlorocyclopentadiene	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.41
RLWTF-22-236042	RLWTF_MES	04/05/2022	77-47-4	Hexachlorocyclopentadiene	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.41
RLWTF-22-235994	RLWTF_MES	04/05/2022	67-72-1	Hexachloroethane	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	3.28
RLWTF-22-236042	RLWTF_MES	04/05/2022	67-72-1	Hexachloroethane	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	3.28
RLWTF-22-235994	RLWTF_MES	04/05/2022	2691-41-0	HMX	0.0792	ug/L	U	N	UF	2022-440	REG	SW-846:8330B	0.0792	1001.11
RLWTF-22-236002	RLWTF_MES	04/05/2022	Fe	Iron	30	ug/L	U	N	F	2022-440	REG	EPA:200.7	30	1,000
RLWTF-22-235994	RLWTF_MES	04/05/2022	78-59-1	Isophorone	3.42	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	3.42	780.63
RLWTF-22-236042	RLWTF_MES	04/05/2022	78-59-1	Isophorone	3.46	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	3.46	780.63
RLWTF-22-236002	RLWTF_MES	04/05/2022	Pb	Lead	0.5	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.5	15
RLWTF-22-236002	RLWTF_MES	04/05/2022	Mn	Manganese	2.63	ug/L	J	Y	F	2022-440	REG	EPA:200.7	2.00	200
RLWTF-22-235994	RLWTF_MES	04/05/2022	Hg	Mercury	0.067	ug/L	U	N	UF	2022-440	REG	EPA:245.2	0.067	2
RLWTF-22-236002	RLWTF_MES	04/05/2022	Hg	Mercury	0.067	ug/L	U	N	F	2022-440	REG	EPA:245.2	0.067	2
RLWTF-22-235994	RLWTF_MES	04/05/2022	1634-04-4	Methyl tert-Butyl Ether	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	100
RLWTF-22-249200	RLWTF_MES	04/05/2022	1634-04-4	Methyl tert-Butyl Ether	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	100
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-09-2	Methylene Chloride	0.5	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.5	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-09-2	Methylene Chloride	0.5	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.5	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	90-12-0	Methylnaphthalene[1-]	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	11.375
RLWTF-22-236042	RLWTF_MES	04/05/2022	90-12-0	Methylnaphthalene[1-]	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	11.375
RLWTF-22-235994	RLWTF_MES	04/05/2022	91-57-6	Methylnaphthalene[2-]	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	35.115
RLWTF-22-236042	RLWTF_MES	04/05/2022	91-57-6	Methylnaphthalene[2-]	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	35.115
RLWTF-22-236002	RLWTF_MES	04/05/2022	Mo	Molybdenum	0.2	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.2	1,000
RLWTF-22-235994	RLWTF_MES	04/05/2022	91-20-3	Naphthalene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	30
RLWTF-22-236042	RLWTF_MES	04/05/2022	91-20-3	Naphthalene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	30
RLWTF-22-236002	RLWTF_MES	04/05/2022	Ni	Nickel	0.6	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.6	200
RLWTF-22-235651	RLWTF_MES	04/05/2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.385	mg/L	NQ	Y	F	2022-441	REG	EPA:353.2	0.017	10
RLWTF-22-235689	RLWTF_MES	04/05/2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.387	mg/L	NQ	Y	F	2022-441	FD	EPA:353.2	0.017	10
RLWTF-22-236010	RLWTF_MES	04/05/2022	NO2	Nitrite	0.108	mg/L	NQ	Y	F	2022-430	REG	EPA:300.0	0.033	1
RLWTF-22-235994	RLWTF_MES	04/05/2022	98-95-3	Nitrobenzene	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1.40
RLWTF-22-236042	RLWTF_MES	04/05/2022	98-95-3	Nitrobenzene	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1.40
RLWTF-22-235994	RLWTF_MES	04/05/2022	55-18-5	Nitrosodiethylamine[N-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.0017
RLWTF-22-236042	RLWTF_MES	04/05/2022	55-18-5	Nitrosodiethylamine[N-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.0017
RLWTF-22-235994	RLWTF_MES	04/05/2022	62-75-9	Nitrosodimethylamine[N-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.0049
RLWTF-22-236042	RLWTF_MES	04/05/2022	62-75-9	Nitrosodimethylamine[N-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.0049
RLWTF-22-235994	RLWTF_MES	04/05/2022	924-16-3	Nitroso-di-n-butylamine[N-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.03
RLWTF-22-236042	RLWTF_MES	04/05/2022	924-16-3	Nitroso-di-n-butylamine[N-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.03
RLWTF-22-235994	RLWTF_MES	04/05/2022	930-55-2	Nitrosopyrrolidine[N-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	0.37
RLWTF-22-236042	RLWTF_MES	04/05/2022	930-55-2	Nitrosopyrrolidine[N-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	0.37
RLWTF-22-235994	RLWTF_MES	04/05/2022	108-60-1	Oxybis(1-chloropropane)[2,2'-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	9.81
RLWTF-22-236042	RLWTF_MES	04/05/2022	108-60-1	Oxybis(1-chloropropane)[2,2'-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	9.81
RLWTF-22-235994	RLWTF_MES	04/05/2022	608-93-5	Pentachlorobenzene	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	3.07
RLWTF-22-236042	RLWTF_MES	04/05/2022	608-93-5	Pentachlorobenzene	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	3.07
RLWTF-22-235994	RLWTF_MES	04/05/2022	87-86-5	Pentachlorophenol	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1
RLWTF-22-236042	RLWTF_MES	04/05/2022	87-86-5	Pentachlorophenol	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1
RLWTF-22-235627	RLWTF_MES	04/05/2022	ClO4	Perchlorate	0.0500	ug/L	U	N	UF	2022-441	REG	SW-846:6850	0.05	13.82
RLWTF-22-235994	RLWTF_MES	04/05/2022	355-46-4	Perfluorohexanesulfonic acid	0.606	ng/L	U	N	UF	2022-440	REG	EPA:537M	0.606	70

Table 1. Analytical Results from the Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES on April 5, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2,3,4,5]	Validation Qualifier[6,7,8,9,10]	Detected[1,12]	Field Preparation Code[13,14]	COC #	Sample Purpose[15,16]	Lab Method	Report Method Detection Limit[17]	Groundwater Limit[18,19,20,21]
RLWTF-22-235994	RLWTF_MES	04/05/2022	1763-23-1	Perfluorooctanesulfonic acid	0.735	ng/L	U	N	UF	2022-440	REG	EPA:537M	0.735	70
RLWTF-22-235994	RLWTF_MES	04/05/2022	335-67-1	Perfluorooctanoic acid	0.735	ng/L	U	N	UF	2022-440	REG	EPA:537M	0.735	70
	RLWTF_MES	04/05/2022	pH	pH	7.6	SU								6-9
RLWTF-22-235994	RLWTF_MES	04/05/2022	85-01-8	Phenanthrene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	170.415
RLWTF-22-236042	RLWTF_MES	04/05/2022	85-01-8	Phenanthrene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	170.415
RLWTF-22-235994	RLWTF_MES	04/05/2022	108-95-2	Phenol	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	5
RLWTF-22-236042	RLWTF_MES	04/05/2022	108-95-2	Phenol	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	1610-18-0	Prometon	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	249.93
RLWTF-22-236042	RLWTF_MES	04/05/2022	1610-18-0	Prometon	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	249.93
RLWTF-22-235994	RLWTF_MES	04/05/2022	129-00-0	Pyrene	0.293	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	0.293	117.423
RLWTF-22-236042	RLWTF_MES	04/05/2022	129-00-0	Pyrene	0.296	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	0.296	117.423
RLWTF-22-235994	RLWTF_MES	04/05/2022	Ra-226+228	Radium-226 and Radium-228	0.876	pCi/L	UJ	N	UF	2022-440	REG	Generic:Radium by Calculation	--	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	121-82-4	RDX	0.0792	ug/L	U	N	UF	2022-440	REG	SW-846:8330B	0.0792	9.6577
RLWTF-22-236002	RLWTF_MES	04/05/2022	Se	Selenium	1.5	ug/L	U	N	F	2022-440	REG	EPA:200.8	1.5	50
RLWTF-22-236002	RLWTF_MES	04/05/2022	Ag	Silver	0.3	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.3	50
RLWTF-22-235994	RLWTF_MES	04/05/2022	100-42-5	Styrene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	100
RLWTF-22-249200	RLWTF_MES	04/05/2022	100-42-5	Styrene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	100
RLWTF-22-236002	RLWTF_MES	04/05/2022	SO4(-2)	Sulfate	0.133	mg/L	U	N	F	2022-440	REG	EPA:300.0	0.133	600
RLWTF-22-236050	RLWTF_MES	04/05/2022	SO4(-2)	Sulfate	0.133	mg/L	U	N	F	2022-440	FD	EPA:300.0	0.133	600
RLWTF-22-235994	RLWTF_MES	04/05/2022	126-33-0	Sulfolane	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	20.03
RLWTF-22-236042	RLWTF_MES	04/05/2022	126-33-0	Sulfolane	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	20.03
RLWTF-22-235994	RLWTF_MES	04/05/2022	95-94-3	Tetrachlorobenzene[1,2,4,5]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1.66
RLWTF-22-236042	RLWTF_MES	04/05/2022	95-94-3	Tetrachlorobenzene[1,2,4,5]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1.66
RLWTF-22-235994	RLWTF_MES	04/05/2022	79-34-5	Tetrachloroethane[1,1,2,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	10
RLWTF-22-249200	RLWTF_MES	04/05/2022	79-34-5	Tetrachloroethane[1,1,2,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	10
RLWTF-22-235994	RLWTF_MES	04/05/2022	127-18-4	Tetrachloroethene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	127-18-4	Tetrachloroethene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-236002	RLWTF_MES	04/05/2022	Tl	Thallium	0.6	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.6	2.0
RLWTF-22-235994	RLWTF_MES	04/05/2022	108-88-3	Toluene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	1,000
RLWTF-22-249200	RLWTF_MES	04/05/2022	108-88-3	Toluene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	1,000
RLWTF-22-235651	RLWTF_MES	04/05/2022	TDS	Total Dissolved Solids	3.4	mg/L	U	N	F	2022-441	REG	EPA:160.1	3.4	1,000
RLWTF-22-235627	RLWTF_MES	04/05/2022	TKN	Total Kjeldahl Nitrogen	2.67	mg/L	NQ	Y	UF	2022-441	REG	EPA:351.2	0.033	--
RLWTF-22-235994	RLWTF_MES	04/05/2022	8001-35-2	Toxaphene (Technical Grade)	0.15	ug/L	U	N	UF	2022-440	REG	SW-846:8081B	0.15	0.16
RLWTF-22-235994	RLWTF_MES	04/05/2022	120-82-1	Trichlorobenzene[1,2,4-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	70
RLWTF-22-249200	RLWTF_MES	04/05/2022	120-82-1	Trichlorobenzene[1,2,4-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	70
RLWTF-22-235994	RLWTF_MES	04/05/2022	71-55-6	Trichloroethane[1,1,1-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	200
RLWTF-22-249200	RLWTF_MES	04/05/2022	71-55-6	Trichloroethane[1,1,1-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	200
RLWTF-22-235994	RLWTF_MES	04/05/2022	79-00-5	Trichloroethane[1,1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	79-00-5	Trichloroethane[1,1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	79-01-6	Trichloroethene	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	5
RLWTF-22-249200	RLWTF_MES	04/05/2022	79-01-6	Trichloroethene	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	5
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-69-4	Trichlorofluoromethane	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	1136.825
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-69-4	Trichlorofluoromethane	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	1136.825
RLWTF-22-235994	RLWTF_MES	04/05/2022	95-95-4	Trichlorophenol[2,4,5-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	1165.98
RLWTF-22-236042	RLWTF_MES	04/05/2022	95-95-4	Trichlorophenol[2,4,5-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	1165.98
RLWTF-22-235994	RLWTF_MES	04/05/2022	88-06-2	Trichlorophenol[2,4,6-]	2.93	ug/L	U	N	UF	2022-440	REG	SW-846:8270E	2.93	11.88
RLWTF-22-236042	RLWTF_MES	04/05/2022	88-06-2	Trichlorophenol[2,4,6-]	2.96	ug/L	U	N	UF	2022-440	FD	SW-846:8270E	2.96	11.88
RLWTF-22-235994	RLWTF_MES	04/05/2022	118-96-7	Trinitrotoluene[2,4,6-]	0.0792	ug/L	U	N	UF	2022-440	REG	SW-846:8330B	0.0792	9.8002
RLWTF-22-236002	RLWTF_MES	04/05/2022	U	Uranium	0.067	ug/L	U	N	F	2022-440	REG	EPA:200.8	0.067	30
RLWTF-22-235994	RLWTF_MES	04/05/2022	75-01-4	Vinyl Chloride	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	2
RLWTF-22-249200	RLWTF_MES	04/05/2022	75-01-4	Vinyl Chloride	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	2
RLWTF-22-235994	RLWTF_MES	04/05/2022	1330-20-7	Xylene (Total)	1	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	1	620
RLWTF-22-249200	RLWTF_MES	04/05/2022	1330-20-7	Xylene (Total)	1	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	1	620
RLWTF-22-235994	RLWTF_MES	04/05/2022	95-47-6	Xylene[1,2-]	0.333	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.333	192.995
RLWTF-22-249200	RLWTF_MES	04/05/2022	95-47-6	Xylene[1,2-]	0.333	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.333	192.995

Table 1. Analytical Results from the Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES on April 5, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2,3,4,5]	Validation Qualifier[6,7,8,9,10]	Detected[1,12]	Field Preparation Code[13,14]	COC #	Sample Purpose[15,16]	Lab Method	Report Method Detection Limit[17]	Groundwater Limit[18,19,20,21]
RLWTF-22-235994	RLWTF_MES	04/05/2022	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	0.5	ug/L	U	N	UF	2022-440	REG	SW-846:8260D	0.5	386
RLWTF-22-249200	RLWTF_MES	04/05/2022	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	0.5	ug/L	U	N	UF	2022-440	FD	SW-846:8260D	0.5	386
RLWTF-22-236002	RLWTF_MES	04/05/2022	Zn	Zinc	3.3	ug/L	U	N	F	2022-440	REG	EPA:200.7	3.3	10,000

Notes:

[1]ug/L-micrograms per liter.

[2]mg/L-milligrams per liter.

[3]ng/L-nanograms per liter.

[4]SU - standard units.

[5]pCi/L-picocuries per liter.

[6]U-The analyte is classified as not detected.

[7]J-The analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual.

[8]J+ - the analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual with a potential positive bias.

[9]UJ - The analyte is classified as not detected, with an expectation that the reported result is more uncertain than usual.

[10]NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.

[11]N - in the Detected column means the analyte was not detected.

[12]Y - in the Detected column means the analyte was detected.

[13]UF - Unfiltered.

[14]F - Filtered.

[15]REG - in the sample purpose column means the sample was a regular sample.

[16]FD - in the sample purpose column means the sample was a field duplicate.

[17] - there is not a Report Detection Limit for Radium-226 and Radium-228 since this result is calculated.

[18] Regulatory Limit represents standards for groundwater as identified in NMAC 20.6.2.3103 where available, otherwise the value represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

[19] Groundwater Limit for N-nitrosodiphenylamine reported as diphenylamine, which represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

[20] Groundwater Limit for combined Endosulfan I and Endosulfan II is 98.7 µg/L, which represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

[21] Total Kjeldahl Nitorgen does not contain either a NMAC 20.6.2.3103 standard or NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

Table 2. Analytical Results from the Monthly Sampling of RLWTF Treated Effluent Discharged to the MES on May 18, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2]	Validation Qualifier[3,4,5]	Detected	Field Preparation Code[6,7]	COC #	Sample Purpose[8,9]	Lab Method	Report Method Detection Limit	Groundwater Limit[10,11]
RLWTF-22-235653	RLWTF_MES	05/18/2022	Cl(-1)	Chloride	0.370	mg/L	NQ	Yes	F	2022-544	REG	EPA:300.0	0.067	250
RLWTF-22-235653	RLWTF_MES	05/18/2022	F(-1)	Fluoride	0.100	mg/L	U	No	F	2022-544	REG	EPA:300.0	0.033	1.6
RLWTF-22-235653	RLWTF_MES	05/18/2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.755	mg/L	NQ	Yes	F	2022-544	REG	EPA:353.2	0.085	10
RLWTF-22-235692	RLWTF_MES	05/18/2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.760	mg/L	NQ	Yes	F	2022-544	FD	EPA:353.2	0.085	10
RLWTF-22-235629	RLWTF_MES	05/18/2022	ClO4	Perchlorate	0.20	ug/L	U	No	UF	2022-544	REG	SW-846:6850	0.05	13.8
RLWTF-22-235653	RLWTF_MES	05/18/2022	TDS	Total Dissolved Solids	5.71	mg/L	J	Yes	F	2022-544	REG	EPA:160.1	3.40	1,000
RLWTF-22-235629	RLWTF_MES	05/18/2022	TKN	Total Kjeldahl Nitrogen	1.26	mg/L	NQ	Yes	UF	2022-544	REG	EPA:351.2	0.033	--

Notes:

[1]mg/L-milligrams per liter.

[2]ug/L-micrograms per liter.

[3]NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.

[4]U-The analyte is classified as not detected.

[5]J-The analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual.

[6]F - Filtered.

[7]UF - Unfiltered.

[8]REG - in the sample purpose column means the sample was a regular sample.

[9]FD - in the sample purpose column means the sample was a field duplicate.

[10] Regulatory Limit represents standards for groundwater as identified in NMAC 20.6.2.3103 where available, otherwise the value represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

[11] Total Kjeldahl Nitorgen does not contain either a NMAC 20.6.2.3103 standard or NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

Table 3. Analytical Results from the Monthly Sampling of RLWTF Treated Effluent Discharged to the MES on June 9, 2022. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2]	Validation Qualifier[3,4,5]	Detected	Field Preparation Code[6,7]	COC #	Sample Purpose[8,9]	Lab Method	Report Method Detection Limit	Groundwater Limit[10,11]
RLWTF-22-235655	RLWTF_MES	06/09/2022	Cl(-1)	Chloride	0.195	mg/L	J	Yes	F	2022-622	REG	EPA:300.0	0.067	250
RLWTF-22-235655	RLWTF_MES	06/09/2022	F(-1)	Fluoride	0.033	mg/L	U	No	F	2022-622	REG	EPA:300.0	0.033	1.6
RLWTF-22-235655	RLWTF_MES	06/09/2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.530	mg/L	NQ	Yes	F	2022-622	REG	EPA:353.2	0.085	10
RLWTF-22-235697	RLWTF_MES	06/09/2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.535	mg/L	NQ	Yes	F	2022-622	FD	EPA:353.2	0.017	10
RLWTF-22-235631	RLWTF_MES	06/09/2022	ClO4	Perchlorate	0.05	ug/L	U	No	UF	2022-622	REG	SW-846:6850	0.05	13.8
RLWTF-22-235655	RLWTF_MES	06/09/2022	TDS	Total Dissolved Solids	10.0	mg/L	J	Yes	F	2022-622	REG	EPA:160.1	3.4	1,000
RLWTF-22-235631	RLWTF_MES	06/09/2022	TKN	Total Kjeldahl Nitrogen	1.61	mg/L	NQ	Yes	UF	2022-622	REG	EPA:351.2	0.033	--

Notes:

[1]mg/L-milligrams per liter.

[2]ug/L-micrograms per liter.

[3]J-The analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual.

[4]U-The analyte is classified as not detected.

[5]NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.

[6]F - Filtered.

[7]UF - Unfiltered.

[8]REG - in the sample purpose column means the sample was a regular sample.

[9]FD - in the sample purpose column means the sample was a field duplicate.

[10] Regulatory Limit represents standards for groundwater as identified in NMAC 20.6.2.3103 where available, otherwise the value represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

[11] Total Kjeldahl Nitorgen does not contain either a NMAC 20.6.2.3103 standard or NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

ATTACHMENT 5

Quarterly Groundwater Monitoring Report – Second Quarter 2022

EPC-DO: 22-186

LA-UR-22-26639

Date: JUL 28 2022

TABLE OF CONTENTS

MCA-RLW-1, Second Quarter 2022

a	Sample Date	4/28/2022
b	Sample Time	0826
c	Individuals collecting sample	N3B Staff
d	Monitoring well identification	MCA-RLW-1
e	Physical description of monitoring well location	See Location Map, Attachment 6
f	Ground-water surface elevation (ft above mean sea level (msl))	N/A
g	Total depth of the well (ft below ground surface (bgs))	22.2
h	Total volume of water in the monitoring well prior to sample collection (gal)	N/A
i	Total volume of water purged prior to sample collection (gal)	N/A
j	Physical parameters including temperature, conductivity, pH, oxidation/reduction potential	DO (mg/L): N/A Oxidation/Reduction Potential (MV): N/A Temp (deg C): N/A pH (SU): N/A Turbidity (NTU): N/A Specific Conductance (µS/cm): N/A
k	Description of sample methods	N/A
l	Chain-of-Custody	N/A
m	Location Map	Attachment 6
	Analytical Results	N/A

Notes:
N/A – Not applicable since well was dry when visited on April 28, 2022.

MCA-RLW-2, Second Quarter 2022

a	Sample Date	4/28/2022
b	Sample Time	0803
c	Individuals collecting sample	N3B Staff
d	Monitoring well identification	MCA-RLW-2
e	Physical description of monitoring well location	See Location Map, Attachment 6
f	Ground-water surface elevation (ft above mean sea level (msl))	6,806.05
g	Total depth of the well (ft below ground surface (bgs))	40.4
h	Total volume of water in the monitoring well prior to sample collection (gal)	N/A
i	Total volume of water purged prior to sample collection (gal)	N/A
j	Physical parameters including temperature, conductivity, pH, oxidation/reduction potential	DO (mg/L): N/A Oxidation/Reduction Potential (MV): N/A Temp (deg C): N/A pH (SU): N/A Turbidity (NTU): N/A Specific Conductance (µS/cm): N/A
k	Description of sample methods	N/A
l	Chain-of-Custody	N/A
m	Location Map	Attachment 6
	Analytical Results	N/A

Notes:

N/A – Not applicable. Well was not sampled due to insufficient water in the well. Well contained 0.10 ft of standing water when visited on 4/28/2022.

MCOI-6, Second Quarter 2022

a	Sample Date	5/31/2022
b	Sample Time	1151
c	Individuals collecting sample	N3B Staff
d	Monitoring well identification	MCOI-6
e	Physical description of monitoring well location	See Location Map, Attachment 6
f	Ground-water surface elevation (ft above mean sea level (msl))	6139.95
g	Total depth of the well (ft below ground surface (bgs))	712.6
h	Total volume of water in the monitoring well prior to sample collection (gal)	34.24
i	Total volume of water purged prior to sample collection (gal)	105.8
j	Physical parameters including temperature, conductivity, pH, oxidation/reduction potential	DO (mg/L): 6.99 Oxidation/Reduction Potential (MV): 179.3 Temp (deg C): 16.6 pH (SU): 6.95 Turbidity (NTU): 1.02 Specific Conductance (µS/cm): 526
k	Description of sample methods	Attachment 5 Page 5
l	Chain-of-Custody	Attachment 5 Page 5
m	Location Map	Attachment 6
	Analytical Results	Attachment 5 Page 6, Table 1

Notes:
N/A – Not applicable.

General Engineering Laboratories, Inc., Charleston, SC.
Charleston SC

Chain of Custody/Analysis Request

COC/Lab Request #: N3B-2022-1594
Page 1 of 1

Client Contact:

Lab Agreement #:

Site Name: N3B LANL

Project Number: N3B

Analysis Turnaround Time:
24 Hour - ☐ Other - ☐
7 Days - ☐
14 Days - ☐
21 Days - ☐
28 Days - ☒

Event ID: 14315

Rad Screening Info: Sample type has no DOT hazard classification

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	EPA:335.4_CN(T)	EPA:350.1_NH3+353.2_NO3/NO2+365.4_PO4	EPA:351.2_TKN+SW846:9060_TOC	EPA:SC_pH_TDS_Anion_Alk+SW846:ClO4	SW846:7470_Hg	SW846:8260_IFGMP_VOA	SW846:8270SIM_1,4Dioxane	SW846:8270_IFGMP_SVOA	SW846:CO_Metals
CAMO-22-249306	05/31/2022	11:51	W	1		1		1	2	3	3	
CAMO-22-249307	05/31/2022	11:51	W		1		1					1
CAMO-22-250380	05/31/2022	11:51	W						1			
CAMO-22-249309	05/31/2022	11:47	W	1		1		1				
CAMO-22-249310	05/31/2022	11:47	W		1		1					1

Special Instructions:

Relinquished by: Lisa Tower	Print Name: Lisa Tower	Date/Time: 6/1/2022 1302	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:

Table 1. Analytical Results from Quarterly Groundwater Sampling of Perched/Intermediate Aquifer Monitoring Well MCOI-6 on May 31, 2022. Permit Condition No. 36.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1,2]	Validation Qualifier[3,4]	Detected	Field Preparation Code[5,6]	COC #	Sample Purpose[7]	Lab Method	Report Method Detection Limit	Groundwater Limit[8,9]
CAMO-22-249307	MCOI-6	05-31-2022	Cl(-1)	Chloride	46.7	mg/L	NQ	Yes	F	N3B-2022-1594	REG	EPA:300.0	0.67	250
CAMO-22-249307	MCOI-6	05-31-2022	F(-1)	Fluoride	0.589	mg/L	NQ	Yes	F	N3B-2022-1594	REG	EPA:300.0	0.033	1.6
CAMO-22-249307	MCOI-6	05-31-2022	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	27.7	mg/L	NQ	Yes	F	N3B-2022-1594	REG	EPA:353.2	0.85	10
CAMO-22-249307	MCOI-6	05-31-2022	ClO4	Perchlorate	137	ug/L	NQ	Yes	F	N3B-2022-1594	REG	SW-846:6850	5	13.8
CAMO-22-249307	MCOI-6	05-31-2022	TDS	Total Dissolved Solids	401	mg/L	NQ	Yes	F	N3B-2022-1594	REG	EPA:160.1	3.4	1,000
CAMO-22-249306	MCOI-6	05-31-2022	TKN	Total Kjeldahl Nitrogen	0.033	mg/L	UJ	No	UF	N3B-2022-1594	REG	EPA:351.2	0.033	-

Notes:

[1] mg/L - milligrams per liter.

[2] ug/L - microgram per liter.

[3] NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.

[4] UJ - The analyte is classified as not detected, with an expectation that the reported result is more uncertain than usual.

[5] F - in the filtered column means the sample was filtered.

[6] UF - in the filtered column means the sample was not filtered.

[7] REG - in the sample purpose column means the sample was a regular sample.

[8] Groundwater Limit represents standards for groundwater as identified NMAC 20.6.2.3103 except perchlorate which represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

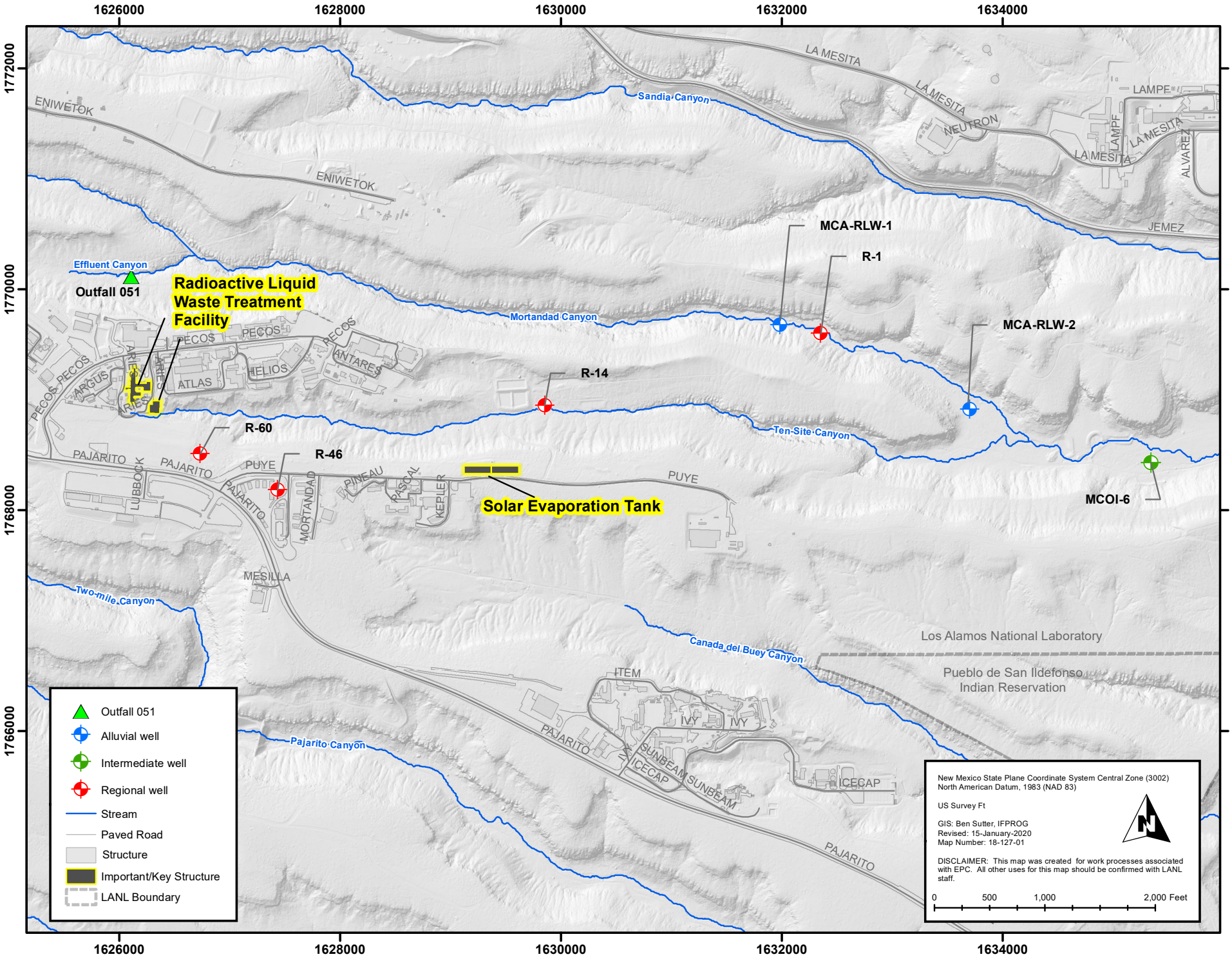
[9] N/A = not applicable. Total Kjeldahl Nitrogen does not contain either a NMAC 20.6.2.3103 standard or NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

ATTACHMENT 6
Monitoring Well Location Map

EPC-DO: 22-186

LA-UR-22-26639

Date: JUL 2 8 2022


1626000
1628000
1630000
1632000
1634000
1772000
1770000
1768000
1766000
Outfall 051
Radioactive Liquid Waste Treatment Facility
Effluent Canyon
Sandia Canyon
Mortandad Canyon
Ten-Site Canyon
Two-mile Canyon
Pajarito Canyon
Canada del Buey Canyon
MCA-RLW-1
R-1
MCA-RLW-2
R-14
R-60
R-46
Solar Evaporation Tank
MCOI-6
LA MESITA
ENIWETOK
NEUTRON
LAMPE
ALVAREZ
JEMEZ
PECOS
ARGUS
ATLAS
HELIOS
ANTARES
PAJARITO
PUYE
LUBBOCK
MORTANDAD
PINEAU
PASCAL
KEPLER
MESILLA
ITEM
IVY
SUNBEAM
ICECAP
Los Alamos National Laboratory
Pueblo de San Ildefonso Indian Reservation
Outfall 051
Alluvial well
Intermediate well
Regional well
Stream
Paved Road
Structure
Important/Key Structure
LANL Boundary
New Mexico State Plane Coordinate System Central Zone (3002)
North American Datum, 1983 (NAD 83)
US Survey Ft
GIS: Ben Sutter, IFPROG
Revised: 15-January-2020
Map Number: 18-127-01
DISCLAIMER: This map was created for work processes associated with EPC. All other uses for this map should be confirmed with LANL staff.
N
0
500
1,000
2,000 Feet