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Symbol: EPC-DO: 23-311
Date: October 30,2023
LA-UR: 23-31677
Locates Action No.: U2200542

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

Subject: DP-1132, Monitoring Report, Radioactive Liquid Waste Treatment Facility, Third Quarter 2023

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 November 1, 2023. The following permit conditions are addressed in Attachment 1 through 6 of this report.

- Condition No.13: Maintenance and Repair
- Condition No. 14: Damage to Structural Integrity
- 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 Robert A. Gallegos at (505) 901-3824 or robert.gallegos@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,

SARAH HOLCOMB (Affiliate)

Digitally signed by SARAH HOLCOMB (Affiliate)
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Sarah S. Holcomb
Acting Group Leader
Environmental Compliance Programs
Triad National Security, LLC

Sincerely,

Robert A. Gallegos

Digitally signed by Robert A. Gallegos
Date: 2023.10.27 08:13:59 -06'00'

Robert A. Gallegos
Permitting and Compliance Program Manager
National Nuclear Security Administration
U.S. Department of Energy

Attachment:
Attachment 1 RLWTF Monitoring Report – Third Quarter 2023
Attachment 2 Quarterly Summary of Maintenance and Repair Activities Conducted at the RLWTF
Attachment 3 RLWTF Daily Influent and Effluent Volumes
Attachment 4 Treated Effluent Sampling Results
Attachment 5 Groundwater Monitoring Report – Third Quarter 2023
Attachment 6 Monitoring Well Location Map

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Attachment 1

RLWTF Monitoring Report – Third Quarter 2023

EPC-DO: 23-311

LA-UR: 23-31677

Date: October 30, 2023

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 November 1, 2023, for the monitoring period of July 1, 2023, through September 30, 2023 (third 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 No. 14: Damage to Structural Integrity
  - 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 third quarter 2023 monitoring period.

Condition No. 14: Damage to Structural Integrity

- On August 31, 2022, NMED was notified that the south treated effluent tank at the RLWTF was taken out of service when treated effluent was discovered to have wept onto the exterior surface of the tank. Corrective Action Plans were submitted to NMED on September 30, 2022 (EPC-DO:22-264), and November 21, 2022 (EPC-DO: 22-315). A Corrective Action Plan Implementation Extension Request (EPC-DO: 23-274) was submitted to NMED on August 30, 2023. NMED approved this request on October 3, 2023.

- An epoxy resin patch and an additional welded patch have been applied to the thinning area of the tank in January and February 2023.

- During this reporting period, project parts and materials that were previously ordered but delayed were received. Additionally, progress was made on room preparation to enable the subsequent steps detailed in the Corrective Action Plan to be completed.

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 third quarter 2023 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 third quarter 2023 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 third quarter 2023 monitoring period.

- No treated effluent was discharged to National Pollutant Discharge Elimination System (NPDES) Outfall 051 or the Solar Evaporative Tank System (SET) during the third quarter 2023 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 this quarter during the months of July, August, and September. Quarterly sampling for all water contaminants listed in 20.6.2.3103 NMAC, all toxic pollutants as defined in 20.6.2.7.T(2) NMAC, and total kjeldahl nitrogen (TKN) was completed on July 11th, 2023. These analytical results are provided in **Attachment 4, Table 1.**

  Monthly sampling for TKN, nitrate (NO_3-N), total dissolved solids (TDS), chloride (Cl), fluoride (F), and perchlorate (ClO_4) was completed on August 2nd and September 6th, 2023. 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.

- **NPDES Outfall 051 Sampling.** No treated effluent from the RLWTF was discharged to NPDES Outfall 051 this reporting period. Therefore, no effluent sampling from NPDES Outfall 051 was completed during the third quarter 2023 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 third quarter 2023 monitoring period.

Condition No. 30: Soil Moisture Monitoring System for the SET
The permittees shall perform quarterly soil moisture monitoring in the moisture monitoring boreholes and shall provide this information in the quarterly reports.

- No treated effluent was discharged to the SET during third quarter 2023 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. NMED approved the report on May 18, 2023.

- Baseline monitoring of all SET moisture monitoring boreholes continued in the third quarter with quarterly monitoring completed in July and August 2023.

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 July 12, 2023.

  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 July 12, 2023, sampling event at MCOI-6 were below 20.6.2.3103 NMAC standards and 20.6.2.7.T NMAC screening levels, with the exception of the following:

  - NO_3+NO_2-N was detected at concentrations of 14 mg/L and 13.9 mg/L in the regular and field duplicate samples, respectively. 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 2017 through 2022 was 12.37 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 accordance with DP-1132 and pursuant to the Compliance Order on Consent, June 2016 (Consent Order).

- ClO_4 was detected at concentrations of 116 µg/L and 113 µg/L in the regular and field duplicate samples, respectively. 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 2017 through 2022 was 93.4 µg/L. Detections of ClO_4 at MCOI-6 at concentrations greater than the 20.6.2.7.T NMAC guidance screening levels were previously identified and reported to NMED. Monitoring well MCOI-6 will continue to be routinely sampled for ClO_4 in accordance with DP-1132 and pursuant to the Consent Order.

Quarterly samples were not collected from alluvial monitoring wells MCA-RLW-1 or MCA-RLW-2 during this period due to insufficient water in the wells. **Attachment 5** provides the ground water monitoring report for these alluvial wells collected on July 10, 2023.

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.

On September 26, 2023, a Revised Integrated Schedule of Stabilization Activities at the RLWTF (EPC-DO: 23-294) was submitted to NMED for review.

The current status of each unit and system listed in Permit Condition No. 41 is listed below.

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 in 2019.
- The chemical feed system was dismantled in May 2021.
- During this reporting period, the clarifier drain line was cleaned and isolated and metal components from inside the clarifier were 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 in 2019.
- The chemical feed system was dismantled in May 2021.
- No additional stabilization milestones were completed during the reporting period for this unit.

75K Tank

- Stabilization activities for the 75K Tank are being completed under the Stabilization Plan for 75K Tank submitted to NMED on January 25, 2019 (EPC-DO: 19-007). This workplan was approved by NMED on April 25, 2019.
- The 75K Tank was operationally emptied in 2019.
- The 75K Tank will remain available for use as emergency storage.
- A Request for an Extension of Time to complete stabilization activities was submitted to NMED on September 28, 2020 (EPC-DO: 20-255). Details related to the extension request were provided in that submittal. NMED approved the request for extension on November 13, 2020.
- No additional stabilization milestones were completed during the reporting period for this unit.

100K Tank

- Stabilization activities for the 100K Tank are being completed under the Stabilization Plan for the 100K Tank submitted to NMED on December 4, 2018 (EPC-DO: 18-428). This workplan was approved by NMED on December 27, 2018. Requests for Extensions of Time to complete mobilization for 100K Tank Stabilization (EPC-DO: 19-372 and EPC-DO: 19-470) were previously submitted to and approved by NMED as previously reported.
- The 100K Tank was emptied of all process liquids in 2019.
- A Request for an Extension of Time to complete stabilization activities was submitted to NMED on September 28, 2020 (EPC-DO: 20-255). Details related to the extension request were provided in that submittal. NMED approved the request for extension on November 13, 2020.
- No additional stabilization milestones were completed during the reporting period for this unit.

Gravity Filter

- Stabilization activities for the Gravity Filter are being completed under the Stabilization Plan for Gravity Filter Tank submitted to NMED on January 25, 2019 (EPC-DO: 19-007). This workplan was approved by NMED on April 25, 2019.
- A Request for an Extension of Time to complete stabilization activities was submitted to NMED on September 28, 2020 (EPC-DO: 20-255). NMED approved the request for extension on November 13, 2020.
- Stabilization of the Gravity Filter has been initiated with the removal of unused chemicals and the chemical feed system.
- No additional stabilization milestones were completed during the reporting period for this unit.

WM2-North/South Tanks

- Stabilization activities for the WM2-North/South Tanks are being completed under the Stabilization Plan for the Low-Level WM2-North/South Tanks submitted to NMED on January 25, 2019 (EPC-DO: 19-007). This workplan was approved by NMED on April 25, 2019.
- A Request for an Extension of Time to complete stabilization activities was submitted to NMED on September 28, 2020 (EPC-DO: 20-255). Details related to the extension request were provided in that submittal. NMED approved the request for extension on November 13, 2020.
- Stabilization activities were initiated for the WM2-North/South Tanks on October 12, 2020.
- During this reporting period, planning for WM2-North/South Tanks stabilization activities occurred. Work on these units is expected to begin later in 2023.

Attachment 2

Quarterly Summary of Maintenance and Repair Activities Conducted at the RLWTF

EPC-DO: 23-311

LA-UR: 23-31677

Date: October 30, 2023

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

			Task Type					
Structures	**Description**	**Built**	**PM**	**CO**	**MD**	**SR**	**UP**	**Total**
Building 1	Original treatment bldg.	1963	46	20	3	9	0	78
Building 2	Original influent storage bldg.	1963	4	0	0	1	0	5
Building 66	TRU influent storage	1982	1	0	0	1	0	2
Building 90	100K Influent Storage tank	1982	0	0	0	0	0	0
Building 248	Low-level bottoms storage	1996	3	1	0	1	0	5
Building 250	Low-level influent storage	2009	23	0	0	0	0	23
Building 257	Mechanical Evaporator System	2010	1	0	0	1	0	2
TA52	Solar Evaporation Tank	2011	14	0	0	0	0	14
	Totals		92	21	3	13	0	129

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

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

TA-50-0001 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500001	00744982	01	CO	500001 TROUBLESHOOT/REPAIR OR REPLACE VALVE 70A-MCRFLT-V300
500001	00742289	01	CO	500001 TROUBLESHOOT AND REPAIR HV-9 AS NEEDED
500001	00742285	01	CO	500001 TROUBLESHOOT AND REPAIR HV-8 AS NEEDED
500001	00759893	01	CO	500001 GMC- A MAIN BREAKER TS&R IN ROOM 116B
500001	00733463	01	CO	500001 TROUBLE SHOOT LIGHT SWITCH FOR 100 CORRIDOR.
500001	00692919	01	CO	500001 PROVIDE ACCESS TO VACUUM FILTER FOR MESH REPLACEMENT
500001	00745451	01	CO	500001 VERFY ROOM 34B SLAB THICKNESS
500001	00739694	01	CO	500001 PUMP MAINTENANCE ON PHW-012
500001	00732058	01	CO	500001 DRUM TUMBLER MOTOR
500001	00729173	01	CO	500001 INSTALL NEW COVERS ON FE-2
500001	00716620	01	CO	500001 REPAIR ROOM 16 SUMP PUMPS
500001	00672280	01	CO	500001 CARPET INSTALLATION AT RLW ENTRANCE & OPS CENTER
500001	00637816	01	CO	500001 REPAIR HANDRAIL AT MAIN ENTRY
500001	00739308	01	CO	500001 REMOVE AND REPLACE PV-007
500001	00704631	01	CO	500001 REPLACE PARTS AND REPAIR CM-003
500001	00604245	01	CO	500001 REMOVE AND REPLACE THE MICROFILTER MEMBRANES
500001	00745963	01	CO	500001 TROUBLESHOOT LP-25, CKT 2,4,6 IN RM. 34B
500001	00728948	01	CO	500001 REPLACE RUA-005
500001	00689978	01	CO	500001 REPLACE CARPET AS NEEDED FOR RLW AND OUTLAND BLDG'S
500001	00760231	01	CO	500001 REPLACE 60-STP-P09, AIR DIAPHRAGM PUMP
500001	00635048	01	MD	500001 REMOVE GAS PIPING SHEDS, GAS PIPING, & DRY SPRINKLERS
500001	00625714	01	MD	500001 REROUTE DRAINS TO BYPASS 75K TANK IN ROOMS 123, 124,
500001	00640461	01	MD	500001 REPLACE CAUSTIC TRANSFER PUMP FOR CST-1
500001	00751312	01	PM	500001 DRE 1YR PM, (ELECTRICAL) 6 EA
500001	00753393	01	PM	50-1 FEXT (1M) PM
500001	00751307	01	PM	500001 EH-001 ELEVTR 6MO PM ELEC/MECH MAINT, THYSSEN KRUPP
500001	00746628	01	PM	50-66/50-01 FAH 1YR PM, HEPA FILTERS (PLENUM) TESTING
500001	00753874	01	PM	50-1 RM 34B (1YR) FIT CALIBRATION 3 EA
500001	00750661	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00753406	01	PM	50-1 EMERGENCY LIGHTS (M) PM
500001	00753404	01	PM	50-1 TRITIUM EXIT LIGHTS (M) PM
500001	00753888	01	PM	500001 LUBE 6MO PM, HEATING & VENTILATION (MECHANICAL) 5 EA
500001	00753604	01	PM	500001 MICROFILTER 3 MONTH PUMP MAINTENANCE
500001	00756315	01	PM	500001 EW 1YR PM, EYEWASH STATIONS
500001	00753885	01	PM	50-1 T-21 PH TRANSMITTERS (6 MO) CALIBRATION

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

TA-50-0001 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500001	00753871	01	PM	50-1 RM24 ANNUAL SRO/HWE CONTROL CABINET CLEANING
500001	00753078	01	PM	500001 RM 24 (6M) SRO, AIT(2EA) ANALYZER VERIFICATION PM
500001	00753880	01	PM	500001 (14M) SCALE TEST/CALIBRATION
500001	00750599	01	PM	50-1 EMERGENCY LIGHTS (M) PM
500001	00750597	01	PM	50-1 TRITIUM EXIT LIGHTS (M) PM
500001	00735078	01	PM	TA-50 FCP 6MO PM, FIRE ALARM SYSTEMS INSPECTION & TESTING
500001	00756062	01	PM	50-1 FEXT (1M) PM
500001	00756020	01	PM	500001 CA-4 (3 MONTH) AIR COMPRESSOR PM
500001	00751215	01	PM	500001 (A) NATURAL GAS SEISMIC SHUTOFF VALVE INSPECT PM 3 EA
500001	00757954	01	PM	500001 CM-010/HE-008 (1YR) PM, MECH/ELECT MAINT
500001	00757003	01	PM	50-1-116B CM-003/HE-005: 1-YR PM MECH/ELECT
500001	00756701	01	PM	500001 CM-11 (1YR) PM, MECHANICAL
500001	00756696	01	PM	500001 CM-11 (1YR) PM, ANSI INSPECTION
500001	00756078	01	PM	50-0001 EMERGENCY LIGHTS (M) PM
500001	00753536	01	PM	500001 BFP'S 1YR PM, 13 EA (POSTED AREAS)
500001	00753358	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00751331	01	PM	500001 PV 3MO PM, (MECHANICAL)
500001	00751325	01	PM	500001 GFCI (6M) SERVICE INSPECTIONS
500001	00756076	01	PM	50-0001 TRITIUM EXIT LIGHTS (M) PM
500001	00756018	01	PM	500001 ASE 3MO PM, EXHAUST STACK PUMP (3 EA)
500001	00757009	01	PM	50-1-116B CM-003/HE-005: 1-YR PM (INSPECTION)
500001	00756113	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00759332	01	PM	500001 PV-008 6MO PM, (MECHANICAL)
500001	00758578	01	PM	50-0001 TRITIUM EXIT LIGHTS (M) PM
500001	00758615	01	PM	50-1 FEXT (1M) PM
500001	00758580	01	PM	50-0001 EMERGENCY LIGHTS (M) PM
500001	00759369	01	PM	50-1 DRUM TUMBLER (3M) PM
500001	00759342	01	PM	500001 3MO ELEVATOR ELECT/MECH MAINT, THYSSEN-KRUPP
500001	00757956	01	PM	50-1-60 CM-010/HE-008: 1-YR PM (INSPECTION)
500001	00737652	01	PM	50-1 HUE (A) PM
500001	00758544	01	PM	50-0001 BHW 1MO PM (2 EA)
500001	00759323	01	PM	500001 BHW 1YR PM, INSPECTION & MAINTENANC
500001	00759309	01	PM	500001-60/60A LT 1YR PM LEVEL INSTRUMENT VERIFICATION 27 EA
500001	00758547	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00533268	01	SR	500001 MOVE FIRE RATED CABINET IN RM 9 TO RM. 101A

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

TA-50-0001 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500001	00710295	02	SR	500001 THYSSEN KRUPP SERVICE CONTRACT
500001	00705145	01	SR	500001 PROVIDE SUPPORT FOR ELECTRICAL BREAKER MAINTENANCE.
500001	00704842	01	SR	500001 PERFORM TESTING/TROUBLESHOOTING FOR HVS
500001	00697117	01	SR	500001 STACK PUMP MAINTENANCE
500001	00666748	01	SR	500001 TAKE SAMPLES FROM THE INSULATION AROUND THE OIL LINES
500001	00639778	02	SR	500001 RECONFIGURE ROOMS
500001	00591268	04	SR	ML4 (STANDING FY18) S/W TRANE SUPPORT
500001	00576657	01	SR	RLW/RLUOB/OUTLAND FACILITIES BOILER CALLOUT-FY18

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

TA-50-0250 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO Task	WO Type	Task Title
500250	00750632	01	PM	500250 FEXT (M), FIRE EXTINGUISHERS PM
500250	00753607	01	PM	500250 SHS 3MO PM, SAFETY SHOWER
500250	00753387	01	PM	500250 FEXT (M), FIRE EXTINGUISHERS PM
500250	00753409	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00753883	01	PM	50-250 GFCI (6M) SERVICE INSPECTIONS
500250	00753410	01	PM	500250 LTE (M) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00753376	01	PM	500250 LTNT (M) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00750605	01	PM	500250 LTE (M) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00753873	01	PM	50-250 (1YR) FIT VERIFY ACCURACY 1 EA
500250	00756085	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00759231	01	PM	50-250 LTNT (A) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00756700	01	PM	50-250 CM-1-HE-1 (1YR) MECH-ELECT MAINTENANCE PM
500250	00756694	01	PM	50-250 CM-1/HE-1 1YR ANSI INSPECTION PM
500250	00753875	01	PM	500250 (A) VERIFY & ENSURE ACCURACY TANK LEVEL INDIC PM 6 EA
500250	00756057	01	PM	500250 FEXT (M), FIRE EXTINGUISHERS PM
500250	00750615	01	PM	500250 LTNT (M) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00750603	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00756087	01	PM	500250 LTE (M) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00758596	01	PM	500250 LTNT (M) PM, NON-TRITIUM EMERGENCY EXIT LIGHT
500250	00758586	01	PM	500250 LTE (M) PM, EMERGENCY WALL MOUNTED LIGHTING UNITS
500250	00758584	01	PM	500250 LTET (M) PM, TRITIUM EMERGENCY EXIT LIGHT
500250	00758612	01	PM	500250 FEXT (M), FIRE EXTINGUISHERS PM
500250	00759230	01	PM	50-250 SPW (A) PM

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

TA-52-0181 Work Completion Report (07-01-2023 to 09-30-2023)

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

TA-52-0182 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
520182	00755712	01	PM	520182 (A) EMERGENCY LIGHTS PM
520182	00753490	01	PM	520182 (A) NON TRITIUM LIGHTS PM
520182	00750660	01	PM	520182 (M) EMERGENCY LIGHTS PM
520182	00750655	01	PM	520182 (M) NON TRITIUM LIGHTS PM
520182	00756112	01	PM	520182 (M) EMERGENCY LIGHTS PM
520182	00756105	01	PM	520182 (M) NON TRITIUM LIGHTS PM
520182	00756104	01	PM	520182 (M) FEXT PM
520182	00756029	01	PM	520182 (3M) FENCE LINE VERIFICATION
520182	00753489	01	PM	520182 (A) FEXT PM
520182	00750654	01	PM	520182 (M) FEXT PM
520182	00756028	01	PM	520182 (3M) SIGNAGE VERIFICATION FOR FENCE LINE
520182	00758546	01	PM	520182 (M) EMERGENCY LIGHTS PM
520182	00758541	01	PM	520182 (M) NON TRITIUM LIGHTS PM
520182	00758540	01	PM	520182 (M) FEXT PM

TA-52-0183 Work Completion Report (07-01-2023 to 09-30-2023)

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

DP-1132 Report: Third Quarter 2023 RLWTF Maintenance

TA-50-0002 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500002	00758203	01	PM	500002 (A) WATER TIGHTNESS MORTANDAD CANYON
500002	00756005	01	PM	50-2 TCA (6M) AUTO DUMP PM
500002	00756000	01	PM	50-2 CA (6M) MECHANICAL PM
500002	00761511	01	PM	500002 HUE 1YR PM
500002	00716655	01	SR	500002 AS-BUILT OF N & S EFFLUENT TANK INSTRUMENTATION

TA-50-0090 Work Completion Report (07-01-2023 to 09-30-2023)

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

TA-50-0066 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500066	00751214	01	PM	500066 (A) VERIFY & ENSURE ACCURACY TANK LEVEL INDICATOR 4EA
500066	00697594	01	SR	500066 FABRICATE AND INSTALL TWO (2) SETS OF LATCHES

TA-50-0201 Work Completion Report (07-01-2023 to 09-30-2023)

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

TA-50-0248 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500248	00722019	01	CO	500248 REPAIR LEAK ON TRANSFER LINE TO SE TANK
500248	00753884	01	PM	50-248 MIXERS: 6-MO PM (LUBRICATION)
500248	00756025	01	PM	500248 PUMPS 3MO PM
500248	00761512	01	PM	50-248 HUE (A) PM
500248	00652803	01	SR	500248 BORESCOPE INSPECTION OF 17K TANK

TA-50-0257 Work Completion Report (07-01-2023 to 09-30-2023)

Unit	Work Order	WO	WO Type	Task Title
500257	00759366	01	PM	50-257 EVAP BOILER (3M) PM
500257	00576687	02	SR	LABOR & DECON SUPPORT FOR RLWTF FY18

DP-1132 Report: Third Quarter 2023 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: 23-311

LA-UR: 23-31677

Date: October 30, 2023

DP-1132 Report: Third Quarter 2023
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall 051	Effluent SET	Transuranic Influent
Totals, 2023-Q3	541,948	403,655	0	0	0
Sub-total, July	143,754	46,207	0	0	0
Sub-total, August	217,460	195,768	0	0	0
Sub-total, Sept.	180,734	161,680	0	0	0
1-Jul	2,650	0	0	0	0
2-Jul	3,558	0	0	0	0
3-Jul	5,791	0	0	0	0
4-Jul	5,413	0	0	0	0
5-Jul	4,542	0	0	0	0
6-Jul	4,050	0	0	0	0
7-Jul	3,671	0	0	0	0
8-Jul	1,665	0	0	0	0
9-Jul	795	0	0	0	0
10-Jul	3,104	628	0	0	0
11-Jul	7,192	5,598	0	0	0
12-Jul	6,207	14,727	0	0	0
13-Jul	7,494	19,576	0	0	0
14-Jul	3,634	5,678	0	0	0
15-Jul	2,650	0	0	0	0
16-Jul	2,725	0	0	0	0
17-Jul	871	0	0	0	0
18-Jul	7,949	0	0	0	0
19-Jul	17,373	0	0	0	0
20-Jul	5,942	0	0	0	0
21-Jul	4,353	0	0	0	0
22-Jul	4,883	0	0	0	0
23-Jul	3,104	0	0	0	0
24-Jul	4,542	0	0	0	0
25-Jul	5,640	0	0	0	0
26-Jul	4,883	0	0	0	0
27-Jul	5,261	0	0	0	0
28-Jul	4,921	0	0	0	0
29-Jul	1,590	0	0	0	0
30-Jul	2,574	0	0	0	0
31-Jul	4,731	0	0	0	0

All flows are in Liters.

DP-1132 Report: Third Quarter 2023
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall 051	Effluent SET	Transuranic Influent
1-Aug	7,646	0	0	0	0
2-Aug	4,656	11,355	0	0	0
3-Aug	4,239	14,913	0	0	0
4-Aug	3,785	18,986	0	0	0
5-Aug	1,400	13,153	0	0	0
6-Aug	871	0	0	0	0
7-Aug	6,889	7,222	0	0	0
8-Aug	7,721	14,743	0	0	0
9-Aug	6,813	5,746	0	0	0
10-Aug	9,311	0	0	0	0
11-Aug	7,646	0	0	0	0
12-Aug	4,164	0	0	0	0
13-Aug	7,229	0	0	0	0
14-Aug	10,901	5,780	0	0	0
15-Aug	7,949	23,936	0	0	0
16-Aug	6,018	19,288	0	0	0
17-Aug	5,905	11,310	0	0	0
18-Aug	5,337	5,034	0	0	0
19-Aug	2,801	0	0	0	0
20-Aug	2,839	0	0	0	0
21-Aug	6,889	4,425	0	0	0
22-Aug	5,980	14,807	0	0	0
23-Aug	7,684	17,877	0	0	0
24-Aug	12,869	7,195	0	0	0
25-Aug	11,847	0	0	0	0
26-Aug	8,857	0	0	0	0
27-Aug	8,630	0	0	0	0
28-Aug	6,699	0	0	0	0
29-Aug	11,556	0	0	0	0
30-Aug	14,875	0	0	0	0
31-Aug	7,456	0	0	0	0

DP-1132 Report: Third Quarter 2023
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall 051	Effluent SET	Transuranic Influent
1-Sep	5,488	0	0	0	0
2-Sep	2,498	0	0	0	0
3-Sep	2,952	0	0	0	0
4-Sep	2,498	0	0	0	0
5-Sep	4,580	5,617	0	0	0
6-Sep	5,829	18,191	0	0	0
7-Sep	6,548	20,144	0	0	0
8-Sep	6,056	18,229	0	0	0
9-Sep	2,044	0	0	0	0
10-Sep	2,725	0	0	0	0
11-Sep	7,911	0	0	0	0
12-Sep	11,279	0	0	0	0
13-Sep	12,491	0	0	0	0
14-Sep	5,753	2,782	0	0	0
15-Sep	7,797	16,117	0	0	0
16-Sep	3,369	14,163	0	0	0
17-Sep	4,126	13,611	0	0	0
18-Sep	5,337	6,817	0	0	0
19-Sep	6,927	0	0	0	0
20-Sep	4,618	0	0	0	0
21-Sep	5,223	0	0	0	0
22-Sep	10,522	0	0	0	0
23-Sep	16,351	0	0	0	0
24-Sep	11,847	0	0	0	0
25-Sep	5,602	0	0	0	0
26-Sep	6,889	0	0	0	0
27-Sep	3,899	9,788	0	0	0
28-Sep	3,747	13,565	0	0	0
29-Sep	3,369	13,444	0	0	0
30-Sep	2,460	9,213	0	0	0

Attachment 4

Treated Effluent Sampling Results

EPC-DO: 23-311

LA-UR: 23-31677

Date: October 30, 2023

Table 1. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the Mechanical Evaporator System on July 11, 2023. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit[6]	Groundwater Limit[7]
RLWTF-23-260633	RLWTF_MES	07/11/2023	107-02-8	Acrolein	1.67	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	1.67	0.04
RLWTF-23-260633	RLWTF_MES	07/11/2023	107-13-1	Acrylonitrile	1.67	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	1.67	0.52
RLWTF-23-260633	RLWTF_MES	07/11/2023	309-00-2	Aldrin	0.00676	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.00676	0.00198
RLWTF-23-260658	RLWTF_MES	07/11/2023	309-00-2	Aldrin	0.0067	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0067	0.00198
RLWTF-23-260622	RLWTF_MES	07/11/2023	Al	Aluminum	19.3	ug/L	U	N	F	2023-810	REG	EPA:200.8	19.3	5,000
RLWTF-23-260633	RLWTF_MES	07/11/2023	120-12-7	Anthracene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	1,721.28
RLWTF-23-260622	RLWTF_MES	07/11/2023	Sb	Antimony	1	ug/L	U	N	F	2023-810	REG	EPA:200.8	1	6
RLWTF-23-260633	RLWTF_MES	07/11/2023	12674-11-2	Aroclor-1016	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	1.4
RLWTF-23-260633	RLWTF_MES	07/11/2023	11104-28-2	Aroclor-1221	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	0.056
RLWTF-23-260633	RLWTF_MES	07/11/2023	11141-16-5	Aroclor-1232	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	0.056
RLWTF-23-260633	RLWTF_MES	07/11/2023	53469-21-9	Aroclor-1242	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	0.0786
RLWTF-23-260633	RLWTF_MES	07/11/2023	12672-29-6	Aroclor-1248	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	0.0786
RLWTF-23-260633	RLWTF_MES	07/11/2023	11097-69-1	Aroclor-1254	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	0.0786
RLWTF-23-260633	RLWTF_MES	07/11/2023	11096-82-5	Aroclor-1260	0.0333	ug/L	U	N	UF	2023-810	REG	SW-846:8082A	0.0333	0.0786
RLWTF-23-260622	RLWTF_MES	07/11/2023	As	Arsenic	2	ug/L	U	N	F	2023-810	REG	EPA:200.8	2	10
RLWTF-23-260633	RLWTF_MES	07/11/2023	1912-24-9	Atrazine	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	3
RLWTF-23-260633	RLWTF_MES	07/11/2023	103-33-3	Azobenzene	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.78
RLWTF-23-260622	RLWTF_MES	07/11/2023	Ba	Barium	0.67	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.67	2,000
RLWTF-23-260633	RLWTF_MES	07/11/2023	71-43-2	Benzene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	92-87-5	Benzidine	3.9	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3.9	0.001
RLWTF-23-260633	RLWTF_MES	07/11/2023	50-32-8	Benzo(a)pyrene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	0.2
RLWTF-23-260633	RLWTF_MES	07/11/2023	205-99-2	Benzo(b)fluoranthene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	0.34
RLWTF-23-260633	RLWTF_MES	07/11/2023	207-08-9	Benzo(k)fluoranthene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	3.43
RLWTF-23-260622	RLWTF_MES	07/11/2023	Be	Beryllium	0.2	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.2	4
RLWTF-23-260633	RLWTF_MES	07/11/2023	319-84-6	BHC[alpha-]	0.00676	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.00676	0.0693
RLWTF-23-260658	RLWTF_MES	07/11/2023	319-84-6	BHC[alpha-]	0.0067	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0067	0.0693
RLWTF-23-260633	RLWTF_MES	07/11/2023	319-85-7	BHC[beta-]	0.00676	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.00676	0.2425
RLWTF-23-260658	RLWTF_MES	07/11/2023	319-85-7	BHC[beta-]	0.0067	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0067	0.2425
RLWTF-23-260633	RLWTF_MES	07/11/2023	58-89-9	BHC[gamma-]	0.00676	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.00676	0.4151
RLWTF-23-260658	RLWTF_MES	07/11/2023	58-89-9	BHC[gamma-]	0.0067	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0067	0.4151
RLWTF-23-260633	RLWTF_MES	07/11/2023	111-44-4	Bis(2-chloroethyl)ether	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.14
RLWTF-23-260633	RLWTF_MES	07/11/2023	117-81-7	Bis(2-ethylhexyl)phthalate	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	55.64
RLWTF-23-260622	RLWTF_MES	07/11/2023	B	Boron	80.7	ug/L	NQ	Y	F	2023-810	REG	EPA:200.7	15	750
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-27-4	Bromodichloromethane	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	1.34
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-25-2	Bromoform	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	32.85
RLWTF-23-260633	RLWTF_MES	07/11/2023	74-83-9	Bromomethane	0.337	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.337	7.545
RLWTF-23-260622	RLWTF_MES	07/11/2023	Cd	Cadmium	0.3	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.3	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	56-23-5	Carbon Tetrachloride	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	57-74-9	Chlordane(alpha/gamma)	0.0778	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.0778	0.448
RLWTF-23-260658	RLWTF_MES	07/11/2023	57-74-9	Chlordane(alpha/gamma)	0.077	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.077	0.448
RLWTF-23-260622	RLWTF_MES	07/11/2023	Cl(-1)	Chloride	0.143	mg/L	J	Y	F	2023-810	REG	EPA:300.0	0.067	250
RLWTF-23-260662	RLWTF_MES	07/11/2023	Cl(-1)	Chloride	0.149	mg/L	J	Y	F	2023-810	FD	EPA:300.0	0.067	250
RLWTF-23-260633	RLWTF_MES	07/11/2023	108-90-7	Chlorobenzene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	77.57
RLWTF-23-260633	RLWTF_MES	07/11/2023	67-66-3	Chloroform	2.96	ug/L	NQ	Y	UF	2023-810	REG	SW-846:8260D	0.333	100
RLWTF-23-260633	RLWTF_MES	07/11/2023	74-87-3	Chloromethane	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	20.32
RLWTF-23-260622	RLWTF_MES	07/11/2023	Cr	Chromium	3	ug/L	U	N	F	2023-810	REG	EPA:200.8	3	50
RLWTF-23-260622	RLWTF_MES	07/11/2023	Co	Cobalt	0.3	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.3	50
RLWTF-23-260622	RLWTF_MES	07/11/2023	Cu	Copper	0.3	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.3	1,000
RLWTF-23-260622	RLWTF_MES	07/11/2023	CN(TOTAL)	Cyanide (Total)	0.00167	mg/L	UJ	N	F	2023-810	REG	EPA:335.4	0.00167	0.2
RLWTF-23-260633	RLWTF_MES	07/11/2023	50-29-3	DDT[4,4'-]	0.0102	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.0102	2.29
RLWTF-23-260658	RLWTF_MES	07/11/2023	50-29-3	DDT[4,4'-]	0.0101	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0101	2.29
RLWTF-23-260633	RLWTF_MES	07/11/2023	106-93-4	Dibromoethane[1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	0.05
RLWTF-23-260633	RLWTF_MES	07/11/2023	74-95-3	Dibromomethane	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	7.997
RLWTF-23-260633	RLWTF_MES	07/11/2023	95-50-1	Dichlorobenzene[1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	600

Table 1. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the Mechanical Evaporation System on July 11, 2023. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit[6]	Groundwater Limit[7]
RLWTF-23-260633	RLWTF_MES	07/11/2023	106-46-7	Dichlorobenzene[1,4-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	75
RLWTF-23-260633	RLWTF_MES	07/11/2023	91-94-1	Dichlorobenzidine[3,3'-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1.25
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-71-8	Dichlorodifluoromethane	0.355	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.355	197.2
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-34-3	Dichloroethane[1,1-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	25
RLWTF-23-260633	RLWTF_MES	07/11/2023	107-06-2	Dichloroethane[1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-35-4	Dichloroethene[1,1-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	7
RLWTF-23-260633	RLWTF_MES	07/11/2023	156-59-2	Dichloroethene[cis-1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	70
RLWTF-23-260633	RLWTF_MES	07/11/2023	156-60-5	Dichloroethene[trans-1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	100
RLWTF-23-260633	RLWTF_MES	07/11/2023	120-83-2	Dichlorophenol[2,4-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	45.3
RLWTF-23-260633	RLWTF_MES	07/11/2023	78-87-5	Dichloropropane[1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	542-75-6	Dichloropropene[cis/trans-1,3-]	0.5	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.5	4.7
RLWTF-23-260633	RLWTF_MES	07/11/2023	60-57-1	Dieldrin	0.0102	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.0102	0.0175
RLWTF-23-260658	RLWTF_MES	07/11/2023	60-57-1	Dieldrin	0.0101	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0101	0.0175
RLWTF-23-260633	RLWTF_MES	07/11/2023	84-66-2	Diethylphthalate	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	14,800.5
RLWTF-23-260633	RLWTF_MES	07/11/2023	131-11-3	Dimethyl Phthalate	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	611.56
RLWTF-23-260633	RLWTF_MES	07/11/2023	84-74-2	Di-n-butylphthalate	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	884.799
RLWTF-23-260633	RLWTF_MES	07/11/2023	534-52-1	Dinitro-2-methylphenol[4,6-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1.52
RLWTF-23-260633	RLWTF_MES	07/11/2023	51-28-5	Dinitrophenol[2,4-]	5	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	5	38.67
RLWTF-23-260633	RLWTF_MES	07/11/2023	121-14-2	Dinitrotoluene[2,4-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	2.37
RLWTF-23-260633	RLWTF_MES	07/11/2023	606-20-2	Dinitrotoluene[2,6-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.49
RLWTF-23-260633	RLWTF_MES	07/11/2023	123-91-1	Dioxane[1,4-]	3	ug/L	UJ	N	UF	2023-810	REG	SW-846:8270E	3	4.59
RLWTF-23-260633	RLWTF_MES	07/11/2023	122-39-4	Diphenylamine	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	122
RLWTF-23-260633	RLWTF_MES	07/11/2023	959-98-8	Endosulfan I	0.00676	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.00676	98.7
RLWTF-23-260658	RLWTF_MES	07/11/2023	959-98-8	Endosulfan I	0.0067	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0067	98.7
RLWTF-23-260633	RLWTF_MES	07/11/2023	33213-65-9	Endosulfan II	0.0102	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.0102	98.7
RLWTF-23-260658	RLWTF_MES	07/11/2023	33213-65-9	Endosulfan II	0.0101	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0101	98.7
RLWTF-23-260633	RLWTF_MES	07/11/2023	72-20-8	Endrin	0.0102	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.0102	2.23
RLWTF-23-260658	RLWTF_MES	07/11/2023	72-20-8	Endrin	0.0101	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0101	2.23
RLWTF-23-260633	RLWTF_MES	07/11/2023	100-41-4	Ethylbenzene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	700
RLWTF-23-260633	RLWTF_MES	07/11/2023	206-44-0	Fluoranthene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	802.198
RLWTF-23-260633	RLWTF_MES	07/11/2023	86-73-7	Fluorene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	287.642
RLWTF-23-260622	RLWTF_MES	07/11/2023	F(-1)	Fluoride	0.033	mg/L	U	N	F	2023-810	REG	EPA:300.0	0.033	1.6
RLWTF-23-260662	RLWTF_MES	07/11/2023	F(-1)	Fluoride	0.033	mg/L	U	N	F	2023-810	FD	EPA:300.0	0.033	1.6
RLWTF-23-260633	RLWTF_MES	07/11/2023	76-44-8	Heptachlor	0.00676	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.00676	0.02
RLWTF-23-260658	RLWTF_MES	07/11/2023	76-44-8	Heptachlor	0.0067	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.0067	0.02
RLWTF-23-260633	RLWTF_MES	07/11/2023	118-74-1	Hexachlorobenzene	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.1
RLWTF-23-260633	RLWTF_MES	07/11/2023	87-68-3	Hexachlorobutadiene	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1.39
RLWTF-23-260633	RLWTF_MES	07/11/2023	77-47-4	Hexachlorocyclopentadiene	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.41
RLWTF-23-260633	RLWTF_MES	07/11/2023	67-72-1	Hexachloroethane	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	3.28
RLWTF-23-260633	RLWTF_MES	07/11/2023	2691-41-0	HMX	0.0804	ug/L	U	N	UF	2023-810	REG	SW-846:8330B	0.0804	1,001.1
RLWTF-23-260622	RLWTF_MES	07/11/2023	Fe	Iron	30	ug/L	U	N	F	2023-810	REG	EPA:200.7	30	1,000
RLWTF-23-260633	RLWTF_MES	07/11/2023	78-59-1	Isophorone	3.5	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3.5	780.63
RLWTF-23-260622	RLWTF_MES	07/11/2023	Pb	Lead	0.5	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.5	15
RLWTF-23-260622	RLWTF_MES	07/11/2023	Mn	Manganese	2	ug/L	U	N	F	2023-810	REG	EPA:200.7	2	200
RLWTF-23-260622	RLWTF_MES	07/11/2023	Hg	Mercury	0.067	ug/L	U	N	F	2023-810	REG	EPA:245.2	0.067	2
RLWTF-23-260633	RLWTF_MES	07/11/2023	Hg	Mercury	0.067	ug/L	U	N	UF	2023-810	REG	EPA:245.2	0.067	2
RLWTF-23-260633	RLWTF_MES	07/11/2023	1634-04-4	Methyl tert-Butyl Ether	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	100
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-09-2	Methylene Chloride	0.5	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.5	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	90-12-0	Methylnaphthalene[1-]	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	11.375
RLWTF-23-260633	RLWTF_MES	07/11/2023	91-57-6	Methylnaphthalene[2-]	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	35.115
RLWTF-23-260622	RLWTF_MES	07/11/2023	Mo	Molybdenum	0.2	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.2	1,000
RLWTF-23-260633	RLWTF_MES	07/11/2023	91-20-3	Naphthalene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	30
RLWTF-23-260622	RLWTF_MES	07/11/2023	Ni	Nickel	0.6	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.6	200
RLWTF-23-260622	RLWTF_MES	07/11/2023	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.597	mg/L	NQ	Y	F	2023-810	REG	EPA:353.2	0.017	10

Table 1. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the Mechanical Evaporation System on July 11, 2023. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit[6]	Groundwater Limit[7]
RLWTF-23-260620	RLWTF_MES	07/11/2023	NO2	Nitrite	0.103	mg/L	NQ	Y	F	2023-808	REG	EPA:300.0	0.033	1
RLWTF-23-260633	RLWTF_MES	07/11/2023	98-95-3	Nitrobenzene	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1.4
RLWTF-23-260633	RLWTF_MES	07/11/2023	55-18-5	Nitrosodiethylamine[N-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.0017
RLWTF-23-260633	RLWTF_MES	07/11/2023	62-75-9	Nitrosodimethylamine[N-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.0049
RLWTF-23-260633	RLWTF_MES	07/11/2023	924-16-3	Nitroso-di-n-butylamine[N-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.0273
RLWTF-23-260633	RLWTF_MES	07/11/2023	930-55-2	Nitrosopyrrolidine[N-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	0.37
RLWTF-23-260633	RLWTF_MES	07/11/2023	108-60-1	Oxybis(1-chloropropane)[2,2'-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	9.81
RLWTF-23-260633	RLWTF_MES	07/11/2023	608-93-5	Pentachlorobenzene	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	3.07
RLWTF-23-260633	RLWTF_MES	07/11/2023	87-86-5	Pentachlorophenol	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1
RLWTF-23-260633	RLWTF_MES	07/11/2023	ClO4	Perchlorate	0.05	ug/L	U	N	UF	2023-810	REG	SW-846:6850	0.05	13.8
RLWTF-23-260633	RLWTF_MES	07/11/2023	355-46-4	Perfluorohexanesulfonic acid	0.594	ng/L	U	N	UF	2023-810	REG	EPA:537M	0.594	401
RLWTF-23-260633	RLWTF_MES	07/11/2023	1763-23-1	Perfluorooctanesulfonic acid	0.72	ng/L	U	N	UF	2023-810	REG	EPA:537M	0.72	60.16
RLWTF-23-260633	RLWTF_MES	07/11/2023	335-67-1	Perfluorooctanoic acid	0.72	ng/L	U	N	UF	2023-810	REG	EPA:537M	0.72	60.16
	RLWTF_MES	07/11/2023	pH	pH	8.2	SU								6-9
RLWTF-23-260633	RLWTF_MES	07/11/2023	85-01-8	Phenanthrene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	170.41
RLWTF-23-260633	RLWTF_MES	07/11/2023	108-95-2	Phenol	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	1610-18-0	Prometon	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	249.93
RLWTF-23-260633	RLWTF_MES	07/11/2023	129-00-0	Pyrene	0.3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	0.3	117.42
RLWTF-23-260633	RLWTF_MES	07/11/2023	Ra-226+228	Radium-226 and Radium-228	1.43	pCi/L	J	Y	UF	2023-810	REG	Generic:Radium by Calculation	-	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	121-82-4	RDX	0.0804	ug/L	U	N	UF	2023-810	REG	SW-846:8330B	0.0804	9.66
RLWTF-23-260622	RLWTF_MES	07/11/2023	Se	Selenium	1.5	ug/L	U	N	F	2023-810	REG	EPA:200.8	1.5	50
RLWTF-23-260622	RLWTF_MES	07/11/2023	Ag	Silver	0.3	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.3	50
RLWTF-23-260633	RLWTF_MES	07/11/2023	100-42-5	Styrene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	100
RLWTF-23-260622	RLWTF_MES	07/11/2023	SO4(-2)	Sulfate	0.133	mg/L	U	N	F	2023-810	REG	EPA:300.0	0.133	600
RLWTF-23-260633	RLWTF_MES	07/11/2023	126-33-0	Sulfolane	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	20.03
RLWTF-23-260633	RLWTF_MES	07/11/2023	95-94-3	Tetrachlorobenzene[1,2,4,5]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1.66
RLWTF-23-260633	RLWTF_MES	07/11/2023	79-34-5	Tetrachloroethane[1,1,2,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	10
RLWTF-23-260633	RLWTF_MES	07/11/2023	127-18-4	Tetrachloroethene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260622	RLWTF_MES	07/11/2023	Tl	Thallium	0.6	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.6	2
RLWTF-23-260633	RLWTF_MES	07/11/2023	108-88-3	Toluene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	1,000
RLWTF-23-260622	RLWTF_MES	07/11/2023	TDS	Total Dissolved Solids	22	mg/L	NQ	Y	F	2023-810	REG	EPA:160.1	2.38	1,000
RLWTF-23-260662	RLWTF_MES	07/11/2023	TDS	Total Dissolved Solids	18	mg/L	NQ	Y	F	2023-810	FD	EPA:160.1	2.38	1,000
RLWTF-23-260622	RLWTF_MES	07/11/2023	TKN	Total Kjeldahl Nitrogen	0.686	mg/L	NQ	Y	F	2023-810	REG	EPA:351.2	0.033	-
RLWTF-23-260633	RLWTF_MES	07/11/2023	8001-35-2	Toxaphene (Technical Grade)	0.153	ug/L	U	N	UF	2023-810	REG	SW-846:8081B	0.153	0.158
RLWTF-23-260658	RLWTF_MES	07/11/2023	8001-35-2	Toxaphene (Technical Grade)	0.151	ug/L	U	N	UF	2023-810	FD	SW-846:8081B	0.151	0.158
RLWTF-23-260633	RLWTF_MES	07/11/2023	120-82-1	Trichlorobenzene[1,2,4-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	70
RLWTF-23-260633	RLWTF_MES	07/11/2023	71-55-6	Trichloroethane[1,1,1-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	200
RLWTF-23-260633	RLWTF_MES	07/11/2023	79-00-5	Trichloroethane[1,1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	79-01-6	Trichloroethene	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	5
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-69-4	Trichlorofluoromethane	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	1,136.82
RLWTF-23-260633	RLWTF_MES	07/11/2023	95-95-4	Trichlorophenol[2,4,5-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	1,165.98
RLWTF-23-260633	RLWTF_MES	07/11/2023	88-06-2	Trichlorophenol[2,4,6-]	3	ug/L	U	N	UF	2023-810	REG	SW-846:8270E	3	11.88
RLWTF-23-260633	RLWTF_MES	07/11/2023	118-96-7	Trinitrotoluene[2,4,6-]	0.0804	ug/L	U	N	UF	2023-810	REG	SW-846:8330B	0.0804	9.8
RLWTF-23-260622	RLWTF_MES	07/11/2023	U	Uranium	0.067	ug/L	U	N	F	2023-810	REG	EPA:200.8	0.0670	30
RLWTF-23-260633	RLWTF_MES	07/11/2023	75-01-4	Vinyl Chloride	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	2
RLWTF-23-260633	RLWTF_MES	07/11/2023	1330-20-7	Xylene (Total)	1	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	1	620
RLWTF-23-260633	RLWTF_MES	07/11/2023	95-47-6	Xylene[1,2-]	0.333	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.333	193
RLWTF-23-260633	RLWTF_MES	07/11/2023	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	0.5	ug/L	U	N	UF	2023-810	REG	SW-846:8260D	0.5	396
RLWTF-23-260622	RLWTF_MES	07/11/2023	Zn	Zinc	3.3	ug/L	U	N	F	2023-810	REG	EPA:200.7	3.3	10,000

Notes:

[1]ug/L - micrograms per liter.
mg/L - milligrams per liter.
ng/L - nanograms per liter.

Table 1. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the Mechanical Evaporation System on July 11, 2023. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit[6]	Groundwater Limit[7]

SU - standard units.

pCi/L - picocuries per liter.

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

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

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

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

[3]N - In the Detected column means the analyte was not detected.

Y - In the Detected column means the analyte was detected.

[4]UF - In the Field Preparation Code column means the sample was not filtered.

F - In the Field Preparation Code column means the sample was filtered.

[5]REG - In the Sample Purpose column means the sample was a regular sample.

FD - In the Sample Purpose column means the sample was a field duplicate.

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

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

Groundwater Limit for diphenylhydrazine reported as azobenzene, which represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

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

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.

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

Groundwater Limit for combined Naphthalene plus monomethlynaphthalenes is 30 µg/L, which represents the NMAC 20.6.2.3103 Groundwater Standard.

Table 2. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the Mechanical Evaporator System on August 2, 2023. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit	Groundwater Limit[6]
RLWTF-23-260532	RLWTF_MES	08/02/2023	Cl(-1)	Chloride	0.134	mg/L	J	Y	F	2023-916	REG	EPA:300.0	0.067	250
RLWTF-23-260532	RLWTF_MES	08/02/2023	F(-1)	Fluoride	0.033	mg/L	U	N	F	2023-916	REG	EPA:300.0	0.033	1.6
RLWTF-23-260532	RLWTF_MES	08/02/2023	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.377	mg/L	NQ	Y	F	2023-916	REG	EPA:353.2	0.017	10
RLWTF-23-260556	RLWTF_MES	08/02/2023	ClO4	Perchlorate	0.05	ug/L	U	N	UF	2023-916	REG	SW-846:6850	0.05	13.8
RLWTF-23-260532	RLWTF_MES	08/02/2023	TDS	Total Dissolved Solids	17	mg/L	NQ	Y	F	2023-916	REG	EPA:160.1	2.38	1,000
RLWTF-23-260532	RLWTF_MES	08/02/2023	TKN	Total Kjeldahl Nitrogen	1.07	mg/L	J+	Y	F	2023-916	REG	EPA:351.2	0.033	-

Notes:

[1]mg/L - milligrams per liter.
ug/L - micrograms per liter.

[2]J - The analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual.
U - The analyte is classified as not detected.
NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.
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.

[3]Y - In the detected column means the analyte was detected.
N - In the detected column means the analyte was not detected.

[4]F - In the Field Preparation Code column means the sample was filtered.
UF - In the Field Preparation Code column means the sample was not filtered.

[5]REG - In the Sample Purpose column means the sample was a regular sample.

[6]Groundwater Limit represents standards for groundwater as identified in 20.6.2.3103 NMAC where available, otherwise the value represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.
Total Kjeldahl Nitrogen does not contain either a 20.6.2.3103 NMAC standard or NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

Table 3. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the Mechanical Evaporator System on September 6, 2023. Permit Condition No. 29.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit	Groundwater Limit[6]
RLWTF-23-260535	RLWTF_MES	09/06/2023	Cl(-1)	Chloride	0.633	mg/L	NQ	Y	F	2023-1055	REG	EPA:300.0	0.067	250
RLWTF-23-260535	RLWTF_MES	09/06/2023	F(-1)	Fluoride	0.136	mg/L	NQ	Y	F	2023-1055	REG	EPA:300.0	0.033	1.6
RLWTF-23-260535	RLWTF_MES	09/06/2023	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	0.377	mg/L	NQ	Y	F	2023-1055	REG	EPA:353.2	0.017	10
RLWTF-23-260559	RLWTF_MES	09/06/2023	ClO4	Perchlorate	0.05	ug/L	U	N	UF	2023-1055	REG	SW-846:6850	0.05	13.8
RLWTF-23-260535	RLWTF_MES	09/06/2023	TDS	Total Dissolved Solids	3	mg/L	J	Y	F	2023-1055	REG	EPA:160.1	2.38	1,000
RLWTF-23-260535	RLWTF_MES	09/06/2023	TKN	Total Kjeldahl Nitrogen	1.21	mg/L	NQ	Y	F	2023-1055	REG	EPA:351.2	0.033	-

Notes:

[1]mg/L - milligrams per liter.
ug/L - micrograms per liter.

[2]NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.
U - The analyte is classified as not detected.
J - The analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual.

[3]Y - In the detected column means the analyte was detected.
N - In the detected column means the analyte was not detected.

[4]F - In the Field Preparation Code column means the sample was filtered.
UF - In the Field Preparation Code column means the sample was not filtered.

[5]REG - In the Sample Purpose column means the sample was a regular sample.

[6]Groundwater Limit represents standards for groundwater as identified in 20.6.2.3103 NMAC where available, otherwise the value represents NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.
Total Kjeldahl Nitrogen does not contain either a 20.6.2.3103 NMAC standard or NMED Risk Assessment Guidance, Table A-1, Tap Water Limit.

Attachment 5

Groundwater Monitoring Report - Third Quarter 2023

EPC-DO: 23-311

LA-UR: 23-31677

Date: October 30, 2023

Quarterly Groundwater Monitoring Report – Third Quarter 2023

TABLE OF CONTENTS

MCA-RLW-1, Third Quarter 2023 2
MCA-RLW-2, Third Quarter 2023 3
MCOI-6, Third Quarter 2023 4

MCA-RLW-1, Third Quarter 2023

a	Sample Date	7/10/2023
b	Sample Time	1340
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))	6,864.4
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. Well was not sampled when visited on July 10, 2023, due to insufficient water in the well. The well only contained 0.14 ft of standing water.

MCA-RLW-2, Third Quarter 2023

a	Sample Date	7/10/2023
b	Sample Time	1415
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))	6,806.3
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 when visited on July 10, 2023, due to insufficient water in the well. The well only contained 0.42 ft of standing water.

MCOI-6, Third Quarter 2023

a	Sample Date	7/12/2023
b	Sample Time	1125
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))	6,137.8
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)	32.5
i	Total volume of water purged prior to sample collection (gal)	99.0
j	Physical parameters including temperature, conductivity, pH, oxidation/reduction potential	DO (mg/L): 7.55 Oxidation/Reduction Potential (MV): 185.4 Temp (deg C): 18.3 pH (SU): 7.3 Turbidity (NTU): 0.54 Specific Conductance (µS/cm): 531
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

629193

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

Chain of Custody/Analysis Request

COC/Lab Request #: N3B-2023-3286
Page 1 of 1

Client Contact:

Lab Agreement #:

Project Number: N3B

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

Total # of bottles: 33
Event ID: 15389

Site Name: N3B LANL

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+SW-846:9060_TOC	EPA:SC_pH_TDS_Anion_Alk+SW-846:ClO4	SW-846:7470_Hg	SW-846:8330_Tracers	SW-846:CO_Metals
CAMO-23-290468	07/12/2023	11:25	W	1		1		1		
CAMO-23-290469	07/12/2023	11:25	W		1		1			1
CAMO-23-290470	07/12/2023	11:25	W	1		1		1		
CAMO-23-290471	07/12/2023	11:25	W		1		1			1
CAMO-23-290472	07/12/2023	11:25	W	1	1	1	1			1
CAMO-23-290554	07/12/2023	11:43	W	1		1		1		
CAMO-23-290555	07/12/2023	11:43	W		1		1			1
CAMO-23-290556	07/12/2023	11:43	W						2	
CAMO-23-290557	07/12/2023	13:07	W	1		1		1		
CAMO-23-290558	07/12/2023	13:07	W		1		1			1
CAMO-23-290559	07/12/2023	13:07	W						2	

Special Instructions:

Relinquished by:	Print Name: Isaac Popova	Date/Time: 07/13/2023 1015	Received by:	Print Name:	Date/Time: 7.14.23
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 Third Quarter Groundwater Sampling of Perched/Intermediate Aquifer Monitoring Well MCOI-6. Permit Condition No. 36.

Field Sample ID	Location ID	Sample Date	Parameter Code	Parameter Name	Report Result	Report Units[1]	Validation Qualifier[2]	Detected[3]	Field Preparation Code[4]	COC #	Sample Purpose[5]	Lab Method	Report Method Detection Limit	Groundwater Limit[6]
CAMO-23-290471	MCOI-6	07-12-2023	Cl(-1)	Chloride	46.0	mg/L	NQ	Y	F	N3B-2023-3286	FD	EPA:300.0	0.67	250
CAMO-23-290469	MCOI-6	07-12-2023	Cl(-1)	Chloride	45.4	mg/L	NQ	Y	F	N3B-2023-3286	REG	EPA:300.0	0.67	250
CAMO-23-290469	MCOI-6	07-12-2023	F(-1)	Fluoride	0.634	mg/L	NQ	Y	F	N3B-2023-3286	REG	EPA:300.0	0.033	1.6
CAMO-23-290471	MCOI-6	07-12-2023	F(-1)	Fluoride	0.654	mg/L	NQ	Y	F	N3B-2023-3286	FD	EPA:300.0	0.033	1.6
CAMO-23-290469	MCOI-6	07-12-2023	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	14.0	mg/L	NQ	Y	F	N3B-2023-3286	REG	EPA:353.2	0.17	10
CAMO-23-290471	MCOI-6	07-12-2023	NO3+NO2-N	Nitrate-Nitrite as Nitrogen	13.9	mg/L	NQ	Y	F	N3B-2023-3286	FD	EPA:353.2	0.17	10
CAMO-23-290471	MCOI-6	07-12-2023	ClO4	Perchlorate	113	ug/L	NQ	Y	F	N3B-2023-3286	FD	SW-846:6850	1	13.8
CAMO-23-290469	MCOI-6	07-12-2023	ClO4	Perchlorate	116	ug/L	NQ	Y	F	N3B-2023-3286	REG	SW-846:6850	1	13.8
CAMO-23-290471	MCOI-6	07-12-2023	TDS	Total Dissolved Solids	369	mg/L	NQ	Y	F	N3B-2023-3286	FD	EPA:160.1	2.38	1,000
CAMO-23-290469	MCOI-6	07-12-2023	TDS	Total Dissolved Solids	349	mg/L	NQ	Y	F	N3B-2023-3286	REG	EPA:160.1	2.38	1,000
CAMO-23-290468	MCOI-6	07-12-2023	TKN	Total Kjeldahl Nitrogen	0.0330	mg/L	UJ	N	UF	N3B-2023-3286	REG	EPA:351.2	0.033	-
CAMO-23-290470	MCOI-6	07-12-2023	TKN	Total Kjeldahl Nitrogen	0.0330	mg/L	UJ	N	UF	N3B-2023-3286	FD	EPA:351.2	0.033	-

Notes:

[1]mg/L - milligrams per liter.
ug/L - micrograms per liter.

[2]NQ - No validation qualifier flag is associated with this result, and the analyte is classified as detected.
UJ - The analyte is classified as not detected, with an expectation that the reported result is more uncertain than usual.

[3]Y - In the detected column means the analyte was detected.
N - In the detected column means the analyte was not detected.

[4]UF - In the Field Preparation Code column means the sample was not filtered.
F - In the Field Preparation Code column means the sample was filtered.

[5]FD - In the sample purpose column means the sample was a field duplicate.
REG - In the sample purpose column means the sample was a regular sample.

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

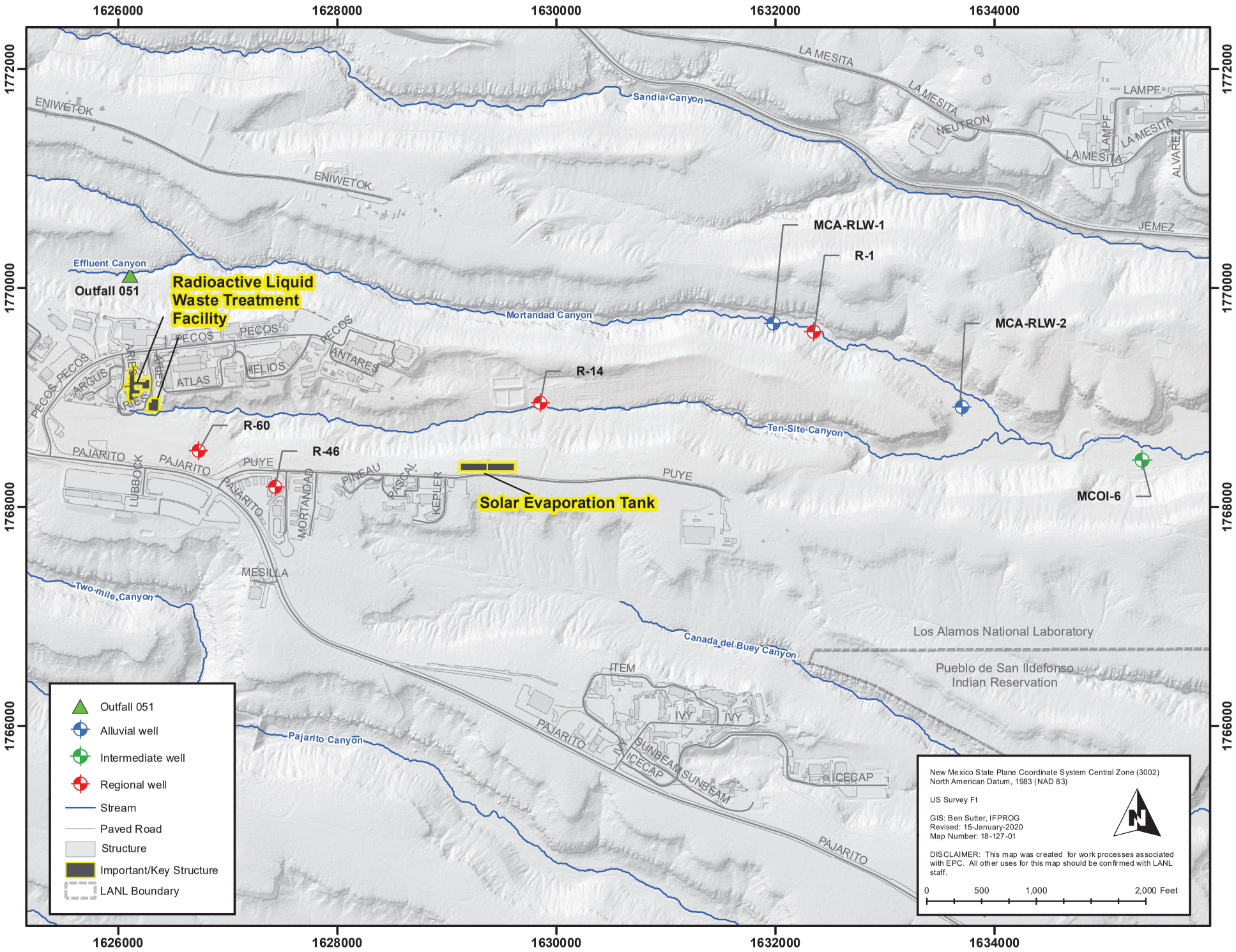
Attachment 6

Monitoring Well Location Map

EPC-DO: 23-311

LA-UR: 23-31677

Date: October 30, 2023


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
MCOI-6
Solar Evaporation Tank
LA MESITA
ENIWETOK
NEUTRON
LAMPE
LAMPF
ALVAREZ
JEMEZ
PECOS
ARGUS
ATLAS
HELIOS
ANTARES
ARIES
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