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EST 1943

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Symbol: EPC-DO-19-114
LA-UR: 19-22962
Locates Action No.: U1801172
Date: APR 17 2019

Ms. Michelle Hunter, Chief
Ground Water Quality Bureau
New Mexico Environment Department
Harold Runnels Building, Room N2261
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502

Subject: DP-1132, First Quarter Monitoring Report for 2019

Dear Ms. Hunter:

On August 29, 2018, the New Mexico Environment Department (NMED) issued Discharge Permit DP-1132 to the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC for the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Subsequently, on November 1, 2018, DP-1132 was transferred to DOE and Triad National Security, LLC (DOE/Triad).

Pursuant to permit Condition No. 4, *Monitoring Reports,* DOE/Triad is required to submit a quarterly monitoring report by May 1, 2019, for the period January 1 to March 31, 2019. The following permit conditions require the submittal of information in the May 1st monitoring report. This information is contained in Attachments 1 through 6.

- Quarterly Monitoring Report
  - ✓ Condition No. 13: Maintenance and Repair
  - ✓ Condition No. 25: Influent Volumes RLW
  - ✓ Condition No. 26: Influent Volumes TRU
  - ✓ Condition No. 27: Discharge Volumes
  - ✓ Condition No. 29: Effluent Sampling
  - ✓ Condition No. 30: Soil Moisture Monitoring System for the SET
  - ✓ Condition No. 36: Ground Water Monitoring

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this quarterly monitoring report.

Sincerely,

Enrique "Kiki" Torres
Division Leader
Environmental Protection & Compliance
Triad National Security, LLC

Sincerely,

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

ET/KEA/MTS/RSB:jdm

Attachment(s): Attachment 1 DP-1132, First Quarter Monitoring Report for 2019
Attachment 2 Summary of maintenance and repair activities conducted at the RLWTF
Attachment 3 RLWTF daily influent and effluent
Attachment 4 Monthly and quarterly treated effluent monitoring results
Attachment 5 MCOI-6 quarterly ground water monitoring report
Attachment 6 Monitoring wells location map

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ATTACHMENT 1

DP-1132, First Quarter Monitoring Report for 2019

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019

Condition No. 4: Monitoring Reports
Pursuant to permit Condition No. 4, *Monitoring Reports,* DOE/Triad is required to submit a quarterly monitoring report by May 1, 2019, for the period January 1 to March 31, 2019. The following permit conditions require the submittal of information in the May 1, 2019, monitoring report. This information is contained in Attachments 1 through 6.

- Quarterly Monitoring Report
  - ✓ Condition No. 13: Maintenance and Repair
  - ✓ Condition No. 25: Influent Volumes RLW
  - ✓ Condition No. 26: Influent Volumes TRU
  - ✓ Condition No. 27: Discharge Volumes
  - ✓ Condition No. 29: Effluent Sampling
  - ✓ Condition No. 30: Soil Moisture Monitoring System for the SET
  - ✓ Condition No. 36: Ground Water Monitoring

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 RLWTF during the monitoring period.

Condition No. 25: Influent Volumes RLW
The Permittees shall measure the volume of all RLW influent wastewater being conveyed to the Facility on a daily basis using the flow meter required to be installed pursuant to this Discharge Permit.

✓ **Attachment 3** provides the total daily and monthly volumes of RLW influent wastewater received by the RLWTF during the monitoring period.

Condition No. 26: Influent Volumes TRU
The Permittees shall measure the daily volume of TRU influent waste water being conveyed to the Facility using electronic sensors which measure tank levels in both the acid waste and caustic waste influent tanks.

✓ **Attachment 3** provides the total daily and monthly volumes of TRU influent wastewater received by the RLWTF during the 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 MES during the monitoring period.
- ✓ No treated effluent was discharged to the SET during the monitoring period.
- ✓ No treated effluent was discharged to Outfall 051 during the monitoring period.

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

- *Treated effluent samples shall be collected once per calendar month for any month in which a discharge occurs to Outfall 051.*
  - ✓ No effluent was discharged to Outfall 051 during the monitoring period.
- *Treated effluent samples shall be collected once per calendar month for any month in which a discharge occurs to the MES or SET. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for TKN, NO_3-N, TDS, Cl, F and perchlorate.*
  - ✓ No treated effluent was discharged to the SET during the monitoring period.
  - ✓ Monthly sampling of treated effluent discharged to the MES was conducted on January 15, February 5, and March 12, 2019, for TKN, NO_3+NO_2-N, TDS, Cl, F and perchlorate. Analytical results are provided in **Attachment 4, Tables 1, 2, and 3.** All results were less than the effluent limits specified in permit Condition No. 17.
- *The Permittees shall collect and analyze effluent samples once per quarter for any quarterly period in which a discharge occurs to the MES or SET. The Permittees shall collect a grab sample of treated effluent which shall be analyzed for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants as defined in 20.6.2.7.WW NMAC.*
  - ✓ Quarterly sampling of treated effluent discharged to the MES was conducted on February 5, 2019, for all water contaminants listed in 20.6.2.3103 NMAC and all Toxic Pollutants as defined in 20.6.2.7.WW NMAC. Analytical results are provided in **Attachment 4, Table 4**. All results were less than the effluent limits specified in Condition No. 17.

The following organic constituents were detected in the February 5th sample of treated effluent:

- Chloroform was detected at a concentration of 3.72 µg/L. The NMWQCC Regulation 3103 Ground Water Standard for chloroform is 100 µg/L.

- Bromodichloromethane was detected at a concentration of 0.41J µg/L (Note: The "J" flag was assigned by the analytical laboratory to indicate the result is an estimated value). There is no NMWQCC Regulation 3103 Ground Water Standard for bromodichloromethane. The NMED Risk Assessment Guidance Table A-1 Tap Water Limit for bromodichloromethane is 1.34 µg/L.

Both chloroform and bromodichloromethane are by-products from the treatment of drinking water with chlorinated compounds.

Condition No. 30: Soil Moisture Monitoring System for the SET
Upon approval or approval with conditions by NMED of the completed installation and soil moisture action level, discharge to the SET can commence. The Permittees shall perform quarterly soil moisture monitoring in the moisture monitoring boreholes, and shall provide this information in the quarterly reports required by Condition VI.B.24 (Monitoring Reports).

- ✓ On October 31, 2018, DOE/Triad submitted a work plan for the SET Soil Moisture Monitoring System for NMED approval (EPC-DO-18-366). NMED approved the work plan on January 30, 2019. Quarterly soil moisture monitoring results will be reported to NMED once the system is constructed and becomes operational.

Condition No. 36: Ground Water Monitoring
The Permittees shall collect ground water samples from the following ground water monitoring wells on a quarterly basis and analyze the samples for TKN, NO3-N, TDS, Cl, F and perchlorate. The Permittees shall prepare ground water monitoring reports describing, in detail, the sampling and analytical methods used. The ground water monitoring report shall be submitted to NMED with the quarterly monitoring report required in this Discharge Permit.

- *Replacement Alluvial Wells #1 and #2 Quarterly.*

- ✓ A work plan for the installation of two replacement monitoring wells was submitted to NMED on November 19, 2018 (EPC-DO-18-414). NMED approved the alluvial well work plan on January 30, 2019. Installation of the two replacement monitoring wells is planned for the third quarter of 2019. Sampling will begin following well installation.

- *MCOI-6 Quarterly.*

  ✓ **Attachment 5** provides the complete ground water monitoring report from the quarterly sampling of perched/intermediate ground water monitoring well MCOI-6 on January 9, 2019. Quarterly results for TKN, NO_3+NO_2-N, TDS, chloride, fluoride, and perchlorate are provided in **Table 1.** All results from the January 9th sampling at MCOI-6 were below NMWQCC Regulation 3103 Ground Water Standards (20.6.2.3103 NMAC) with the exception of the following:

  - Nitrate-Nitrite as Nitrogen (NO_3+NO_2-N) was detected at a concentration of 12.8 mg/L; the NMWQCC Regulation 3103 Ground Water Standard is 10 mg/L. The average NO_3+NO_2-N concentration at MCOI-6 during the 5-yr period from 2014 through 2018 was 9.0 mg/L. The maximum NO_3+NO_2-N concentration during the reference period was 11.5 mg/L. 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 under Discharge Permit DP-1132 and, pursuant to the Compliance Order on Consent (Consent Order, June 2016), the Chromium Investigation Monitoring Group.

  - Perchlorate was detected at a concentration of 109 µg/L; the NMED Risk Assessment Guidance Table A-1 Tap Water Limit is 13.8 µg/L. The average perchlorate concentration at MCOI-6 during the 5-yr period from 2014 through 2018 was 72.9 µg/L. The maximum perchlorate concentration during the reference period was 124 µg/L. Detections of perchlorate at MCOI-6 at concentrations greater than the Table A-1 Tap Water Limit were previously identified and reported to NMED. Monitoring well MCOI-6 will continue to be routinely sampled for perchlorate under Discharge Permit DP-1132 and, pursuant to the Compliance Order on Consent (Consent Order, June 2016), the Chromium Investigation Monitoring Group.

A map showing the location of ground water monitoring wells MCOI-6, R-1, R-14, R-46 and R-60 is provided in **Attachment 6.**

ATTACHMENT 2

Summary of maintenance and repair activities conducted at the RLWTF

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019

DP-1132 Report: First Quarter 2019
RLWTF Maintenance

Structures	Description	Built	Task Type				Total
			PM	CO	MD	SR	
Building 1	Original treatment bldg.	1963	34	14	0	3	51
Building 2	Original influent storage bldg.	1963	2	0	0	0	2
Building 66	TRU influent storage	1982	0	0	0	0	0
Building 248	Low-level bottoms storage	1996	0	3	0	0	3
Building 250	Low-level influent storage	2009	15	4	0	0	19
Building 257	Mechanical evaporator	2010	2	0	1	0	3
TA52	Solar evaporation	2011	24	0	0	0	24
	Totals		77	21	1	3	102

Task Types: PM - preventive maintenance; CO - corrective maintenance; MD - modification; SR - service request

DP-1132 Report: First Quarter 2019
RLWTF Maintenance

TA-50-0001 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
500001	00431503	01	CO	500001 REPLACE PUMPS & VALVES ON CHEM. FEED SYSTEM
500001	00500832	01	CO	500001 STACK PUMP MAINTENANCE FY15
500001	00542728	01	CO	500001 LAUNDRY UP KEEP AT RLW FY16
500001	00593480	01	CO	500001 REPAIR SMALL DRIP ON RDF SAMPLE SINK
500001	00593520	01	CO	REPLACE FAR-18 FILTERS
500001	00606476	01	CO	500001 REPAIR THE RDI SAMPLER
500001	00620474	01	CO	500001 REPLACE CRACKED FLANGE GASKET ON SRO
500001	00611414	01	CO	500001 TROUBLESHOOT AND REPAIR COMPRESSED AIR LEAK IN ROOM 1
500001	00623095	01	CO	500001 TURN ON WATER TO DISHWASHER
500001	00628175	01	CO	PURCHASE 6 PORTABLE ELECTRIC SPACE HEATERS
500001	00630434	01	CO	500001 REPLACE LATCH ON HOOK FOR VAULT TRUCK CRANE
500001	00632191	01	CO	500001 REPLACE SMOKE DETECTOR ON HV-11
500001	00632435	01	CO	500001 REPAIR OR REPLACE PAPER TOWEL DISPENSER IN ROOM 7A ME
500001	00632675	01	CO	500001 REINSTALL SHELF IN GREENHOUSE
500001	00523318	01	PM	50-1 ELECTRICAL EQUIPMENT 5YR PM GROUP 5
500001	00606584	01	PM	TA-50 FCP 1YR PM, FUNCTIONALITY TESTING PM
500001	00624312	01	PM	500001 FAR 3MO PM (9 EA)
500001	00625345	01	PM	500001 ASE 3MO PM, EXHAUST STACK PUMP (3 EA)
500001	00625348	01	PM	500001 MICROFILTER 3 MONTH PUMP MAINTENANCE
500001	00625370	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00625378	01	PM	500001 BHW 1MO PM (2 EA)
500001	00625394	01	PM	500001 LTET 1MO PM
500001	00625420	01	PM	500001 FEXT 1MO PM
500001	00627291	01	PM	50-0001 (A) MANLIFT JGL/GENIE INSPECTION
500001	00627293	01	PM	500001 CA-4 (3 MONTH) AIR COMPRESSOR PM (1 UNIT)
500001	00627296	01	PM	500001 RGNG 1YR PM, RIGGING EQUIPMENT/HARDWARE (CERTIFICATIO
500001	00627297	01	PM	500001 FDC 1YR PM, FIRE DOORS, 8 EA (CARPENTER)
500001	00627322	01	PM	500001 LTE 1MO PM
500001	00627324	01	PM	500001 LTET 1MO PM
500001	00627347	01	PM	500001 FEXT 1MO PM

DP-1132 Report: First Quarter 2019
RLWTF Maintenance

TA-50-0001 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
500001	00627366	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00627397	01	PM	500001 BHW 1MO PM (2 EA)
500001	00627905	01	PM	500001 LTE 1YR PM
500001	00627906	01	PM	500001 RM 60 (A) MAGNAHELLIC VERIFICATION
500001	00627911	01	PM	500001 LUBE 6MO PM, HEATING & VENTILATION (MECHANICAL) 5 EA
500001	00627912	01	PM	50-1 PH ANALYZER 6MO CALIBRATION 13 EA
500001	00627914	01	PM	500001 EH 3MO PM, ELEVATOR MECH/ELECT
500001	00628790	01	PM	500001 HWG 1YR PM, HOT WATER HEATERS, 3 EA
500001	00629599	01	PM	500001 SPW/SPH 6 MO FIRE SUPPRRESSION SYSTEMS PM
500001	00629611	01	PM	500001 PV-007 3 MO PM, (MECHANICAL)
500001	00629625	01	PM	50-1 PH ANALYZER 2MO CALIBRATION 2 EA
500001	00629643	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00629652	01	PM	500001 BHW 1MO PM (2 EA)
500001	00629671	01	PM	500001 FEXT 1MO PM
500001	00629691	01	PM	500001 LTE 1MO PM
500001	00629693	01	PM	500001 LTET 1MO PM
500001	00631596	01	PM	500001 FRKLFT 1YR PM, FORKLIFT (INSPECTIONS)
500001	00631602	01	PM	500001 DRUM TUMBLER (6M) PM
500001	00437160	01	SR	500001 SRO REPLACE RUPTURE DISKS AS NEEDED
500001	00437160	02	SR	500001 RO REPLACE RUPTURE DISKS AS NEEDED
500001	00519123	01	SR	500001 PERFORM UT ON SLUDGE PIPE

DP-1132 Report: First Quarter 2019
RLWTF Maintenance

TA-50-0002 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
500002	00627302	01	PM	500002 TCA 6MO PM, AUTO DUMP
500002	00628801	01	PM	500002 CA'S 6MO PM, (MECHANICAL)

TA-50-0066 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title

*** NO DATA TO REPORT FOR LISTED PERIOD.

TA-50-0248 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
500248	00625332	01	PM	500248 LUBE 6MO PM, MIXER LUBRICATION
500248	00629608	01	PM	500248 PUMPS 3MO PM (2 EA.)
500248	00631600	01	PM	500248 TANK 3K, 1YR PM, (VISUAL INSPECTION)

TA-50-0250 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
500250	00626019	01	CO	500250 REPAIR LEAK ON TK-5 & TK-6 INLET PIPING FLANGE
500250	00627465	01	CO	500250 REPLACE EMERGENCY LIGHT LTE-75 IN ROOM 003 AT TA 50-0
500250	00628319	01	CO	500250 REQUEST TROUBLESHOOT/REPAIR OF TK-006 MIXERS
500250	00630281	01	CO	500250 REQUEST INSTALLATION OF PLEXIGLASS COVER AROUND CHEMI
500250	00578653	02	MD	500250 WMRM INSTALL CHEMICAL FEED SYSTEM
500250	00625337	01	PM	50-250 GFCI (6M) SERVICE INSPECTIONS
500250	00625349	01	PM	500250 SHS 3MO PM, SAFETY SHOWER
500250	00625364	01	PM	500250 FEXT 1MO PM
500250	00625397	01	PM	500250 LTET 1MO PM
500250	00625399	01	PM	500250 LTE 1MO PM
500250	00625418	01	PM	500250 LTNT 1MO PM
500250	00627327	01	PM	500250 LTET 1MO PM
500250	00627329	01	PM	500250 LTE 1MO PM
500250	00627345	01	PM	500250 LTNT 1MO PM
500250	00627352	01	PM	500250 FEXT 1MO PM
500250	00629669	01	PM	500250 LTNT 1MO PM
500250	00629689	01	PM	500250 FEXT 1MO PM
500250	00629695	01	PM	500250 LTET 1MO PM
500250	00629698	01	PM	500250 LTE 1MO PM

DP-1132 Report: First Quarter 2019
RLWTF Maintenance

TA-50-0257 Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
500257	00485660	01	MD	500257 RELOCATE EFFLUENT EVAPORATOR FEED FLOWMETER
500257	00629623	01	PM	50-257 3MO EVAP BOILER PM
500257	00631597	01	PM	50-257 6MO EVAP FAN MECHANICAL PM

TA-52-SET Work Completion Report (01-01-2019 to 03-31-2019)

Unit	Work Order	Task	Task Type	Task Title
520182	00625371	01	PM	TA52-182 FEXT 1MO PM
520182	00625372	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00625374	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00626070	01	PM	52-0182 (3M) FENCE LINE VERIFICATION
520182	00626071	01	PM	52-0182 (3M) SIGNAGE VERIFICATION FOR FENCE LINE
520182	00627306	01	PM	52-0182 (3M) FENCE LINE VERIFICATION
520182	00627307	01	PM	52-0182 (3M) SIGNAGE VERIFICATION FOR FENCE LINE
520182	00627364	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00627393	01	PM	TA52-182 FEXT 1MO PM
520182	00627394	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00629639	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00629641	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00629642	01	PM	TA52-182 FEXT 1MO PM
520182	00631707	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00631709	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00631710	01	PM	TA52-182 FEXT 1MO PM
520182	00634065	01	PM	52-0182 (3M) SIGNAGE VERIFICATION FOR FENCE LINE
520182	00634066	01	PM	52-0182 (3M) FENCE LINE VERIFICATION
520182	00634074	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00634103	01	PM	TA52-182 FEXT 1MO PM
520182	00634104	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00636568	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00636570	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00636571	01	PM	TA52-182 FEXT 1MO PM

DP-1132 Report: First Quarter 2019
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

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019

DP-1132 Report: First Quarter 2019
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
Totals, 2019-Q1	723,578	796,615	0	0	1,442
Sub-total, Jan	235,200	236,898	0	0	0
Sub-total, Feb	217,978	240,610	0	0	1,442
Sub-total, Mar	270,400	319,106	0	0	0

All flows are in Liters.

1-Jan	5,034	14,605	0	0	0
2-Jan	10,257	6,998	0	0	0
3-Jan	5,564	0	0	0	0
4-Jan	6,170	0	0	0	0
5-Jan	5,488	0	0	0	0
6-Jan	5,223	0	0	0	0
7-Jan	6,927	0	0	0	0
8-Jan	8,251	0	0	0	0
9-Jan	8,554	0	0	0	0
10-Jan	8,668	0	0	0	0
11-Jan	7,911	7,193	0	0	0
12-Jan	6,964	14,912	0	0	0
13-Jan	7,949	14,888	0	0	0
14-Jan	6,775	11,332	0	0	0
15-Jan	9,198	10,963	0	0	0
16-Jan	10,484	2,650	0	0	0
17-Jan	9,046	0	0	0	0
18-Jan	6,889	6,301	0	0	0
19-Jan	6,851	15,122	0	0	0
20-Jan	6,321	15,122	0	0	0
21-Jan	6,207	15,122	0	0	0
22-Jan	7,229	5,776	0	0	0
23-Jan	8,706	3,443	0	0	0
24-Jan	8,062	14,103	0	0	0
25-Jan	7,835	13,888	0	0	0
26-Jan	7,986	10,009	0	0	0
27-Jan	6,510	13,946	0	0	0
28-Jan	7,835	10,661	0	0	0
29-Jan	8,857	12,211	0	0	0
30-Jan	8,857	13,892	0	0	0
31-Jan	8,592	3,764	0	0	0

DP-1132 Report: First Quarter 2019
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
1-Feb	6,624	0	0	0	0
2-Feb	6,170	7,552	0	0	0
3-Feb	5,791	14,500	0	0	0
4-Feb	6,813	8,434	0	0	0
5-Feb	7,532	6,490	0	0	0
6-Feb	11,090	5,728	0	0	1,140
7-Feb	6,927	14,399	0	0	0
8-Feb	7,419	8,557	0	0	0
9-Feb	5,791	14,281	0	0	0
10-Feb	5,148	14,359	0	0	0
11-Feb	6,964	3,890	0	0	0
12-Feb	7,116	0	0	0	0
13-Feb	7,532	4,637	0	0	0
14-Feb	6,624	9,210	0	0	0
15-Feb	6,245	8,793	0	0	0
16-Feb	5,337	14,209	0	0	0
17-Feb	5,148	14,209	0	0	0
18-Feb	4,921	9,946	0	0	0
19-Feb	4,996	409	0	0	0
20-Feb	6,624	0	0	0	0
21-Feb	6,548	5,559	0	0	0
22-Feb	8,630	13,664	0	0	0
23-Feb	12,301	13,674	0	0	0
24-Feb	11,771	13,674	0	0	0
25-Feb	11,090	8,124	0	0	0
26-Feb	9,463	3,356	0	0	0
27-Feb	10,295	7,746	0	0	302
28-Feb	17,070	15,212	0	0	0

DP-1132 Report: First Quarter 2019
RLWTF Daily Influent and Effluent

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
1-Mar	6,662	10,252	0	0	0
2-Mar	5,110	8,776	0	0	0
3-Mar	6,435	15,045	0	0	0
4-Mar	11,090	5,172	0	0	0
5-Mar	9,652	5,663	0	0	0
6-Mar	7,002	15,197	0	0	0
7-Mar	15,670	15,068	0	0	0
8-Mar	6,889	5,238	0	0	0
9-Mar	6,245	1,797	0	0	0
10-Mar	5,980	14,358	0	0	0
11-Mar	8,743	9,047	0	0	0
12-Mar	10,712	15,316	0	0	0
13-Mar	8,403	8,922	0	0	0
14-Mar	7,835	9,796	0	0	0
15-Mar	7,570	10,192	0	0	0
16-Mar	6,548	0	0	0	0
17-Mar	6,283	4,710	0	0	0
18-Mar	6,813	13,889	0	0	0
19-Mar	13,512	15,536	0	0	0
20-Mar	15,973	15,951	0	0	0
21-Mar	14,421	12,430	0	0	0
22-Mar	5,829	10,304	0	0	0
23-Mar	4,807	14,139	0	0	0
24-Mar	6,397	15,459	0	0	0
25-Mar	7,154	15,412	0	0	0
26-Mar	9,614	15,334	0	0	0
27-Mar	9,652	10,446	0	0	0
28-Mar	20,969	0	0	0	0
29-Mar	7,759	0	0	0	0
30-Mar	5,602	10,392	0	0	0
31-Mar	5,072	15,265	0	0	0

ATTACHMENT 4

Monthly and quarterly treated effluent monitoring results

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019

Table 1. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the MES, January 15, 2019, Permit Condition No. 29

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	COC #	Lab Method
RLWTF-19-165911	RLWTF_MES 01	01-15-2019	Chloride	19.1	mg/L		Y	N	2019-752	EPA:300.0
RLWTF-19-165911	RLWTF_MES 01	01-15-2019	Perchlorate	0.050	ug/L	U	N	N	2019-752	SW-846:6850
RLWTF-19-165911	RLWTF_MES 01	01-15-2019	Fluoride	0.221	mg/L		Y	N	2019-752	EPA:300.0
RLWTF-19-165911	RLWTF_MES 01	01-15-2019	Nitrate-Nitrite as Nitrogen	6.61	mg/L		Y	N	2019-752	EPA:353.2
RLWTF-19-165911	RLWTF_MES 01	01-15-2019	Total Dissolved Solids	179	mg/L		Y	N	2019-752	EPA:160.1
RLWTF-19-165911	RLWTF_MES 01	01-15-2019	Total Kjeldahl Nitrogen	0.451	mg/L		Y	N	2019-752	EPA:351.2

Table 2. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the MES, February 5, 2019, Permit Condition No. 29

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	COC #	Lab Method
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Chloride	5.03	mg/L		Y	N	2019-859	EPA:300.0
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Perchlorate	0.050	ug/L	U	N	N	2019-859	SW-846:6850
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Fluoride	0.0558	mg/L	J	Y	N	2019-859	EPA:300.0
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Nitrate-Nitrite as Nitrogen	1.35	mg/L		Y	N	2019-859	EPA:353.2
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Total Dissolved Solids	68.6	mg/L		Y	N	2019-859	EPA:160.1
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Total Kjeldahl Nitrogen	0.794	mg/L		Y	N	2019-859	EPA:351.2

Table 3. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the MES, March 12, 2019, Permit Condition No. 29

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	COC #	Lab Method
RLWTF-19-171486	RLWTF_MES 01	03-12-2019	Chloride	18.3	mg/L		Y	N	2019-1070	EPA:300.0
RLWTF-19-171486	RLWTF_MES 01	03-12-2019	Perchlorate	0.050	ug/L	U	N	N	2019-1070	SW-846:6850
RLWTF-19-171486	RLWTF_MES 01	03-12-2019	Fluoride	0.199	mg/L		Y	N	2019-1070	EPA:300.0
RLWTF-19-171486	RLWTF_MES 01	03-12-2019	Nitrate-Nitrite as Nitrogen	3.40	mg/L		Y	N	2019-1070	EPA:353.2
RLWTF-19-171486	RLWTF_MES 01	03-12-2019	Total Dissolved Solids	149	mg/L		Y	N	2019-1070	EPA:160.1
RLWTF-19-171486	RLWTF_MES 01	03-12-2019	Total Kjeldahl Nitrogen	0.0934	mg/L	J	Y	N	2019-1070	EPA:351.2

Table 4. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES, February 5, 2019, Permit Condition No. 29

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	COC #	Lab Method
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aluminum	19.3	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Arsenic	2.00	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Barium	1	ug/L	J	Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Boron	54.5	ug/L		Y	N	2019-877	EPA:200.7
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Cadmium	0.300	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chromium	3.00	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Cobalt	1.06	ug/L		Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Copper	15.8	ug/L		Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Cyanide (Total)	0.00167	mg/L	U	N	N	2019-877	EPA:335.4
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Iron	87.2	ug/L	J	Y	N	2019-877	EPA:200.7
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Lead	0.500	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Manganese	16.2	ug/L		Y	N	2019-877	EPA:200.7
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Mercury	0.067	ug/L	U	N	N	2019-877	EPA:245.2
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Molybdenum	2.97	ug/L		Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nickel	9.57	ug/L		Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Selenium	2.00	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Silver	0.300	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-165913	RLWTF_MES 01	02-05-2019	Sulfate	25.3	mg/L		Y	N	2019-859	EPA:300.0
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Uranium	1.25	ug/L		Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Zinc	6.72	ug/L	J	Y	N	2019-877	EPA:200.7
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Radium-226	0.168	pCi/L	U	N	N	2019-877	EPA:903.1
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Radium-228	0.247	pCi/L	U	N	N	2019-877	EPA:904
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aldrin	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	BHC[alpha-]	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	BHC[beta-]	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	BHC[gamma-]	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chlordane(alpha/gamma)	0.0773	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chlordane[alpha-]	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chlordane[gamma-]	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	DDT[4,4'-]	0.0101	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dieldrin	0.0101	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Endosulfan I	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Endosulfan II	0.0101	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Endrin	0.0101	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Heptachlor	0.00672	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Toxaphene (Technical Grade)	0.152	ug/L	U	N	N	2019-877	SW-846:8081B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1016	0.0314	ug/L	U	N	N	2019-877	SW-846:8082
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1221	0.0314	ug/L	U	N	N	2019-877	SW-846:8082
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1232	0.0314	ug/L	U	N	N	2019-877	SW-846:8082

Table 4. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES, February 5, 2019, Permit Condition No. 29

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	COC #	Lab Method
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1242	0.0314	ug/L	U	N	N	2019-877	SW-846:8082
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1248	0.0314	ug/L	U	N	N	2019-877	SW-846:8082
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1254	0.0314	ug/L	U	N	N	2019-877	SW-846:8082
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1260	0.0314	ug/L	U	N	N	2019-877	SW-846:8082
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Benzene	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Bromodichloromethane	0.41	ug/L	J	Y	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Bromoform	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Bromomethane	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Carbon Tetrachloride	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chlorobenzene	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chloroform	3.72	ug/L		Y	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Chloromethane	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dibromoethane[1,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichlorobenzene[1,4-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichlorodifluoromethane	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichloroethane[1,1-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichloroethane[1,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichloroethene[1,1-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichloroethene[cis-1,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichloroethene[trans-1,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichloropropene[cis/trans-1,3-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Ethylbenzene	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Methyl tert-Butyl Ether	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Methylene Chloride	1.00	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Tetrachloroethane[1,1,2,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Tetrachloroethene	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Toluene	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trichloroethane[1,1,1-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trichloroethane[1,1,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trichloroethene	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trichlorofluoromethane	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Vinyl Chloride	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Xylene (Total)	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Xylene[1,2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Xylene[1,3-]+Xylene[1,4-]	0.300	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Anthracene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Azobenzene	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Benzidine	3.90	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Benzo(a)pyrene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Benzo(b)fluoranthene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Benzo(k)fluoranthene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Bis(2-chloroethyl)ether	3.00	ug/L	U	N	N	2019-877	SW-846:8270D

Table 4. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES, February 5, 2019, Permit Condition No. 29

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	COC #	Lab Method
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Bis(2-ethylhexyl)phthalate	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichlorobenzidine[3,3'-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dichlorophenol[2,4-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Diethylphthalate	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dimethyl Phthalate	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Di-n-butylphthalate	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dinitro-2-methylphenol[4,6-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dinitrophenol[2,4-]	5.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dinitrotoluene[2,4-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Dinitrotoluene[2,6-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Diphenylamine	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Fluoranthene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Fluorene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Hexachlorobenzene	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Hexachlorobutadiene	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Hexachlorocyclopentadiene	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Hexachloroethane	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Isophorone	3.50	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Methylnaphthalene[1-]	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Methylnaphthalene[2-]	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Naphthalene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nitrobenzene	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nitrosodiethylamine[N-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nitrosodimethylamine[N-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nitroso-di-n-butylamine[N-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nitrosopyrrolidine[N-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Oxybis(1-chloropropane)[2,2'-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Pentachlorobenzene	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Pentachlorophenol	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Phenanthrene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Phenol	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Pyrene	0.300	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Tetrachlorobenzene[1,2,4,5]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Total PAHs	0.0	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trichlorophenol[2,4,5-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trichlorophenol[2,4,6-]	3.00	ug/L	U	N	N	2019-877	SW-846:8270D
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	HMX	0.0833	ug/L	U	N	N	2019-877	SW-846:8330B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	RDX	0.0833	ug/L	U	N	N	2019-877	SW-846:8330B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Trinitrotoluene[2,4,6-]	0.0833	ug/L	U	N	N	2019-877	SW-846:8330B

ATTACHMENT 5

MCOI-6 quarterly ground water monitoring report

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019

Table 1. Analytical Results from Quarterly Groundwater Sampling at Perched/Intermediate Monitoring Well MCOI-6, January 9, 2019, Condition No. 36

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
CAMO-19-165954	MCOI-6	01-09-2019	Chloride	51.4	mg/L		Y	Y	EPA:300.0
CAMO-19-165954	MCOI-6	01-09-2019	Perchlorate	109	ug/L		Y	Y	SW-846:6850
CAMO-19-165954	MCOI-6	01-09-2019	Fluoride	0.531	mg/L		Y	Y	EPA:300.0
CAMO-19-165954	MCOI-6	01-09-2019	Nitrate-Nitrite as Nitrogen	12.8	mg/L		Y	Y	EPA:353.2
CAMO-19-165954	MCOI-6	01-09-2019	Total Dissolved Solids	527	mg/L		Y	Y	EPA:160.1
CAMO-19-165955	MCOI-6	01-09-2019	Total Kjeldahl Nitrogen	0.120	mg/L		Y	N	EPA:351.2

DP-1132, Condition No. 36, Groundwater Monitoring Report, MCOI-6, January 9, 2019.

a	Sample Date	01/09/2019
b	Sample Time	1214
c	Individuals collecting sample.	TPMC 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 below mean sea level (msl))	6144.81
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)	38.25
i	Total volume of water purged prior to sample collection (gal).	118.8
j	Physical parameters including temperature, conductivity, pH, oxidation/reduction potential.	DO (mg/L): 7.35 Oxidation/Reduction Potential (MV): 270.7 Temp (deg C): 14.0 pH (SU): 7.21 Turbidity (NTU): 0.67 Specific Conductance (µS/cm): 550
k	Description of sample methods	See Attached Chain-of-Custody
l	Chain-of custody.	Attached
m	Location Map	Attachment 6

LANL SMO

Los Alamos NM

MC01-6

Chain of Custody/Analysis Request

COC/Lab Request #: 2019-738

Client Contact:

Lab Agreement #:

Project Number:

Site Name: N3B LANL

Analysis Turnaround Time:

24 Hour - ☐ Other - ☒

7 Days - ☐

14 Days - ☐

21 Days - ☐

28 Days - ☐

Rad Screening Info:

Lab Reporting Limit Type: Method Detection Limit

Field Sample ID	Sample Date	Sample Time	Sample Matrix	MSGP-Hg	WSP-All Metals	WSP-CN(T)	WSP-GENINORG+PerChlorate	WSP-NH3+NO3/NO2+PO4	WSP-TKN+TOC
CAMO-19-165954	Jan 9 2019	12:14	W		1		1	1	
CAMO-19-165955	Jan 9 2019	12:14	W	1		1			1

Special Instructions:

Relinquished by: Tanya VanderVit	Print Name: TanyaVanderVit	Date/Time: 1-9-2019 1324	Received by: Lance Orstott	Print Name: Lance Orstott	Date/Time: 1/9/19 1324
Relinquished by:	Print Name:	Date/Time:	Received by:	Print Name:	Date/Time:
Relinquished by:	Print Name:	Date/Time: 3	Received by:	Print Name:	Date/Time:

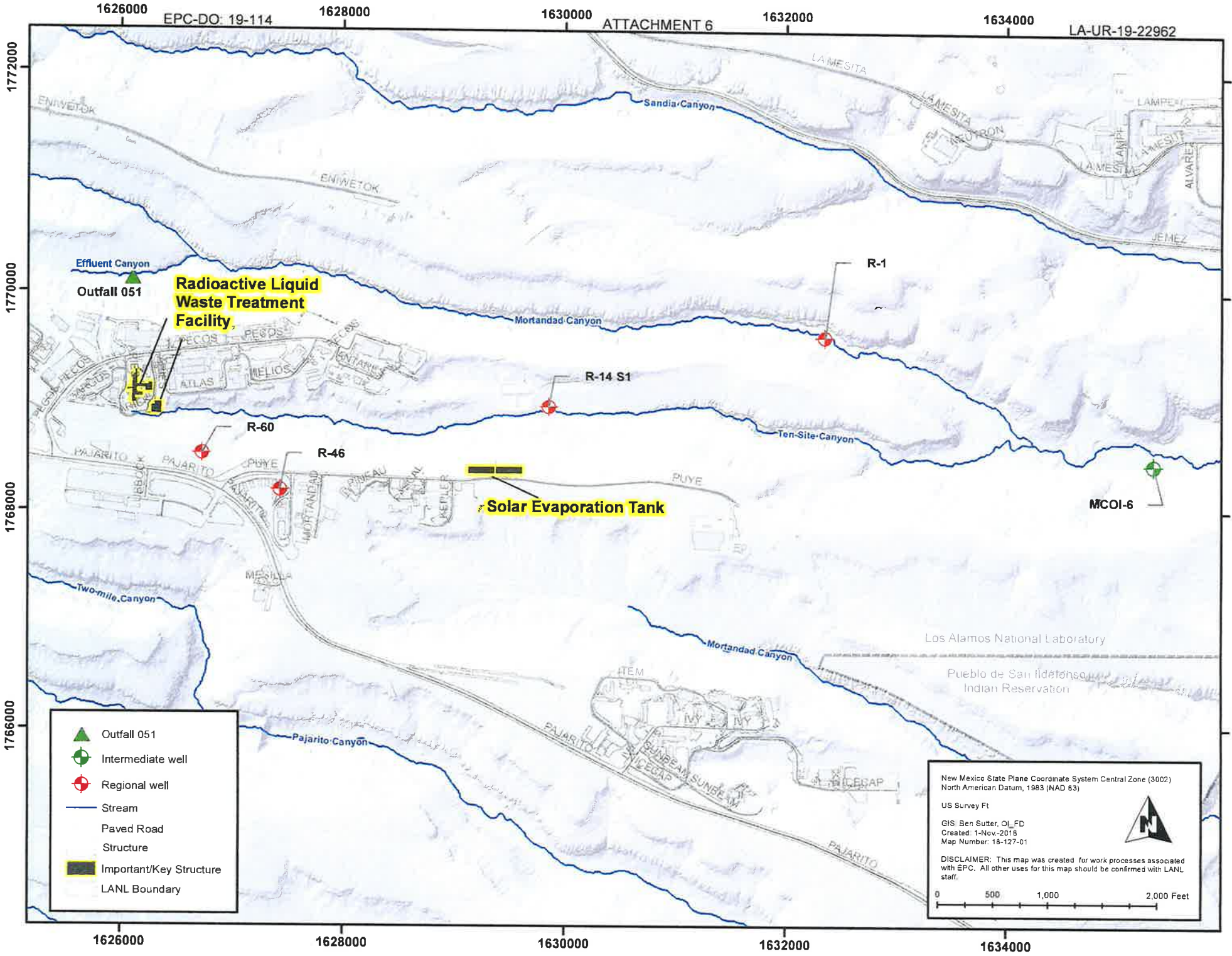
ATTACHMENT 6

Monitoring wells location map

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019


1626000
1628000
1630000
1632000
1634000
1772000
1770000
1768000
1766000
Sandia Canyon
Mortandad Canyon
Ten-Site-Canyon
Two-mile Canyon
Pajarito Canyon
Effluent Canyon
Outfall 051
Radioactive Liquid Waste Treatment Facility
R-1
R-14 S1
R-60
R-46
Solar Evaporation Tank
MCOI-6
Los Alamos National Laboratory
Pueblo de San Ildefonso Indian Reservation
Outfall 051
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, OI_FD
Created: 1-Nov.-2018
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.
0 500 1,000 2,000 Feet