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Symbol: EPC-DO: 19-112  
LA-UR: 19-22764  
Locates Action No.: U1801172  
Date: **APR 09 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, Condition Nos. 21 and 22, Installation and Calibration of Flow Meters**

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 and Los Alamos National Security, LLC (subsequently transferred to Triad National Security, LLC) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to permit Condition No. 21, *Installation of Flow Meters*, the U.S. Department of Energy and Triad National Security, LLC (DOE/Triad) are required to submit by April 26, 2019, verification that flow meters were installed at four locations. **Attachment 1**, Table 1, provides the location, installation dates, and meter type for the required meters.

Pursuant to permit Condition No. 22, *Calibration of Flow Meters*, DOE/Triad are required to (1) calibrate each of the four referenced flow meters by February 25, 2019, (2) prepare a calibration report for each flow meter, and (3) maintain records of flow meter calibration at a location accessible for review by NMED during facility inspections. Calibration of the four referenced flow meters was completed by October 31, 2018. Calibration reports were prepared for each meter and will be maintained at the Facility, as required by Condition No. 22. **Attachment 1**, Table 2, provides information on the calibration dates, calibration method, and meter accuracy for the required meters.

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

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, Tables 1 and 2, flow meter installation and calibration information

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# **ATTACHMENT 1**

Tables 1 and 2, flow meter installation and  
calibration information

EPC-DO-19-112

LA-UR-19-22764

Date: APR 09 2019

**Table 1. Flow Meter Installation Information Required by DP-1132, Condition No. 21.**

<b>Meter</b>	<b>Meter Location</b>	<b>Installation Date</b>	<b>Meter Type</b>
Low-level Influent to RLWTF	WRRM Facility	October 2018	Signet 2551 Magmeter
Effluent to the SET	Building 50-01, Room 34B	September 2018	Signet 2551 Magmeter
Effluent to the MES	Structure 50-257 (MES)	March 2018	Signet 2551 Magmeter
Effluent to Outfall	Building 50-01, Room 34B	September 2018	Signet 2551 Magmeter

**Table 2. Flow Meter Calibration Information Required by DP-1132, Condition No. 22.**

<b>Meter</b>	<b>Calibration Date(s)</b>	<b>Calibration Method</b>	<b>Meter Accuracy Under Field Conditions</b>
Low-level Influent to RLWTF	October 16-18, 2018	known tank volume	within +/- 10% of actual flow
Effluent to the SET	September 12-24, 2018	calibrated reference meter	within +/- 5% of actual flow
Effluent to the MES	March 27-29, 2018	calculated volume from known tank weight using calibrated scale	within +/- 5% of actual flow
Effluent to Outfall	September 12-24, 2018	calibrated referenced meter	within +/- 5% of actual flow



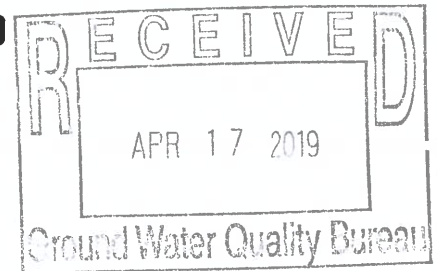


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LA-UR: 19-23062  
Locates Action No.: U1801172  
Date: **APR 17 2019**

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, Final Status Update on Malfunctioning RLWTF Vault and Sump Alarms**

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). On November 1, 2018, DP-1132 was transferred to DOE and Triad National Security, LLC (DOE/Triad).

Discharge Permit DP-1132, Condition No. 13, *Maintenance and Repair*, requires DOE/Triad to maintain the function and structural integrity of the RLWTF at all times except during maintenance and repair. Maintenance and repair required at a unit that could lead to an unauthorized discharge to the environment or pose a threat to human health shall be corrected as soon as possible but no later than 30 days from the date of the observed malfunction. Condition No. 13 allows NMED to approve a longer period, for good cause.

Pursuant to permit Condition No. 13, on October 15, 2018, DOE/Triad informed NMED that seven secondary containment alarms—located in vaults and sumps—were malfunctioning (Attachment 1, EPC-DO-18-365). Repair of these seven alarms could not be completed within 30 days from the date of the observed malfunction.

On December 4, 2018, DOE/Triad provided NMED with a report on the status of the seven malfunctioning alarms (Attachment 1, EPC-DO-18-432). DOE/Triad reported that two of the seven vault alarms remained out of service. Further, DOE/Triad committed to complete repairs to the two malfunctioning alarms by February 15, 2019.

On February 11, 2019, DOE/Triad informed NMED that one vault alarm remained out of service and would not be repaired by February 15, 2019 (personal communication, Mr. Robert Beers, DOE/Triad, and Mr. Andrew Romero, NMED). NMED requested that DOE/Triad document the status of the vault alarms in writing. Accordingly, on February 26, 2019, DOE/Triad provided NMED with an update, and reported that (a) one secondary containment alarm had been repaired, (b) that one alarm remained out of service, and (c) that this remaining alarm would be repaired by March 31, 2019 (Attachment 1, EPC-DO-19-052).

This letter updates the status of repairs to the remaining alarm, PLC11\_SM776; that alarm was repaired on April 02, 2019. All secondary containment alarms are now functioning, as required by DP-1132, Condition 13.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this final status 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, Condition No. 13, Maintenance and Repair Status Reports:  
EPC-DO-18-365, EPC-DO-18-432, and EPC-DO-19-052

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# **ATTACHMENT 1**

**DP-1132, Condition No. 13,  
Maintenance and Repair Status Reports:  
EPC-DO-18-365, EPC-DO-18-432, and EPC-DO-19-052**

**EPC-DO: 19-118**

**LA-UR-19-23062**

**Date: APR 17 2019**



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*Symbol:* EPC-DO: 19-052

*LA-UR:* 19-21332

*Locates Action No.:* U1801172

*Date:* **FEB 26 2019**

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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, Status Update on Malfunctioning RLWTF Vault and Sump Alarms**

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). On November 1, 2018, DP-1132 was transferred to DOE and Triad National Security, LLC (DOE/Triad).

Discharge Permit DP-1132, Condition No. 13, *Maintenance and Repair*, requires DOE/Triad to maintain the function and structural integrity of the RLWTF at all times except during maintenance and repair. Maintenance and repair required at a unit that could lead to an unauthorized discharge to the environment or pose a threat to human health shall be corrected as soon as possible but no later than 30 days from the date of the observed malfunction. Condition No. 13 allows NMED to approve a longer period, for good cause.

Pursuant to permit Condition No. 13, on October 15, 2018, DOE/Triad informed NMED that seven secondary containment alarms—located in vaults and sumps—were malfunctioning (Attachment 1). Repair of these seven alarms could not be completed within 30 days from the date of the observed malfunction.

On December 4, 2018, DOE/Triad provided NMED with a report on the status of the seven malfunctioning alarms (Attachment 2). DOE/Triad reported that two of the seven vault alarms remained out of service. Further, DOE/Triad committed to complete repairs to the two malfunctioning alarms by February 15, 2019.

On February 11, 2019, DOE/Triad informed NMED that one vault alarm remained out of service and would not be repaired by February 15, 2019 (personal communication, Mr. Robert Beers, DOE/Triad, and Mr. Andrew Romero, NMED). NMED requested that DOE/Triad document the status of the vault alarms in writing. This letter updates the status of the two alarms, PLC11\_SM749 and PLC11\_SM776.

#### Repair Completed

PLC11\_SM749 had probable breaks in underground communication wiring. A new wireless communication device was installed, tested, and confirmed to be functioning on December 15, 2018.

#### Repair in Progress

PLC11\_SM776 has probable breaks in underground communication wiring, and is to be upgraded with a wireless communication device. Installation and testing was to have been completed by February 15, 2019. However, there have been delays in receiving the device and, as a result, installation and testing will not be complete until March 31, 2019.

#### Interim Actions

Until communication is re-established with alarm PLC11\_SM776, the RLWTF will continue to perform weekly visual inspections of this vault. If liquid is discovered during a weekly inspection, the liquid will be sampled to determine if the water is due to vault infiltration, or due to a leak in the primary pipe.

In closing, the list of seven malfunctioning secondary containment alarms has now been reduced to one. That final alarm is scheduled to be repaired by March 31, 2019.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this status 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 Condition No. 13, Maintenance and Repair (EPC-DO-18-365)  
Attachment 2 DP-1132 Status Update on Malfunctioning RLWTF Vault and Sump Alarms  
(EPC-DO-18-432)

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*Date:* **OCT 11 2018**  
*Symbol:* EPC-DO-18-365  
*LA-UR:* 18-29518  
*Locates Action No.:* U1801172

**GROUND WATER**

**OCT 15 2018**

**BUREAU**

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

Dear Ms. Hunter:

**Subject: Discharge Plan DP-1132, Condition No. 13, Maintenance and Repair**

On August 29, 2018, the New Mexico Environment Department (NMED) issued Discharge Permit DP-1132 to the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Condition No. 13, Maintenance and Repair, requires DOE/LANS to maintain the function and structural integrity of the RLWTF at all times except during maintenance and repair. Maintenance and repair required at a unit that could lead to an unauthorized discharge to the environment or pose a threat to human health shall be corrected as soon as possible but no later than 30 days from the date of the observed malfunction. Condition No. 13 allows NMED to approve a longer period, for good cause.

Pursuant to Condition No. 13, DOE/LANS have identified seven secondary containment alarms—located in vaults and sumps—that are presently malfunctioning. Repair of these seven alarms will not be completed within 30 days from the date of observed malfunction. Table 1 below provides additional, detailed information on each alarm.

Ms. Michelle Hunter  
EPC-DO-18-365

- 2 -

**Table 1. List of RLWTF Vault and Sump Alarms Requiring Repair**

Tag Name	Location	Alarm Type	Malfunction Type
PLC11 SM749	TA-03-029	RLWCS <sup>1</sup> vault	Communication Failure
PLC11 SM776	TA-03-029	RLWCS vault	Communication Failure
PLC14 SM758	TA-03-130	RLWCS vault	Communication Failure
PLC2 INF 16 A11	TA-50-001	Containment sump	Communication Failure
PLC2 INF 16 A41	TA-50-001	Containment sump	Communication Failure
PLC2 INF 16 A51	TA-50-001	Containment sump	Communication Failure
PLC2 SMP 34B A1	TA-50-001	Containment sump	Communication Failure

<sup>1</sup>Radioactive Liquid Waste Collection System

DOE/LANS estimate that the task of identifying the root cause for each of the malfunctioning alarms will take approximately 30 days. Once the root cause is determined then DOE/LANS will provide NMED with a schedule for completing the required repairs.

In the interim, until the alarms are fully functional, DOE/LANS commit to implement the following contingencies to ensure that no unauthorized discharge occurs to the environment.

#### Vault Alarms

- Weekly visual inspection of the vaults with the malfunctioning alarms.
- If liquid is identified during a weekly inspection then the liquid will be sampled to confirm that the source of the liquid is infiltrated ground or storm water and not radioactive liquid waste.

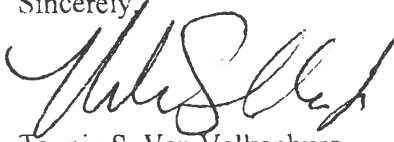
#### Sump Alarms

- Daily visual inspection of the sumps with the malfunctioning alarms.
- Functioning tank-level alarms that respond to rapid changes in tank volumes.

In closing, DOE/LANS has identified seven secondary containment alarms that require repair; the time period to complete said repairs will extend beyond the 30-day allowable window specified in DP-1132 Condition No. 13. DOE/LANS request 30 days to determine the root cause of the malfunctioning alarms. Once the root cause is identified then a schedule for completing the repairs will be submitted to NMED. DOE/LANS request NMED approval of the proposed plan.

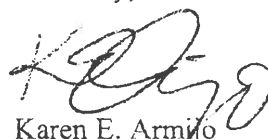
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this report.

Sincerely,



Taunia S. Van Valkenburg  
Group Leader

Sincerely,



Karen E. Armijo  
Permitting and Compliance Program Manager

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## **ATTACHMENT 2**

**DP-1132 Status Update on Malfunctioning RLWTF  
Vault and Sump Alarms  
(EPC-DO-18-432)**

**EPC-DO: 19-052**

**LA-UR-19-21332**

**Date: FEB 26 2019**

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*Symbol:* EPC-DO-18-432  
*LA-UR:* 18-30938  
*Locates Action No.:* U1801172  
*Date:* **DEC 04 2018**

Ms. Michelle Hunter, Chief  
Ground Water Quality Bureau  
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P.O. Box 26110  
Santa Fe, NM 87502

GROUND WATER  
DEC 04 2018  
BUREAU

**Subject: DP-1132, Status Update on Malfunctioning RLWTF Vault and Sump Alarms**

Dear Ms. Hunter:

On October 15, 2018, the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC submitted to the New Mexico Environment Department (NMED) notification pursuant to Condition No. 13 of Discharge Permit DP-1132 that seven secondary containment alarms at the Radioactive Liquid Waste Treatment Facility (RLWTF) were malfunctioning (EPC-DO-18-365). Subsequently, DP-1132 was transferred to Triad National Security, LLC (Triad). A copy of the above-referenced letter is provided as Attachment 1. The intent of this letter is to provide NMED with an update on the status of the seven malfunctioning secondary containment alarms.

In the attached letter, DOE/Triad identified seven malfunctioning secondary containment alarms. Three of the malfunctioning alarms have been repaired; two were mistakenly identified as malfunctioning; and two will be repaired over the next four months. Table 1.0 below summarizes the updated alarm status.

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Ms. Michelle Hunter

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**Table 1.0. Status Update of Malfunctioning RLWTF Vault and Sump Alarms**

Alarm Tag	Location	Alarm Type	Repair Status
PLC11_SM749	TA03-029	vault	in progress
PLC11_SM776	TA03-029	vault	in progress
PLC14_SM758	TA03-130	vault	repaired
PLC2_INF_16_A11	TA50-001	pump control	mistakenly identified
PLC2_INF_16_A41	TA50-001	pump control	mistakenly identified
PLC2_INF_16_A5	TA50-001	floor sump	repaired
PLC2_SMP_34B_A1	TA50-001	floor sump	repaired

**Alarms Repaired**

- PLC14\_SM758: An electrical relay was discovered to be defective, was replaced, and was tested to confirm operability. Communication has been re-established.
- PLC2\_INF\_16\_A5: The communication module for this alarm, a part of the Programmable Logic Controller, was determined to be defective, was replaced, and was tested to confirm operability. Communication has been re-established.
- PLC2\_SMP\_34B\_A1: Wiring between the alarm and the Programmable Logic Controller was corroded. Wiring was replaced, and the alarm was tested to confirm operability. Communication has been re-established.

**Alarms Mistakenly Identified as Malfunctioning**

- PLC2\_INF\_16\_A11 and PLC2\_INF\_16\_A41 were both determined to be pump ON-OFF controls, not secondary alarms. They had been mistakenly identified during a recent modification to the RLWTF building alarm system.

**Repair in Progress**

- PLC11\_SM749 and PLC11\_SM776 have probable breaks in underground communication wiring. These will be upgraded with wireless communication devices. For alarm PLC11\_SM749, installation and testing is scheduled to be completed by December 15, 2018. For alarm PLC11\_SM776, installation and testing is scheduled to be completed February 15, 2019.

**Interim Actions**

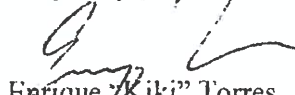
Until communication is re-established with alarms PLC11\_SM749 and PLC11\_SM776, the RLWTF will continue to perform weekly visual inspections of these vaults. If liquid is discovered during a weekly inspection, the liquid will be sampled to determine if the water is due to vault infiltration, or due to a leak in the primary pipe.

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Ms. Michelle Hunter


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Page 3

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this status update.

Very truly yours,

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

Very truly yours,

  
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 October 15, 2018, Letter to NMED RE: DP-1132, Condition No. 13

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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 1<sup>st</sup> 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](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto: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<sub>3</sub>-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<sub>3</sub>+NO<sub>2</sub>-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 5<sup>th</sup> 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, NO<sub>3</sub>-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<sub>3</sub>+NO<sub>2</sub>-N, TDS, chloride, fluoride, and perchlorate are provided in **Table 1**. All results from the January 9<sup>th</sup> 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<sub>3</sub>+NO<sub>2</sub>-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<sub>3</sub>+NO<sub>2</sub>-N concentration at MCOI-6 during the 5-yr period from 2014 through 2018 was 9.0 mg/L. The maximum NO<sub>3</sub>+NO<sub>2</sub>-N concentration during the reference period was 11.5 mg/L. Detections of NO<sub>3</sub>+NO<sub>2</sub>-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<sub>3</sub>+NO<sub>2</sub>-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.

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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**.

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## ATTACHMENT 2

Summary of maintenance and repair activities  
conducted at the RL WTF

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	
<b>Totals</b>			<b>77</b>	<b>21</b>	<b>1</b>	<b>3</b>	<b>102</b>	

Task Types: PM - preventive maintenance MD - modification  
 CO - corrective maintenance 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 SUPPRESSION 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 GFCL (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	LPT	lightning protection
BHW	boiler, hot water	LTE	lights, emergency
CA	compressed air	LTEE	lights, emergency, tritium
DAD	desiccant air dryer	LTNT	lights, non-tritium
EB	exhaust bank	PRV	pressure reducing valve
EH	exhaust heater	PV	pump, vacuum
FAR	filter, air replaceable	RCA	radiological control area
FE	fan, exhaust	SHS	shower, safety
FEXT	fire extinguisher	SPH	sprinkler pipe, dry
HEPA	high-efficiency particulate air	SPW	sprinkler pipe, wet
HUE	heater unit, electric	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**

<b>Date</b>	<b>Low-level Influent</b>	<b>Effluent MES</b>	<b>Effluent Outfall</b>	<b>Effluent SET</b>	<b>Transuranic Influent</b>
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	U	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	U	Y	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Copper	15.8	ug/L	U	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:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Iron	87.2	ug/L	J	Y	N	2019-877	EPA:335.4
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Lead	0.500	ug/L	U	Y	N	2019-877	EPA:200.7
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Manganese	16.2	ug/L	U	N	N	2019-877	EPA:200.8
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Mercury	0.067	ug/L	U	Y	N	2019-877	EPA:200.7
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Molybdenum	2.97	ug/L	U	N	N	2019-877	EPA:245.2
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Nickel	9.57	ug/L	U	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	U	Y	N	2019-859	EPA:300.0
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Uranium	1.25	ug/L	U	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-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1248	0.0314	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1254	0.0314	ug/L	U	N	N	2019-877	SW-846:8260B
RLWTF-19-166514	RLWTF_MES 01	02-05-2019	Aroclor-1260	0.0314	ug/L	U	N	N	2019-877	SW-846:8260B
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	Bromochloromethane	0.41	ug/L	J	Y	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	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	U	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	Xylenes[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-846:8260B
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 ( $\mu$ S/cm): 550
k	Description of sample methods	See Attached Chain-of-Custody
l	Chain-of custody.	Attached
m	Location Map	Attachment 6



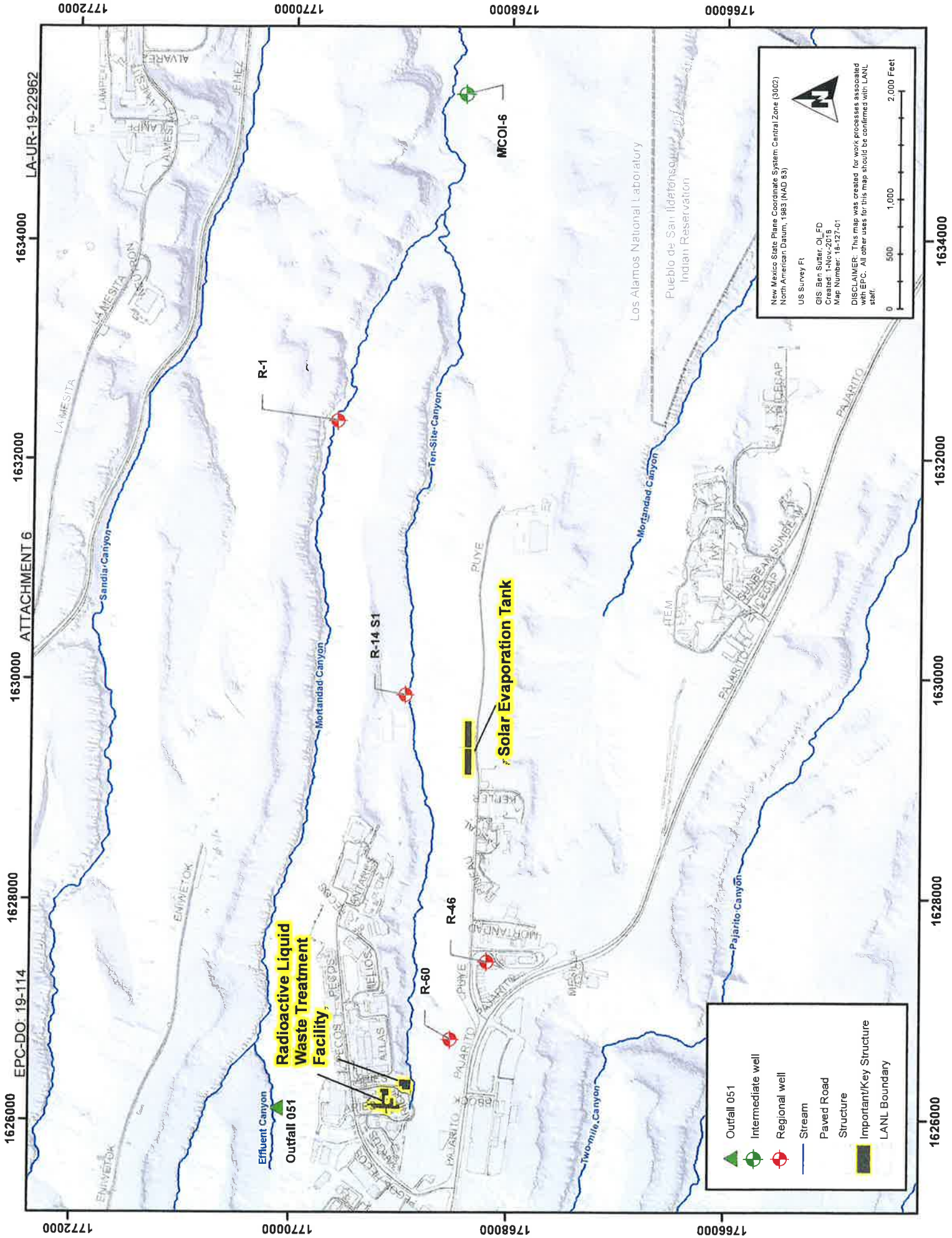
# ATTACHMENT 6

Monitoring wells location map

EPC-DO: 19-114

LA-UR-19-22962

Date: APR 17 2019



New Mexico State Plane Coordinate System Central Zone (3002)  
 North American Datum, 1983 (NAD 83)

US Survey Ft

GIS Ben Suter, OLE ED  
 Created: 10-Nov-2019  
 Map Number: 16-127-01

DISCLAIMER: This map was created for work processes associated with EPC. All other uses for this map should be confirmed with LANL staff.

Outfall 051

Intermediate well

Regional well

Stream

Paved Road

Structure

Important/Key Structure

LANL Boundary

1772000

1634000

1632000

1630000

1628000

1626000

1772000

1770000

1768000

1766000

ATTACHMENT 6

EPC-DO: 19-114

LA-UR-19-22962

1634000

1632000

1630000

1628000

1626000

1772000



**Michelle Lujan Grisham**  
Governor

**Howie C. Morales**  
Lieutenant Governor

**NEW MEXICO  
ENVIRONMENT DEPARTMENT**

**Ground Water Quality Bureau**

**1190 South St. Francis Drive (87505)  
P.O. Box 5469, Santa Fe, New Mexico 87502-5469  
Phone (505) 827-2900 Fax (505) 827-2965  
www.env.nm.gov**



**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

April 25, 2019

Enrique “Kiki” Torres  
Division Leader  
Environmental Protection & Compliance  
Triad National Security, LLC  
PO Box 1663, K490  
Los Alamos, New Mexico 87545

Karen E. Armijo  
Permitting and Compliance Program Manager  
National Nuclear Security Administration  
U.S. Department of Energy  
3747 West Jemez Road, A316  
Los Alamos, New Mexico 87544

**RE: Approval of Stabilization Plans for Clarifier #2, Gravity Filter, WM2-North/South Tank, and 75K Tank, Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility, DP-1132**

Dear Mr. Torres and Ms. Armijo:

On January 28, 2019, the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) received Work Plans from the U.S. Department of Energy and Triad National Security, LLC (DOE/Triad) pursuant to Condition #41 of Discharge Permit 1132 (DP-1132) for the stabilization of the following units that have ceased operations and are being removed from service: (1) Low-Level Clarifier #2, (2) Gravity Filter, (3) WM-2 North/South Tanks, and (4) 75,000-gallon concrete influent tank.

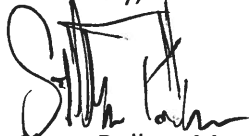
The primary objective of stabilizing Clarifier #2, the Gravity Filter, WM2-North/South Tanks, and the 75,000-gallon concrete influent tank is to empty and isolate the units so that they will not pose a threat to the environment (groundwater and air) until closure. Stabilization of all units pursuant to the Stabilization Plan shall be executed as described in the Work Plans and in accordance with all applicable portions within Condition #42 of the Closure Plan in DP-1132.

The information submitted in the Work Plans satisfies Condition #41 of your Discharge Permit. The Stabilization Work Plans for Clarifier #2, the Gravity Filter, WM2-North/South Tanks, and the 75,000-gallon concrete influent tank are hereby approved.

Approval of these Work Plans does not relieve the DOE/Triad of the responsibility to comply with any other applicable federal, state, and/or local laws and regulations. This approval does not relieve DOE/Triad of liability should operations associated with these Work Plans result in actual pollution of ground or surface waters.

If you have any questions, please contact Andrew Romero at (505) 827-0076. Thank you for your cooperation.

Sincerely,



Steve Pullen, Manager  
Pollution Prevention Section  
Ground Water Quality Bureau

MH:ar

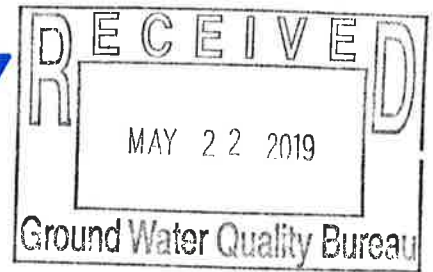
cc (e-version):

Shelly Lemon, NMED/SWQB  
John Kieling, NMED/HWB  
Michael W. Hazen, ALDESHQSS  
William H. Schwettmann, IPM  
Raelynn Romero, PM6  
Randal S. Johnson, DESHF-TA55  
Denise C. Gelston, TA-55-RLW  
Alvin M. Arahon, TA-55-RLW  
John C. Del Signore, TA-55-RLW  
Michael T. Saladen, EPC-CP  
Robert S. Beers, EPC-CP  
Steven G. Pearson, EPC-CP





**COPY**



**Environmental Protection & Compliance  
Division**

Los Alamos National Laboratory  
PO Box 1663, K490  
Los Alamos, NM 87545  
505-667-0666

Symbol: EPC-DO:19-164  
LAUR: 19-24659  
Date: **MAY 22 2019**

Ms. Michelle Hunter, Bureau Chief  
Ground Water Quality Bureau  
New Mexico Environment Department  
Harold Runnels Building, N2250  
1190 St. Francis Drive  
P.O. Box 5469  
Santa Fe, New Mexico 87502

**Subject: Notice of Intent to Discharge Storm Water from Technical Area 52 Solar  
Evaporation Tank**

Dear Ms. Hunter:

Enclosed is a Notice of Intent to Discharge (NOI) that has been prepared by Triad National Security, LLC (Triad) for submittal to the New Mexico Environment Department pursuant to 20.6.2.1201 NMAC of the New Mexico Water Quality Control Commission Regulations and the Los Alamos National Laboratory (LANL) Liquid Discharge Reporting Guidance (Decision Tree), dated March 10, 2009.

A discharge of approximately 50,000 gallons of storm water is being requested to facilitate removal and replacement of the Technical Area 52 Solar Evaporation Tank (SET) primary liner. This work is being completed to comply with Ground Water Discharge Permit DP-1132. Best Management Practices will be implemented to prevent adverse impacts from the discharge.

Sincerely,

Taunia Van Valkenburg  
Group Leader  
Environmental Protection & Compliance  
Triad National Security, LLC



*Environmental Protection & Compliance  
Division*

Los Alamos National Laboratory  
PO Box 1663, K490  
Los Alamos, NM 87545  
505-667-0666

Symbol: EPC-DO:19-164  
LAUR: 19-24659  
Date: **MAY 22 2019**

Ms. Michelle Hunter, Bureau Chief  
Ground Water Quality Bureau  
New Mexico Environment Department  
Harold Runnels Building, N2250  
1190 St. Francis Drive  
P.O. Box 5469  
Santa Fe, New Mexico 87502

**Subject: Notice of Intent to Discharge Storm Water from Technical Area 52 Solar  
Evaporation Tank**

Dear Ms. Hunter:

Enclosed is a Notice of Intent to Discharge (NOI) that has been prepared by Triad National Security, LLC (Triad) for submittal to the New Mexico Environment Department pursuant to 20.6.2.1201 NMAC of the New Mexico Water Quality Control Commission Regulations and the Los Alamos National Laboratory (LANL) Liquid Discharge Reporting Guidance (Decision Tree), dated March 10, 2009.

A discharge of approximately 50,000 gallons of storm water is being requested to facilitate removal and replacement of the Technical Area 52 Solar Evaporation Tank (SET) primary liner. This work is being completed to comply with Ground Water Discharge Permit DP-1132. Best Management Practices will be implemented to prevent adverse impacts from the discharge.

Sincerely,

A handwritten signature in black ink, appearing to read 'Taunia Van Valkenburg for'.

Taunia Van Valkenburg  
Group Leader  
Environmental Protection & Compliance  
Triad National Security, LLC



EPC-DO: 19-164  
Ms. Michelle Hunter

Page 2

TVV/MTS/BMI:jdm

Attachment(s): Attachment 1 Notice of Intent to Discharge Storm Water from Technical Area  
52 Solar Evaporation Tank

Copy: Nancy Williams, USEPA/Region 6, [williams.nancy@epa.gov](mailto:williams.nancy@epa.gov), (E-File)  
Steve Pullen, NMED/GWQB, [steve.pullen@state.nm.us](mailto:steve.pullen@state.nm.us), (E-File)  
Melanie Sandoval, NMED/GWQB, [melanie.sandoval2@state.nm.us](mailto:melanie.sandoval2@state.nm.us), (E-File)  
Gerald L. Knutson, NMED/GWQB, [gerald.knutson@state.nm.us](mailto:gerald.knutson@state.nm.us), (E-File)  
Andrew Romero, NMED/GWQB, [andrewc.romero@state.nm.us](mailto:andrewc.romero@state.nm.us), (E-File)  
Sarah Holcomb, NMED-SWQB, [sarah.holcomb@state.nm.us](mailto:sarah.holcomb@state.nm.us), (E-File)  
Erin Shea, NMED-SWQB, [erin.shea@state.nm.us](mailto:erin.shea@state.nm.us), (E-File)  
Karen E. Armijo, NA-LA, [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), (E-File)  
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Brian M. Iacona, EPC-CP, [biacona@lanl.gov](mailto:biacona@lanl.gov), (E-File)  
Steven G. Pearson, EPC-CP, [spearson@lanl.gov](mailto:spearson@lanl.gov), (E-File)  
Robert C. Mason, TA-55-DO, [rcmason@lanl.gov](mailto:rcmason@lanl.gov), (E-File)  
Alvin M. Aragon, TA-55, [alaragon@lanl.gov](mailto:alaragon@lanl.gov), (E-File)  
Gerald L. George, DESH-TA-55, [jgeorge@lanl.gov](mailto:jgeorge@lanl.gov), (E-File)  
Randal S. Johnson, DESH-TA-55, [randyj@lanl.gov](mailto:randyj@lanl.gov), (E-File)  
Stephen G. Cossey, DESH-TA-55, [sgc@lanl.gov](mailto:sgc@lanl.gov), (E-File)  
[epc-correspondence@lanl.gov](mailto:epc-correspondence@lanl.gov), (E-File)

# Attachment 1

Notice of Intent to Discharge Storm Water from  
Technical Area 52 Solar Evaporation Tank

EPC-DO: 19-164

LA-UR-19-24659

Date:           MAY 22 2019

**NOTICE OF INTENT****1. Name and address of facility making the discharge.**

Los Alamos National Laboratory  
P.O. Box 1663  
Los Alamos, New Mexico 87545

**2. Location of the discharge (In Township, Range and Section, if available).**

Los Alamos National Laboratory, Technical Area 52, Solar Evaporation Tank  
Approximate coordinates: 35°51' 36" North, 106 °17'14" West  
Township-19 North, Range-6 East, Section-22

**3. The means of discharge. (To lagoon, Flowing stream, Watercourse, Arroyo, Septic tank, other).**

The Technical Area 52 Solar Evaporation Tank (SET) primary liner is being replaced in accordance with Ground Water Discharge Permit DP-1132. Accumulated storm water must be pumped from the SET to facilitate liner removal and replacement. Accumulated storm water will be pumped, as needed, from each of the SET's two constructed cells to the vegetated area to the east. Best Management Practices will be utilized throughout the discharge to minimize environmental impacts. A silt sock will be placed at the discharge point to prevent the discharge of sediment and gravel bags will be used to prevent erosion and promote infiltration. The discharge will be monitored while storm water pumping is conducted. The discharge is not expected to reach a watercourse and will not adversely impact any Solid Waste Management Units, Areas of Concern or National Pollutant Discharge Elimination Storm Water Individual Permit Sites.

**4. The estimated concentration of contaminants (if any) in the discharge.**

The TA-52 SET was installed in 2012, but has never but put into use. Water accumulated in SET is direct precipitation from rain and snowmelt received at the site.

**5. The type of operation from which the discharge is derived.**

The liner is being replaced to fulfill Ground Water Discharge Permit DP-1132 conditions.

**6. The estimated flow to be discharged per day.**

The amount of storm water that will require pumping from the SET will depend on the amount of precipitation received at the site. It is estimated that up to 50,000 gallons of storm water may need to be discharged from the SET in order to replace the liner.

**7. The estimated depth to Ground Water (if available).**

Approximately 1,330 feet to the regional aquifer as measured at nearby groundwater monitoring well R-46.



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**National Nuclear Security Administration**  
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*Symbol:* EPC-DO: 19-162  
*LA-UR:* 19-24296  
*Locates Action No.:* U1801172  
*Date:* **JUN 03 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

**GROUND WATER**  
**JUN 03 2019**  
**BUREAU**

**Subject: DP-1132, Condition No. 7, Verification of Secondary Containment, May 2019 Revision**

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 and Triad National Security, LLC (DOE/Triad) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF).

Pursuant to permit Condition No. 7, *Verification of Secondary Containment*, DOE/Triad are required to submit verification that all units intended to convey, store, treat or dispose of untreated liquid or semi-liquid waste streams meet the requirements of secondary containment. In November 2018 DOE/Triad identified six secondary containment units without leak detection systems. Installation of those six systems has been completed; DOE/Triad can now verify that all treatment, storage, and conveyance units at the RLWTF have secondary containment. The attached Verification of Secondary Containment Report provides information on each unit and its associated secondary containment (Attachment 1).

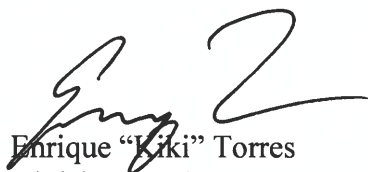
On November 27, 2018, DOE/Triad reported to NMED that six of the 81 secondary containment units at the RLWTF did not have functioning leak detection systems (Attachment 2). DOE/Triad committed to complete the design of the missing systems within 90 days.

On March 20, 2019, DOE/Triad provided a status update to NMED on the six missing leak detection systems (Attachment 3). DOE/Triad reported that the design work was complete and installation would be finished by June 15, 2019.

This correspondence informs the NMED that the six leak detection systems have been installed and that all units intended to convey, store, treat or dispose of untreated liquid or semi-liquid waste streams meet the requirements in Discharge Permit DP-1132 for secondary containment.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this 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, Verification of Secondary Containment Report, May 2019  
Revision  
Attachment 2 DP-1132, Condition No. 7, Verification of Secondary Containment,  
November 19, 2018  
Attachment 3 DP-1132, Status Update, Condition No. 7, Verification of Secondary  
Containment, March 20, 2019

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# **ATTACHMENT 1**

**DP-1132, Verification of Secondary Containment Report,  
May 2019 Revision**

**EPC-DO-19-162**

**LA-UR-19-24296**

**Date:                     JUN 03 2019**

**Discharge Permit DP-1132**  
**Condition No. 7: Verification of Secondary Containment**  
**Radioactive Liquid Waste Treatment Facility (RLWTF)**

—  
**May 2019 Update**

**Purpose**

This report verifies secondary containment for all units and systems that convey, store, treat, or dispose of an untreated liquid or semi-liquid waste stream at the Radioactive Liquid Waste Treatment Facility (RLWTF) meet the requirements of secondary containment as defined in Ground water Discharge DP-1132.

**Requirements**

Discharge Permit DP-1132 requires Los Alamos National Laboratory (LANL) to verify secondary containment by 11-27-2018. Permit requirements are listed below:

- Condition 7 requires LANL submit to the New Mexico Environment Department (NMED) verification demonstrating that all units intended to convey, store, treat, or dispose of an untreated liquid or semi-liquid waste stream meet the requirements of secondary containment as defined in DP-1132.
- Definition Y of DP-1132 defines secondary containment as a constructed unit or system designed to prevent any migration of waste streams or accumulated liquid out of the unit or system to the soil, ground water, or surface water at any time.
- Definition Y of DP-1132 adds that secondary containment can include, but is not limited to: double-walled pipes, concrete and floors equipped with sumps and alarm systems to detect potential leaks.



- Definition Y of DP-1132 also states that secondary containment must be:
  - Designed, constructed, and maintained to surround the unit on sides and bottom;
  - Free of cracks, gaps, or fissures;
  - Constructed of, or lined with, materials that are compatible with the waste streams to be in contact with the unit or system;
  - Placed on a foundation or base capable of withstanding pressure gradients, settling or uplift which may cause failure of the unit or system; and
  - Equipped with a leak detection system that is designed and operated so that it will detect the failure of the primary containment structure.

### **Scope of the Secondary Containment Survey**

The secondary containment verification conducted by LANL included all facilities and systems regulated by DP-1132:

- Underground collection systems (piping and access vaults) at six LANL Technical Areas: TA-03, TA-35, TA-48, TA-50, TA-55, TA-59;
- Treatment units and systems in five buildings at TA-50 (Buildings 1, 2, 66, 248, and 250);
- The three treatment processes as described in the application for DP-1132: the main treatment process, the transuranic radioactive liquid waste (RLW) treatment process, and the secondary treatment process;
- Seventeen treatment units within the three treatment processes.

### **Treatment Processes**

The RLWTF receives and treats RLW from generators at LANL. The RLWTF has a main treatment process for low-level RLW, a process for treating transuranic RLW, and a secondary treatment process for waste streams from both the low-level and transuranic processes.

The main treatment process consists of influent collection and storage, the treatment of low-level RLW, and the discharge of treated effluent. Process steps include treatment with chemicals in a reaction tank, filtration, ion exchange, and reverse osmosis. Treated effluent is sampled and analyzed prior to discharge. Two secondary streams are generated by primary treatment, solids precipitated in the reaction tanks, and reverse osmosis concentrate. Both are sent to the secondary treatment process.

Transuranic RLW treatment consists of influent collection and storage, treatment of the transuranic RLW, and sludge treatment. Treated transuranic RLW cannot be discharged because it exceeds Department of Energy (DOE), Environmental Protection Agency (EPA), or NMED effluent limits. (e.g., Radioactivity levels in treated transuranic RLW can exceed levels found in low-level RLW influent.) Instead, treated transuranic RLW must be re-treated in the main or secondary treatment processes. Solids from the treatment process are concentrated, solidified with cement, and shipped to the Waste Isolation Pilot Plant (WIPP) for disposal as a transuranic waste.

The secondary process treats wastes from the primary and transuranic treatment process lines. It consists of a vacuum filter to treat solids from main process, secondary reverse osmosis to treat RO concentrate from the main process and/or treated transuranic RLW, and a bottoms disposal step. Wastes from the secondary treatment process are disposed as low-level radioactive solid waste.

### Treatment Units

Units within each of these process lines are summarized in Table 1, and discussed in the following pages.

**TABLE 1: RLWTF TREATMENT PROCESSES AND UNITS**

Treatment Unit	Location
<b>Main Treatment:</b>	
M1 Collection system	TA-03, 35, 48, 50, 55, 59
M2 Influent storage	50-250
M3 Emergency influent storage	50-250
M4 Reaction tanks	50-01
M5 Microfilter	50-01
M6 Pressure filters	50-01
M7 Perchlorate ion exchange	50-01
M8 Primary reverse osmosis	50-01
M10 Effluent storage	50-01
<b>Transuranic:</b>	
T1 TRU Collection system	TA50, 55
T2 TRU Influent storage	50-66
T3 TRU Treatment	50-01
T4 TRU Sludge	50-01
T5 TRU Effluent	50-01
<b>Secondary Treatment:</b>	
S1 Secondary reverse osmosis	50-01
S2 Rotary vacuum filter	50-01
S3 Bottoms storage	50-248

Location: Technical Area – Building (e.g., 50-248)

Table 1 does not list treatment unit M9, copper-zinc ion exchange, because this treatment step is no longer used. Nor does Table 1 include units that convey or store treated water to be discharged to the environment, in accordance with DP-1132 Condition 7. Specifically, it does not list Outfall 051, the mechanical evaporator system (MES), or the solar evaporation tank (SET).

### **Vessels and Secondary Containment**

Table 2 expands upon the treatment unit summary provided in Table 1. Table 2 lists vessels associated with each treatment unit, vessel location, and information about each vessel and its secondary containment.

Vessels include water treatment equipment (e.g., the microfilter) and tanks associated with the unit (e.g., the sludge tank and cleaning tanks). Each vessel is described by capacity, material of construction, and whether the vessel is above ground, on the ground (or floor), or inground. Definition CC of DP-1132 defines these three terms, as they apply to tanks.

Table 2 also describes the secondary containment provided for each vessel, by identifying the type of secondary containment, its material of construction, and the leak detection alarm that notifies RLWTF personnel of the presence of water in the secondary containment.

### **Survey Summary**

The report of November 2018 had identified six rooms in Building 50-01 that were not equipped with leak detection systems. Leak detection systems have now been installed in those rooms.

The installation of the new leak detection systems now allows the RLWTF to confirm that secondary containment is in place for all units and systems that “convey, store, treat, or dispose of an untreated liquid or semi-liquid waste stream”.

**Table 2: RLWTF Vessels and Secondary Containment**

Treatment Unit	Vessel(s)	Location	Vessel			Secondary Containment		
			Capacity (gals.)	Category	Material	Structure	Material	Leak Detection
<b>Main Treatment:</b> M1 Collection system	Piping (~ 4 miles) Vaults (63) CS piping	Six TAs Six TAs 50-250-04	---	Inground	Polyethylene	Pipe	Polyethylene	63 alarms
			---	Inground	Concrete	Floor	Concrete	63 alarms
M2 Influent storage	CS piping 1-TK1	50-01-71A	---	Aboveground	HDPE	Pipe	HDPE	250-BW_to_WMRM 250-
M3 Emergency influent storage	TK-W5, W6 Xfer piping TK-W1, W2, W3, W4	50-01-71A	---	Aboveground	HDPE	Pipe	HDPE	BW_from_WMRM
		50-250-01	3,000	Onground	Steel	Floor	Concrete	250_SMP1
		50-250-03	50,000 ea.	Aboveground	Fiberglass	Floor	Concrete	250_SMP3
		50-250-04	---	Inground	Polyethylene	Pipe	Polyethylene	250_Inf, 250_Eff
M4 Reaction Tanks	TK71, TK72	50-250-03	50,000 ea.	Aboveground	Fiberglass	Floor	Concrete	250_SMP3
M5 Microfilter	CST1, CST2 Filter Concentrate tank Cleaning tanks (2) Filters (3)	50-01-70	10,000 ea.	Aboveground	Steel	Floor	Concrete	RUF_71A_A1
		50-01-16	4,800	Onground	Steel	Floor	Concrete	SMP_16_A2
		50-01-70	40	Aboveground	Steel	Floor	Concrete	RUF_71A_A1
		50-01-70	500	Onground	Polyethylene	Floor	Concrete	RUF_71A_A1
M6 Pressure filters	IX vessels (8) TK09 R72 RO unit R72 CIP tank M8 RO unit M8 CIP tank	50-01-70	400	Onground	Polyethylene	Floor	Concrete	RUF_71A_A1
		50-01-63	300	Aboveground	Lined Steel	Floor	Concrete	RUF_71A_A1
		50-01-16	400	Aboveground	Fiberglass	Floor	Concrete	SMP_16_A2
		50-01-62	10,000	Aboveground	Steel	Floor	Concrete	SMP_16_A1
M8 Primary reverse osmosis	R72 RO unit R72 CIP tank M8 RO unit M8 CIP tank	50-01-72	40	Aboveground	Steel	Floor	Concrete	SMP_62_A1
		50-01-72	500	Aboveground	Polyethylene	Floor	Concrete	RUF_71A_A1
		50-01-36	60	Aboveground	Fiberglass	Floor	Concrete	RUF_71A_A1
		50-01-36	300	Aboveground	Polyethylene	Floor	Concrete	SMP_36_A1
M9 Reserved								
M10 Effluent storage	N.Frac, S.Frac	50-01-34B	20,000	Aboveground	Steel	Floor	Concrete	SMP_34B_A1
M11 Effluent evaporator	----	50-257	1,200	Aboveground	S.Steel	Floor	Hypalon, Asphalt HDPE,	--
M11 Solar evaporation	E.Tank, W.Tank	TA52	380,000	Inground	HDPE	Liner	Concrete	ID
M11 NPDES Outfall #051	----	Canyon	---	Inground	---	---	---	--

Notes: See Page 6.

**Table 2: RLWTF Vessels and Secondary Containment (concluded)**

Treatment Unit	Vessel(s)	Location	Vessel			Secondary Containment			
			Capacity (gals.)	Category	Material	Structure	Material	Leak Detection	
<b>Transuranic:</b> T1 TRU Collection system T2 TRU Influent storage T3 TRU Treatment T4 TRU Solids T5 TRU Effluent	Piping (~1 mile) Vaults (1) Acid tank Caustic tank	TA50, TA55	---	Inground	PVDF, PP	Pipe	PVDF, PP	CTL_WM57_A1	
		50-201	---	Inground	Concrete	Floor	Concrete	CTL_WM57_A1	
	TK1 TK2 TK-7A TK3	50-66	3,900	Aboveground	Steel	Floor	Concrete	CTL_WM66_A4	
		50-66	3,000	Aboveground	Steel	Floor	Concrete	CTL_WM66_A4	
		50-01-60	900	Aboveground	Steel	Floor	Concrete	SMP_60_A1	
T4 TRU Solids T5 TRU Effluent	TK-7A TK3	50-01-60	800	Aboveground	Fiberglass	Floor	Concrete	SMP_60_A1	
		50-01-60A	900	Aboveground	Steel	Floor	Concrete	SMP_60A_A2	
		50-01-60	1,000	Aboveground	Fiberglass	Floor	Concrete	SMP_60_A1	
<b>Secondary Treatment:</b> S1 Secondary reverse osmosis S2 Vacuum filter S3 Bottoms storage	RO vessel TK25 TK73	50-01-24	10	Aboveground	Fiberglass	Floor	Concrete	SMP_24-A1	
		50-01-24	300	Aboveground	Polyethylene	Floor	Concrete	SMP_24-A1	
		50-01-70	3,700	Aboveground	Steel	Floor	Concrete	RUF_71A_A1	
	Vacuum filter TK14, TK15 TK08	50-01-116	150	Aboveground	S.Steel	Floor	Concrete	SMP_16_A2	
		50-01-116	800	Aboveground	Steel	Floor	Concrete	SMP_16_A2	
		50-01-61	8,000	Aboveground	Steel	Floor	Concrete	SMP-61-A1	
	TK-NE, SE, SW, NW 3K tank 17K tank	50-248	20,000	ea.	Aboveground	Steel	Floor	Concrete	SMP_TKF_A2
		50-248	3,000	Aboveground	Steel	Floor	Concrete	SMP_TKF_A2	
		50-02	17,000	Aboveground	Steel	Floor	Concrete	SMP_WM2_A2	

Notes:

1. Location: Technical Area-Bldg-Room
2. Vessel category per definition CC of DP-1132: Aboveground, Onground, Inground
3. Collection systems: Each access vault is equipped with a sump and leak detection probe-alarm
4. Leak detection: ID means in design.
5. **Red** indicates changes since November 2019.
6. S Steel means stainless steel.
7. HDPE means high-density polyethylene.
8. PVDF means polyvinylidene fluoride.
9. PP means polypropylene.

# **ATTACHMENT 2**

**DP-1132, Condition No. 7,  
Verification of Secondary Containment  
November 19, 2018**

**EPC-DO-19-162**

**LA-UR-19-24296**

**Date:                     JUN 03 2019**



**COPY**



GROUND WATER  
NOV 19 2018  
BUREAU

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*Symbol:* EPC-DO-18-403  
*LA-UR:* 18-30432  
*Locates Action No.:* U1801172  
*Date:* **NOV 19 2018**

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

**Subject: DP-1132, Condition No. 7, Verification of Secondary Containmentment**

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 and Los Alamos National Security, LLC (subsequently transferred to Triad National Security, LLC) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to permit Condition No. 7, *Verification of Secondary Containmentment*, the U.S. Department of Energy and Triad National Security, LLC (DOE/Triad) is required to submit to NMED by November 27, 2018, verification that all units intended to convey, store, treat or dispose of untreated liquid or semi-liquid waste streams meet the requirements of secondary containment as defined in Discharge Permit DP-1132.

Enclosure 1 documents that all treatment, storage, and conveyance units at the RLWTF have secondary containment. The majority of those secondary containments—63 out of 81—are associated with the Radioactive Liquid Waste Collection System (RLWCS). The remaining 18 secondary containments are located within buildings and rooms at Technical Area (TA)-50. Presently, six of these 18 secondary containments do not have functioning leak detection systems, as required by permit Condition No. 7.



Ms. Michelle Hunter  
EPC-DO-18-403

- 2 -

Planning and design are underway for installation of the missing leak detection systems. The design effort will take approximately 90 days. Once the design has been completed, a schedule for installing the additional detection systems will be prepared.

The RLWTF has round-the-clock knowledge of the status of vessels within TA-50 through other facility monitoring systems. For example, tank levels are continuously monitored and an unexpected level drop will generate an alarm that requires a response by the on-call duty operator. In addition, Rooms 60, 60A, and 61 are equipped with continuous radiation monitoring instruments that would sound an alarm if a vessel develops a leak.

In the interim, until the missing leak detection systems are installed, the listed rooms will be inspected at least once each work day. In addition, a revised secondary containment verification report will be submitted with each Discharge Permit DP-1132 quarterly monitoring report until all leak detection systems are installed and operational.

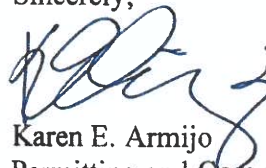
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this submittal.

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

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Enclosure(s): (1) DP-1132, Verification of Secondary Containment

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Ms. Michelle Hunter  
EPC-DO-18-403

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# **ENCLOSURE 1**

**DP-1132, Verification of Secondary Containment**

**EPC-DO: 18-403**

**LA-UR-18-30432**

**Date: NOV 19 2018**

**Discharge Permit DP-1132  
Condition No. 7: Verification of Secondary Containment  
Radioactive Liquid Waste Treatment Facility (RLWTF)**

—  
**November 2018**

**Purpose**

This report verifies secondary containment for all units and systems that convey, store, treat, or dispose of an untreated liquid or semi-liquid waste stream at the Radioactive Liquid Waste Treatment Facility (RLWTF) meet the requirements of secondary containment as defined in Discharge Permit DP-1132.

**Requirements**

Discharge Permit DP-1132 requires Los Alamos National Laboratory (LANL) to verify secondary containment by November 27, 2018. Permit requirements are listed below:

- Condition 7 of DP-1132 requires that LANL submit to the New Mexico Environment Department (NMED) verification demonstrating that all units intended to convey, store, treat, or dispose of an untreated liquid or semi-liquid waste stream meet the requirements of secondary containment as defined in DP-1132.
- Definition Y of DP-1132 defines secondary containment as a constructed unit or system designed to prevent any migration of waste streams or accumulated liquid out of the unit or system to the soil, ground water, or surface water at any time.
- Definition Y of DP-1132 adds that secondary containment can include, but is not limited to: double-walled pipes, concrete and floors equipped with sumps and alarm systems to detect potential leaks.
- Definition Y of DP-1132 states that secondary containment must be:
  - Designed, constructed and maintained to surround the unit on sides and bottom;
  - Free of cracks, gaps, or fissures;
  - Constructed of, or lined with, materials that are compatible with the waste streams to be in contact with the unit or system;
  - Placed on a foundation or base capable of withstanding pressure gradients, settling or uplift which may cause failure of the unit or system; and
  - Equipped with a leak detection system that is designed and operated so that it will detect the failure of the primary containment structure.

### **Scope of the Secondary Containment Survey**

The secondary containment verification included all facilities and systems regulated by Discharge Permit DP-1132:

- Underground collection systems (piping and access vaults) at six LANL Technical Areas: TA-03, TA-35, TA-48, TA-50, TA-55, TA-59;
- Treatment units and systems in five buildings at TA-50 (Buildings 1, 2, 66, 248, and 250);
- The three treatment processes as described in Discharge Permit DP-1132: the main treatment process, the transuranic radioactive liquid waste (RLW) treatment process, and the secondary treatment process;
- The seventeen treatment units within the three treatment processes.

### **Treatment Processes**

The RLWTF receives and treats RLW from generators at LANL. The RLWTF has a main treatment process for low-level RLW, a process for treating transuranic RLW, and a secondary treatment process for waste streams from both the low-level and transuranic processes.

The main treatment process consists of influent collection and storage, the treatment of low-level RLW, and the discharge of treated water to the environment. Process steps include treatment with chemicals in a reaction tank, filtration, ion exchange, reverse osmosis, and the sampling and analysis of treated water prior to discharge. Two secondary streams are generated by primary treatment, solids precipitated in the reaction tanks, and reverse osmosis concentrate. Both are sent to the secondary treatment process.

Transuranic RLW treatment consists of influent collection and storage, treatment of the transuranic RLW, and sludge treatment. Treated transuranic RLW cannot be discharged to the environment because it exceeds DOE, EPA, and NMED effluent limits (e.g., Radioactivity levels in treated transuranic RLW can exceed levels found in low-level RLW influent). Instead, treated transuranic RLW must be re-treated in the main or secondary treatment processes. Solids from the treatment process are concentrated, solidified with cement, and shipped to the Waste Isolation Pilot Plant (WIPP) for disposal as a transuranic waste.

The secondary process treats wastes from the primary and transuranic treatment lines. It consists of a vacuum filter to treat solids from main process, secondary reverse osmosis to treat RO concentrate from the main process and/or treated transuranic RLW, and a bottoms disposal step. Wastes from the secondary treatment process are disposed as low-level radioactive solid waste.

## Treatment Units

Units within each of these process lines are summarized in Table 1, and discussed in the following pages.

**TABLE 1: RLWTF TREATMENT PROCESSES AND UNITS**

Treatment Unit	Location
<b>Main Treatment:</b>	
M1 Collection system	TA-03, 35, 48, 50, 55, 59
M2 Influent storage	50-250
M3 Emergency influent storage	50-250
M4 Reaction tanks	50-01
M5 Microfilter	50-01
M6 Pressure filters	50-01
M7 Perchlorate ion exchange	50-01
M8 Primary reverse osmosis	50-01
M10 Effluent storage	50-01
<b>Transuranic:</b>	
T1 TRU Collection system	TA50, 55
T2 TRU Influent storage	50-66
T3 TRU Treatment	50-01
T4 TRU Sludge	50-01
T5 TRU Effluent	50-01
<b>Secondary Treatment:</b>	
S1 Secondary reverse osmosis	50-01
S2 Rotary vacuum filter	50-01
S3 Bottoms storage	50-248

Location: Technical Area – Building (e.g., 50-248)

Table 1 does not list treatment unit M9, copper-zinc ion exchange, because this treatment step is no longer used. Nor does Table 1 include units that convey or store treated water to be discharged to the environment, in accordance with DP-1132 Condition 7. Specifically, it does not list the NPDES Outfall 051, the mechanical evaporator system (MES), or the solar evaporation tank (SET).

### **Vessels and Secondary Containment**

Table 2 expands upon the treatment unit summary provided in Table 1. Table 2 lists vessels associated with each treatment unit, vessel location, and information about each vessel and its secondary containment.

Vessels include water treatment equipment (e.g., the microfilter) and tanks associated with the unit (e.g., the sludge tank and cleaning tanks). Each vessel is described by capacity, material of construction, and whether the vessel is above ground, on the ground (or floor), or in-ground. Definition CC of Discharge Permit DP-1132 defines these three terms, as they apply to tanks.

Table 2 also describes the secondary containment provided for each vessel, by identifying the type of secondary containment, its material of construction, and the leak detection alarm that notifies RLWTF personnel of the presence of water in the secondary containment.

### **Survey Summary**

The survey confirmed that secondary containment is in place for all units and systems that convey, store, treat, or dispose of an untreated liquid or semi-liquid waste stream. However, the following rooms in Building 50-01 do not have the required leak detection systems:

- Room 24, location of the secondary reverse osmosis treatment unit
- Room 36, location of the double-pass M8 reverse osmosis unit
- Room 61, used for storage of low-level solids (TK08)
- Rooms 60 and 60A, location of equipment for the treatment of transuranic RLW
- Room 62, used for storage of RLW that has been chemically treated and filtered (TK09)

Planning and design is underway for the installation of the required leak detection system in these rooms. The design effort will take approximately 90 days. Once the design has been completed, a schedule for installing the additional detection systems will be prepared.

The RLWTF has round-the-clock knowledge of the status of vessels within these rooms through the other facility monitoring systems. For example, tank levels are continuously monitored, and unexpected level drops generate an alarm that requires a response by an on-call duty operator. In addition, Rooms 60, 60A, and 61 are equipped with continuous radiation monitoring instruments that would sound an alarm if a vessel develops a leak.

In the interim, until the leak detection alarms are installed, the listed rooms will be inspected at least once each work day. In addition, a revised secondary verification report will be submitted with each DP-1132 quarterly monitoring report, until leak detection systems are installed.

**Table 2: RLWTF Vessels and Secondary Containment**

Treatment Unit	Vessel	Location	Vessel			Secondary Containment		
			Capacity (gals.)	Category	Material	Structure	Material	Leak Detection
<b>Main Treatment:</b> M1 Collection system M2 Influent storage M3 Emergency influent storage M4 Reaction Tanks M5 Microfilter M6 Pressure filters M7 Perchlorate ion exchange M8 Primary reverse osmosis M1 Effluent storage	Piping (~ 4 miles) Vaults (63)	Six TAs Six TAs	---	In-ground	Polyethylene	Pipe	Polyethylene	63 alarms
	WARM tanks (2) Xfer piping	50-250-003 50-250-004	50,000	In-ground	Concrete	Floor	Concrete	63 alarms
	Xfer pump room	50-250-001	---	Aboveground	Fiberglass	Floor	Concrete	PLC250_SMP3
	WARM tanks (4)	50-250-003	---	In-ground	Polyethylene	Pipe	Polyethylene	250_Inf, 250_Eff
	TK71, TK72	50-250-003	50,000	Aboveground	Steel	Floor	Concrete	PLC250_SMP1
	Filter	50-01-70	10,000	Aboveground	Fiberglass	Floor	Concrete	PLC250_SMP3
	Sludge tank	50-01-70	40	Aboveground	Steel	Floor	Concrete	RUF_71A_A1
	Cleaning tanks (2)	50-01-70	500	On-ground	Polyethylene	Floor	Concrete	RUF_71A_A1
	Filters (3)	50-01-63	200	On-ground	Polyethylene	Floor	Concrete	RUF_71A_A1
	IX vessels (8)	50-01-16	100	Aboveground	Lined Steel	Floor	Concrete	SMP_16_A2
<b>Transuranic:</b> T1 TRU Collection system T2 TRU Influent storage T3 TRU Treatment T4 TRU Sludge T5 TRU Effluent	TK09	50-01-62	50	Aboveground	Fiberglass	Floor	Concrete	SMP_16_A2
	R72 RO unit	50-01-72	10,000	Aboveground	Steel	Floor	Concrete	F
	R72 CIP tank	50-01-72	40	Aboveground	Steel	Floor	Concrete	RUF_71A_A1
	M8 RO unit	50-01-36	500	Aboveground	Polyethylene	Floor	Concrete	RUF_71A_A1
	M8 CIP tank	50-01-36	60	Aboveground	Fiberglass	Floor	Concrete	F
	N.Frac, S.Frac	50-01-36	300	Aboveground	Polyethylene	Floor	Concrete	F
	Piping (~1 mile) Vaults (1)	TA50, TA55 50-201	20,000	Aboveground	Steel	Floor	Concrete	SMP_34B_A1
	Acid tank	50-66	---	In-ground	PVDF, PP	Pipe	PVDF, PP	CTL_WM57_A1
	Caustic tank	50-66	---	In-ground	Concrete	Floor	Concrete	CTL_WM57_A1
	TK1	50-01-60	3,900	Aboveground	Steel	Floor	Concrete	CTL_WM66_A4
TK2	50-01-60	3,000	Aboveground	Steel	Floor	Concrete	CTL_WM66_A4	
TK-7A	50-01-60A	900	Aboveground	Steel	Floor	Concrete	F	
TK3	50-01-60	800	Aboveground	Fiberglass	Floor	Concrete	F	
		900	Aboveground	Steel	Floor	Concrete	F	
		1,000	Aboveground	Fiberglass	Floor	Concrete	F	

Notes: See Page 6

**Table 2: RLWTF Vessels and Secondary Containment (concluded)**

Treatment Unit	Vessel	Location	Vessel			Secondary Containment		
			Capacity (gals.)	Category	Material	Structure	Material	Leak Detection
<b>Secondary Treatment:</b> S1 Secondary reverse osmosis	RO vessel	50-01-24	10	Aboveground	Fiberglass	Floor	Concrete	F
	TK25	50-01-24	300	Aboveground	Polyethylene	Floor	Concrete	F
	TK73	50-01-70	3,700	Aboveground	Steel	Floor	Concrete	RUF_71A_A1
S2 Rotary vacuum filter	Vacuum filter	50-01-116	900	Aboveground	S.Steel	Floor	Concrete	SMP_16_A2
	TK08	50-01-61	8,000	Aboveground	Steel	Floor	Concrete	F
S3 Bottoms storage	TK-NE, SE, SW, NW	50-248	20,000	Aboveground	Steel	Floor	Concrete	SMP_TKF_A2
	3K tank	50-248	3,000	Aboveground	Steel	Floor	Concrete	SMP_TKF_A2
	17K tank	50-02	17,000	Aboveground	Steel	Floor	Concrete	SMP_WM2_A2

**Notes:**

1. Vessel Descriptions, per definition CC of DP-1132: Aboveground, On-ground, In-ground.
2. When multiple tanks or vessels are identified, capacity is for each vessel.
3. Collection systems: Each access vault is equipped with a sump and leak detection probe-alarm
4. Collection system:
  - Piping: leaks in primary pipe would drain into the next downstream access vault.
  - Access vaults: each is equipped with a sump and leak detection probe-alarm.
5. Location: Technical Area-Bldg-Room
6. F means a leak detection system for the listed containment needs to be installed.



# **ATTACHMENT 3**

**DP-1132, Status Update, Condition No. 7,  
Verification of Secondary Containment,  
March 20, 2019**

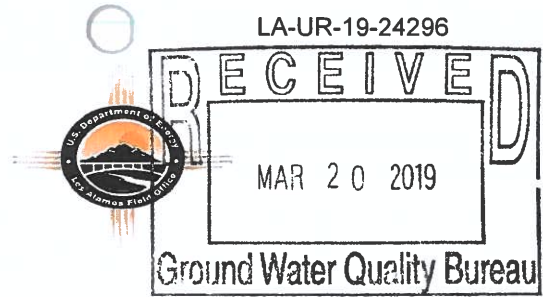
**EPC-DO-19-162**

**LA-UR-19-24296**

**Date: \_\_\_\_\_ JUN 03 2019**



COPY



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**Environmental Compliance Programs (EPC-CP)**  
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**National Nuclear Security Administration**  
**Los Alamos Field Office**  
 3747 West Jemez Road, A316  
 Los Alamos, New Mexico, 87544  
 (505) 665-7314/Fax (505) 667-5948

*Symbol:* EPC-DO-19-069

*LA-UR:* 19-21981

*Locates Action No.:* U1801172

*Date:* **MAR 20 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, Status Update, Condition No. 7, Verification of Secondary Containment**

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 and Los Alamos National Security, LLC (subsequently transferred to Triad National Security, LLC) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to permit Condition No. 7, *Verification of Secondary Containment*, the U.S. Department of Energy and Triad National Security, LLC (DOE/Triad) were required to submit to NMED by November 27, 2018 verification that all units intended to convey, store, treat, or dispose of untreated liquid or semi-liquid meet the requirements of secondary containment, as defined in Discharge Permit DP-1132. In a November 19, 2018 letter (Attachment 1), DOE/Triad submitted the required verification to NMED. In summary, the above-referenced letter communicated the following:

1. The RLWTF has secondary containment for all units and systems intended to convey, store, treat, or dispose of an untreated liquid or semi-liquid.
2. Six rooms at the RLWTF do not have the required leak detection systems.
3. Designs for the missing leak detection systems would be completed in ~90 days.
4. An installation schedule would be submitted to NMED when the design was complete.

Ms. Michelle Hunter  
EPC-DO-19-069

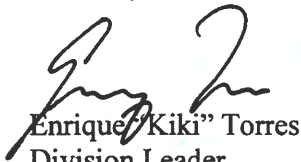
- 2 -

**MAR 20 2019**

The designs for leak detection systems in the six rooms identified in the above-referenced November 19, 2018, letter (Attachment 1) have been completed, and installation will be finished by June 15, 2019. Upon completion of work, a revised secondary containment verification report will be submitted to NMED.

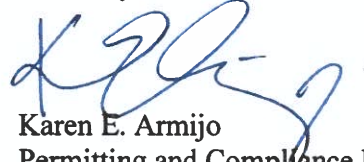
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this update.

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, Condition No. 7, Verification of Secondary Containment

Copy: Shelly Lemon, NMED/SWQB, [Shelly.Lemon@state.nm.us](mailto:Shelly.Lemon@state.nm.us), (E-File)  
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**Michelle Lujan Grisham**  
Governor

**Howie C. Morales**  
Lieutenant Governor

**NEW MEXICO  
ENVIRONMENT DEPARTMENT**

Ground Water Quality Bureau

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[www.env.nm.gov](http://www.env.nm.gov)



**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

June 7, 2019

Taunia Van Valkenburg, Group Leader  
Los Alamos National Laboratory  
P.O. Box 1663  
Los Alamos, NM 87545  
Sent via E-mail: email address

**RE: Response to Notice of Intent to Discharge; Discharge Permit Not Required for Los Alamos National Laboratory, AI-856**

Dear Ms. Van Valkenburg:

The Ground Water Quality Bureau of the New Mexico Environment Department (NMED) received a Notice of Intent from you on May 22, 2019, regarding a proposed discharge of storm water from the Technical Area 52 Solar Evaporation Tank (SET) at Los Alamos National Laboratory. The proposed discharge is located approximately three miles southeast of Los Alamos, in Section 22, Township 19, Range 6E, Los Alamos County.

The notice satisfies the requirements of Subsection A of 20.6.2.1201 NMAC, Ground and Surface Water Protection Regulations (20.6.2 NMAC).

The proposed discharge is briefly described as follows:

The Technical Area 52 SET primary liner is being replaced in accordance with the Ground Water Discharge Permit, DP-1132. Accumulated stormwater must be pumped from the SET to facilitate liner removal and replacement. Approximately 50,000 gallons of accumulated stormwater will be pumped, as needed, from each of the SET's two constructed cells to the vegetated area to the east. Best Management Practices will be utilized throughout the discharge to minimize environmental impacts. A silt sock will be placed at the discharge point to prevent the discharge of sediment and gravel bags will be used to prevent erosion and promote infiltration. The discharge will be monitored while stormwater pumping is conducted. It is NMED's understanding that waste effluent has never been placed in the SET and therefore the accumulated stormwater contains no waste constituents.

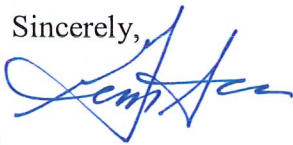
Based on the information provided in your Notice of Intent, NMED has determined that a Discharge Permit is not required as long as the discharge is as described. A Discharge Permit is not required at this time because the information provided indicates it is unlikely that the discharge will adversely affect ground water quality.

Although a Discharge Permit is not being required for this discharge at this time, you are not relieved of liability should your operation result in actual pollution of surface or ground waters. Further, this decision by NMED does not relieve you of your responsibility to comply with any other applicable federal, state, and/or local laws and regulations, zoning requirements, plumbing codes, and nuisance ordinances.

If at some time in the future you intend to change the amount, character or location of your discharge, or if observation or monitoring shows that the discharge is not as described in your Notice of Intent, you must file a revised Notice of Intent with the Ground Water Quality Bureau.

If you have any questions, please contact either Andrew Romero at (505) 827-0076 or Steve Pullen, Program Manager of the Ground Water Pollution Prevention Section, at (505) 827-2962.

Sincerely,



*gh* Michelle Hunter, Chief  
Ground Water Quality Bureau

MH:AR

cc: Steve Pullen, Program Manager  
Robert Italiano, District Manager, NMED District II  
County File





**COPY**



*Environmental Protection & Compliance Division  
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(505) 667-2211

*National Nuclear Security Administration  
Los Alamos Field Office*  
3747 West Jemez Road, A316  
Los Alamos, New Mexico, 87544  
(505) 665-7314 /Fax (505) 667-5948

Symbol: EPC-DO: 19-161  
LA-UR: 19-24391  
Locates Action No.: U1801172  
Date: **JUN 12 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

**GROUND**  
**JUN 12 2019**  
**BUREAU**

**Subject: DP-1132, Condition No. 8, Completion of Water Tightness Test, Outfall 051 Pipeline**

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 and Triad National Security, LLC (DOE/Triad) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to permit Condition No. 8, *Water Tightness Testing*, DOE/Triad was required to demonstrate that the pipeline conveying treated wastewater from the TA-50 RLWTF to Outfall 051—a pipeline without secondary containment—is not leaking. Further, Condition No. 8 stipulates that the tightness test shall be completed by February 25, 2019, 180 days after permit issuance.

Under Discharge Permit DP-1132, Condition No. 53, *Extensions of Time*, DOE/Triad may request from NMED an extension of time in which to perform a permit obligation. On January 23, 2019, DOE/Triad submitted a written request (Attachment 1) to NMED for an extension of time until June 25, 2019, to complete water tightness testing of the pipeline connecting the TA-50 RLWTF and Outfall 051. On April 3, 2019, NMED approved the extension of time request (Attachment 2).

On May 24, 2019, DOE/Triad successfully completed the water tightness test of the pipeline from the RLWTF to Outfall 051. As required by Condition No. 8, test procedures and findings shall be submitted to NMED in the DP-1132 Annual Update Report (Due date: February 1, 2020).



**Environmental Protection & Compliance Division**  
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Los Alamos, New Mexico 87545  
(505) 667-2211

**National Nuclear Security Administration**  
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Ms. Michelle Hunter, Chief  
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Harold Runnels Building, Room N2261  
1190 St. Francis Drive  
P.O. Box 26110  
Santa Fe, NM 87502

**Subject: DP-1132, Condition No. 8, Completion of Water Tightness Test, Outfall 051 Pipeline**

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 and Triad National Security, LLC (DOE/Triad) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to permit Condition No. 8, *Water Tightness Testing*, DOE/Triad was required to demonstrate that the pipeline conveying treated wastewater from the TA-50 RLWTF to Outfall 051—a pipeline without secondary containment—is not leaking. Further, Condition No. 8 stipulates that the tightness test shall be completed by February 25, 2019, 180 days after permit issuance.

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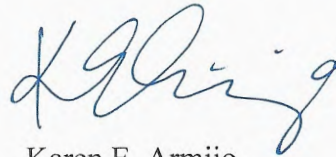
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this notification.

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, Condition No. 53, Request for an Extension of Time to Complete Outfall 051 Pipeline Water Tightness Testing  
Attachment 2 Approval of DP-1132, Condition No. 53, Request for an Extension of Time

Copy: Shelly Lemon, NMED/SWQB, [Shelly.Lemon@state.nm.us](mailto:Shelly.Lemon@state.nm.us), (E-File)  
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Michael W. Hazen, ALDESHQSS, [mhazen@lanl.gov](mailto:mhazen@lanl.gov), (E-File)  
William R. Marison, ADESHQSS, [wmairson@lanl.gov](mailto:wmairson@lanl.gov), (E-File)  
Enrique Torres, EPC-DO, [etorres@lanl.gov](mailto:etorres@lanl.gov), (E-File)  
William H. Schwettmann, IPM, [bills@lanl.gov](mailto:bills@lanl.gov), (E-File)  
Randal S. Johnson, DESHF-TA55, [randyj@lanl.gov](mailto:randyj@lanl.gov), (E-File)  
Denise C. Gelston, TA-55-RLW, [dgelston@lanl.gov](mailto:dgelston@lanl.gov), (E-File)  
Alvin M. Aragon, TA-55-RLW, [alaragon@lanl.gov](mailto:alaragon@lanl.gov), (E-File)  
John C. Del Signore, TA-55-RLW, [jcds@lanl.gov](mailto:jcds@lanl.gov), (E-File)  
Michael T. Saladen, EPC-CP, [saladen@lanl.gov](mailto:saladen@lanl.gov), (E-File)  
Robert S. Beers, EPC-CP, [bbeers@lanl.gov](mailto:bbeers@lanl.gov), (E-File)  
[locatesteam@lanl.gov](mailto:locatesteam@lanl.gov), (E-File)  
[epc-correspondence@lanl.gov](mailto:epc-correspondence@lanl.gov), (E-File)



# **ATTACHMENT 1**

DP-1132, Condition No. 53, Request for an Extension of  
Time to Complete Outfall 051 Pipeline  
Water Tightness Testing

EPC-DO: 19-161

LA-UR-19-24391

Date:     **JUN 12 2019**



# COPY



**Environmental Protection & Compliance Division**  
**Environmental Compliance Programs (EPC-CP)**  
 PO Box 1663, K490  
 Los Alamos, New Mexico 87545  
 (505) 667-0666

**National Nuclear Security Administration**  
**Los Alamos Field Office**  
 3747 West Jemez Road, A316  
 Los Alamos, New Mexico, 87544  
 (505) 665-7314/Fax (505) 667-5948

Symbol: EPC-DO-19-010  
 LA-UR: 19-20278  
 Locates Action No.: U1801172  
 Date: **JAN 22 2019**

**GROUND WATER**

**JAN 23 2019**

**BUREAU**

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, Condition No. 53, Request for an Extension of Time to Complete Outfall 051 Pipeline Water Tightness Testing**

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 and Los Alamos National Security, LLC for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Subsequently, on November 1, 2018, DP-1132 was transferred to Triad National Security, LLC (DOE/Triad). Under Discharge Permit DP-1132, Condition No. 53, *Extensions of Time*, DOE/Triad may request from NMED an extension of time in which to perform a permit obligation. DOE/Triad must send a written request to NMED that states the length of the requested extension and describes the basis for the extension. Pursuant to permit Condition No. 53, DOE/Triad request an extension of time to complete water tightness testing of the pipeline connecting the TA-50 RLWTF and Outfall 051 in Mortandad Canyon.

Permit Condition No. 8 requires that DOE/Triad demonstrate that the pipeline conveying treated wastewater from the TA-50 RLWTF to Outfall 051—a pipeline without secondary containment—is not leaking. Further, Condition No. 8 stipulates that the tightness test shall be completed by February 25, 2019, 180 days after permit issuance. DOE/Triad request an extension of time for conducting water tightness testing for the following two reasons:

1. Between December 15, 2018, and January 15, 2019, Los Alamos National Laboratory received in excess of 36 inches of snow. The terminus of the outfall pipeline is down a north facing, very steep, dirt road. Access to the outfall prior to spring snow melt could presents significant safety concerns for LANL workers.
2. NPDES Outfall 051 is located within the Mexican Spotted Owl core habitat in Mortandad Canyon. The Mexican Spotted Owl is listed as a threatened species by the U.S. Fish and Wildlife Service. During the Mexican Spotted Owl's breeding season, noise disturbance is not permitted in its core habitat. Conducting work with heavy equipment or other noise-generating machinery is prohibited between March 1 and May 15.

Due to the factors listed above, DOE/Triad estimate that an additional four months will be required to complete water tightness testing of the pipeline to Outfall 051. Accordingly, DOE/Triad request an extension of time until June 25, 2019.

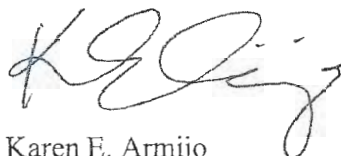
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto:bbeers@lanl.gov) if you have questions regarding this request.

Very truly yours,



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

Very truly yours,



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

TVV/KEA/MTS/RSB:jdm



Copy: Shelly Lemon, NMED/SWQB, [Shelly.Lemon@state.nm.us](mailto:Shelly.Lemon@state.nm.us), (E-File)  
John E. Kieling, NMED/HWB, [john.kieling@state.nm.us](mailto:john.kieling@state.nm.us), (E-File)  
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Andrew Romero, NMED/GWQB, [AndrewC.Romero@state.nm.us](mailto:AndrewC.Romero@state.nm.us), (E-File)  
Karen E. Armijo, NA-LA, [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), (E-File)  
Michael W. Hazen, ALDESHQSS, [mhazen@lanl.gov](mailto:mhazen@lanl.gov), (E-File)  
William R. Marison, ADESH, [wmairson@lanl.gov](mailto:wmairson@lanl.gov), (E-File)  
Enrique Torres, EPC-DO, [etorres@lanl.gov](mailto:etorres@lanl.gov), (E-File)  
William H. Schwettmann, IPM, [bills@lanl.gov](mailto:bills@lanl.gov), (E-File)  
Raelynn Romero, PM6, [raelynn@lanl.gov](mailto:raelynn@lanl.gov), (E-File)  
Randal S. Johnson, DESHF-TA55, [randyj@lanl.gov](mailto:randyj@lanl.gov), (E-File)  
Denise C. Gelston, TA-55-RLW, [dgelston@lanl.gov](mailto:dgelston@lanl.gov), (E-File)  
Alvin M. Aragon, TA-55-RLW, [alaragon@lanl.gov](mailto:alaragon@lanl.gov), (E-File)  
John C. Del Signore, TA-55-RLW, [jcds@lanl.gov](mailto:jcds@lanl.gov), (E-File)  
Michael T. Saladen, EPC-CP, [saladen@lanl.gov](mailto:saladen@lanl.gov), (E-File)  
Robert S. Beers, EPC-CP, [bbeers@lanl.gov](mailto:bbeers@lanl.gov), (E-File)  
[locatsteam@lanl.gov](mailto:locatsteam@lanl.gov), (E-File)  
[epc-correspondence@lanl.gov](mailto:epc-correspondence@lanl.gov), (E-File)

## **ATTACHMENT 2**

Approval of DP-1132, Condition No. 53,  
Request for an Extension of Time

EPC-DO: 19-161

LA-UR-19-24391

Date:     **JUN 12 2019**

**From:** [Romero, Andrew C. NMENV](#)  
**To:** [Beers, Bob](#)  
**Subject:** Approval of DP-1132, Condition No. 53 Request for an Extension of Time  
**Date:** Wednesday, April 3, 2019 4:52:40 PM

Bob,

On January 23, 2019, the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) received *DP-1132, Condition No. 53, Request for an Extension of Time to Complete Outfall 051 Pipeline Water Tightness Testing*. Condition No. 8 of DP-1132 requires DOE/TRIAD demonstrate that the pipeline conveying treated wastewater from the TA-50 RLWTF to Outfall 051 - a pipeline without secondary containment - is not leaking. Further, Condition No. 8 stipulates that the tightness test shall be completed by February 25, 2019, 180 days after permit issuance.

DOE/TRIAD requests an extension of time for conducting water tightness testing for the following two reasons:

- Between December 15, 2018, and January 15, 2019, Los Alamos National Laboratory received in excess of 3 6 inches of snow. The terminus of the outfall pipeline is down a north facing, very steep, dirt road. Access to the outfall prior to spring snow melt could presents significant safety concerns for LANL workers
- NPDES Outfall 051 is located within the Mexican Spotted Owl core habitat in Mortandad Canyon. The Mexican Spotted Owl is listed as a threatened species by the U.S. Fish and Wildlife Service. During the Mexican Spotted Owl's breeding season, noise disturbance is not permitted in its core habitat. Conducting work with heavy equipment or other noise-generating machinery is prohibited between March 1 and May 15.

Due to the factors listed above, DOE/Triad estimate that an additional four months will be required to complete water tightness testing of the pipeline to Outfall 051. Accordingly, DOE/Triad request an extension of time until June 25, 2019.

NMED hereby approves a longer period, for good cause, for Condition No. 8 as described in the Request for an Extension of Time to Complete Outfall 051 Pipeline Water Tightness Testing.

Approval of the *DP-1132, Condition No. 53, Request for an Extension of Time to Complete Outfall 051 Pipeline Water Tightness Testing* does not relieve the Permittee of the responsibility to comply with any other applicable federal, state, and/or local laws and regulations. This approval does not relieve the Permittee of liability should operations associated with this time extension result in actual pollution of ground or surface waters.

Thank you for your cooperation.

**Andrew C. Romero**

Environmental Scientist, Pollution Prevention Section

Ground Water Quality Bureau

New Mexico Environment Department

(505) 827-0076



*Environmental Protection & Compliance Division  
Environmental Compliance Programs (EPC-CP)*  
PO Box 1663, K491  
Los Alamos, New Mexico 87545  
(505) 667-2211

*National Nuclear Security Administration  
Los Alamos Field Office*  
3747 West Jemez Road, A316  
Los Alamos, New Mexico, 87544  
(505) 665-7314 /Fax (505) 667-5948

*Symbol:* EPC-DO: 19-196  
*LA-UR:* 19-25206  
*Locates Action No.:* U1801172  
*Date:* **JUN 19 2019**

**GROUND WATER**

**JUN 19 2019**

**BUREAU**

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, Condition No. 41, Stabilization of Individual Units and Systems, 100K Tank, Removal of Process Liquids**

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 and Triad National Security, LLC (DOE/Triad) for discharges of treated effluent from the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Pursuant to permit Condition No. 41, *Stabilization of Individual Units and Systems*, DOE/Triad submitted a stabilization plan for the 100K Tank on December 4, 2018. NMED subsequently approved the stabilization plan on December 27, 2018.

In Section 4.7, *Stabilization Schedule*, DOE/Triad committed to remove process liquids from the 100K Tank by June 2019. The 100K Tank was emptied of all process liquids on April 25, 2019.



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

Sincerely,

Sincerely,



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



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

ET/KEA/MTS/RSB:jdm

Copy: Shelly Lemon, NMED/SWQB, [Shelly.Lemon@state.nm.us](mailto:Shelly.Lemon@state.nm.us), (E-File)  
John E. Kieling, NMED/HWB, [john.kieling@state.nm.us](mailto:john.kieling@state.nm.us), (E-File)  
Gerald Knutson, NMED/GWQB, [Gerald.Knutson@state.nm.us](mailto:Gerald.Knutson@state.nm.us), (E-File)  
Andrew Romero, NMED/GWQB, [AndrewC.Romero@state.nm.us](mailto:AndrewC.Romero@state.nm.us), (E-File)  
Karen E. Armijo, NA-LA, [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), (E-File)  
Michael W. Hazen, ALDESHQSS, [mhazen@lanl.gov](mailto:mhazen@lanl.gov), (E-File)  
William R. Mairson, ADESHQSS, [wmairson@lanl.gov](mailto:wmairson@lanl.gov), (E-File)  
Enrique Torres, EPC-DO, [etorres@lanl.gov](mailto:etorres@lanl.gov), (E-File)  
William H. Schwettmann, IPM, [bills@lanl.gov](mailto:bills@lanl.gov), (E-File)  
Randal S. Johnson, DESHF-TA55, [randyj@lanl.gov](mailto:randyj@lanl.gov), (E-File)  
Denise C. Gelston, TA-55-RLW, [dgelston@lanl.gov](mailto:dgelston@lanl.gov), (E-File)  
Alvin M. Aragon, TA-55-RLW, [alaragon@lanl.gov](mailto:alaragon@lanl.gov), (E-File)  
John C. Del Signore, TA-55-RLW, [jcds@lanl.gov](mailto:jcds@lanl.gov), (E-File)  
Michael T. Saladen, EPC-CP, [saladen@lanl.gov](mailto:saladen@lanl.gov), (E-File)  
Robert S. Beers, EPC-CP, [bbeers@lanl.gov](mailto:bbeers@lanl.gov), (E-File)  
[locatesteam@lanl.gov](mailto:locatesteam@lanl.gov), (E-File)  
[epccorrespondence@lanl.gov](mailto:epccorrespondence@lanl.gov), (E-File)

STATE OF NEW MEXICO  
BEFORE THE  
WATER QUALITY CONTROL COMMISSION



PETITION FOR REVIEW OF THE NEW MEXICO  
SECRETARY OF THE ENVIRONMENT'S DECISION  
GRANTING GROUNDWATER DISCHARGE  
PERMIT DP-1132 IN PROCEEDING GWB17-20(P)

WQCC No. 18-05(A)

**ORDER TO VACATE AGENCY DECISION AND REMAND  
THE PETITION FOR REVIEW OF DP-1132**

**THIS MATTER** came before the New Mexico Water Quality Control Commission (“Commission”), on April 9, 2019 and on May 14, 2019, at the New Mexico State Capitol Building, Room 307, located at 490 Old Santa Fe Trail, in Santa Fe, Santa Fe County, New Mexico, for a ruling on Petitioner’s *Motion to Vacate Agency Decision and Remand the Petition for Review of DP-1132* (“Motion”), filed on February 4, 2019, by and through Petitioner’s counsel, the New Mexico Environmental Law Center (Lindsay A. Lovejoy, Jr. and Jonathan M. Block, Esquires). On June 18, 2019, the Commission, by a unanimous vote in the affirmative, hereby renders this *Order to Vacate Agency Decision and Remand the Petition for Review of DP-1132*.

The Commission, being sufficiently advised, finds as follows:

1. Petitioner filed its Motion on February 4, 2019.
2. The New Mexico Environment Department filed a Response to the Motion on February 18, 2019.
3. The United States Department of Energy and Triad National Security, LLC as joint permittees under Discharge Permit No. 1132 filed a Response to the Motion on February 19, 2019.
4. The Commission set the Motion for hearing on April 9, 2019.


5. After hearing argument from attorneys for all the parties, on April 9, 2019 the Commission denied the Motion.
6. At the Commission's May 14, 2019 meeting, the Commission discussed whether to reconsider the April 9 decision, but a motion was approved that the Commission not reconsider the April 9 decision, leaving intact the April 9 denial of the motion to vacate and remand.
7. On June 11, 2019, at the regularly scheduled meeting for the Commission, the Commission voted to vacate the Agency Decision and remand the matter for a new hearing with a newly appointed Hearing Officer.
8. According to *Reid v. New Mexico Board of Examiners in Optometry*, 1979-NMSC-005, ¶ 7, 92 N.M. 414, 589 P.2d 198 (internal Citations omitted), "At a minimum, a fair and impartial tribunal requires that the trier of fact be disinterested and free from any form of bias or predisposition regarding the outcome of the case. In addition, our system of justice requires that the appearance of complete fairness be present."
9. The Commission believes that the Hearing Officer's job application and subsequent hiring by one of the parties created an improper appearance of bias potentially affecting the Secretary's deliberation and issuance of DP-1132.
10. On June 18, 2019 at a special meeting called by the Commission, the Commission ratified the decision to vacate the Agency Decision and remand the matter for a new hearing with a newly appointed Hearing Officer.
11. At the June 18, 2019 special meeting, John Verheul, Assistant General Counsel for the New Mexico Environment Department made an oral motion to limit the scope of the remand to the Department.
12. The Commission denied Mr. Verheul's Motion.

**IT IS THEREFORE ORDERED** that pursuant to NMSA 1978, Section 74-6-5(Q), 20.1.3.16(A)(3) NMAC, and 20.1.3.16(F)(3) NMAC the Secretary's Order is vacated and this matter is remanded to the New Mexico Environment Department for a new hearing with a newly appointed Hearing Officer.

**IT IS SO ORDERED.**

June 18, 2019  
DATE

**NEW MEXICO WATER  
QUALITY COMMISSION**

  
\_\_\_\_\_  
Jennifer J. Pruett,  
Commission Chair

Certificate of Service

I hereby certify that a true and correct copy of the foregoing **Order to Vacate Agency Decision and Remand the Petition for Review of SP-1132** was emailed to all parties on June 19, 2019. The above-mentioned document can be served via first class mail upon request.

Jennifer Pruett, Esq., Deputy Secretary  
and Commission Chair  
New Mexico Environment Department  
1190 St. Francis Drive, Suite N4050  
Santa Fe, NM 87505  
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Douglas Meiklejohn, Jaimie Park  
New Mexico Environmental Law Center  
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Santa Fe, New Mexico 87507  
jblock@nmelc.org  
*Counsel for Communities for Clean Water*

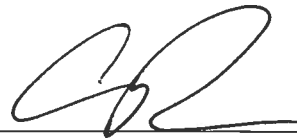
Mr. Stuart R. Butzier and Ms. Christina C. Sheehan  
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Ms. Susan L. McMichael  
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*Counsel for Triad National Security, LLC, and  
U.S. Department of Energy/NNSA*

Mr. John Verheul, Assistant General Counsel,  
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121 Tijeras Avenue, NE, Suite 1000  
Harold Runnels Building, Suite N-4050  
Albuquerque, New Mexico 87102  
john.verheul@state.nm.us  
*Counsel for the New Mexico Environment Department*



---

Cody Barnes  
Commission Administrator  
(505) 827-2428  
cody.barnes@state.nm.us

**From:** [Pullen, Steve, NMENV](#)  
**To:** [Joni Arends](#)  
**Cc:** [Hunter, Michelle, NMENV](#); [Holcomb, Sarah, NMENV](#)  
**Subject:** RE: [EXT] DP-1132 - Discharge to Outfall 051  
**Date:** Tuesday, July 16, 2019 11:35:53 AM

---

Hi Joni,

I currently have no record of the discharge. DP-1132 requires any such discharge be reported quarterly, and so a discharge in June (2nd quarter) would be reported in August. However with DP-1132 vacated, it is unclear that this report would be submitted.

Sarah Holcomb tells me the only official report associated with the discharge and the NPDES permit will be to EPA and that report will be posted on EPA's publicly-facing database (<https://echo.epa.gov/>) and should be posted mid-July.

We do have knowledge of the discharge as the SWQB was inspecting the Laboratory during the week the discharge took place, but again, nothing in writing.

Best regards,

---

Steve Pullen

Steve Pullen  
Section Manager  
New Mexico Environment Department  
Ground Water Quality Bureau  
Pollution Prevention Section  
1190 S. St. Francis Drive, Santa Fe, NM  
(505) 827-2962  
steve.pullen@state.nm.us  
<https://www.env.nm.gov/>

-----Original Message-----

From: Joni Arends <jarends@nuclearactive.org>  
Sent: Tuesday, July 16, 2019 8:07 AM  
To: Pullen, Steve, NMENV <steve.pullen@state.nm.us>  
Subject: [EXT] DP-1132 discharge

Hi Steve,

Do you have any evidence of the DP-1132 discharge?

Best,

Joni

--

Joni Arends, Executive Director  
Concerned Citizens for Nuclear Safety  
P. O. Box 31147  
Santa Fe, NM 87594-1147

505 986-1973

<https://clicktime.symantec.com/32GJGV08wkJCBpk6qNrZeBt7Vc?u=www.nuclearactive.org>



**From:** [New Mexico Environment Department](#)  
**To:** [diana.tharpe@state.nm.us](mailto:diana.tharpe@state.nm.us); [Allison.Majure@state.nm.us](mailto:Allison.Majure@state.nm.us); [leanne.martony@state.nm.us](mailto:leanne.martony@state.nm.us); [Graves, Robert, NMENV](#); [Hochman, Todd, NMENV](#); [Ali.Furmall@state.nm.us](mailto:Ali.Furmall@state.nm.us); [MacDonald, AnaMaria, NMENV](#); [Farrell, Lochlin, NMENV](#); [Clark, Rick, NMENV](#); [Hayden, Maddy, NMENV](#); [Katy.Dougherty-Diff@state.nm.us](mailto:Katy.Dougherty-Diff@state.nm.us)  
**Subject:** [EXT] Courtesy Copy: NMED-GWQB: Groundwater Discharge Permit Applications Proposed for Approval (PN-2) - July 19, 2019  
**Date:** Thursday, July 18, 2019 2:47:45 PM

---

**This is a courtesy copy of an email bulletin sent by Lochlin Farrell.**

**This bulletin was sent to the following groups of people:**

Subscribers of GWQB-Public Notice of Discharge Permit Actions (922 recipients)

---

NMED Banner



## Ground Water Quality Bureau

Groundwater Discharge Permit Applications Proposed for Approval (PN-2) - July 19, 2019

---

Thank you for taking part in the Ground Water Quality Bureau's Groundwater Discharge Permit public notice process. The Bureau published a Public Notice dated July 19, 2019, pertaining to Groundwater Discharge Permit applications that have been proposed for approval.

[Please click this link to view the Public Notice](#)

**[Traducción en español](#)**

To review a draft permit for a facility, please click on the facility's name in the linked Public Notice. To request additional information, please contact the Ground Water Quality Bureau in Santa Fe at (505) 827-2900. To access additional Public Notices published by the Ground Water Quality Bureau, please visit the Bureau Public Notice webpage: <https://www.env.nm.gov/gwb/NMED-GWQB-PublicNotice.htm>

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Parts 5 and 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, you may contact: Kristine Yurdin, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, [nd.coordinator@state.nm.us](mailto:nd.coordinator@state.nm.us). If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at <https://www.env.nm.gov/non-employee-discrimination-complaint-page/> to learn how and where to file a complaint of discrimination.

PN2 icon



---

**GWQB DISCHARGE PERMIT PUBLIC NOTICE CONTACT:**

Lochlin Farrell: [lochlin.farrell@state.nm.us](mailto:lochlin.farrell@state.nm.us) or 505-827-2905

<https://www.env.nm.gov/gwb/>

---

Stay Connected with New Mexico Environment Department



## New Mexico Environment Department – Ground Water Quality Bureau

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) hereby provides notice pursuant to 20.6.2.3108.H NMAC that the following Groundwater Discharge Permits have been proposed for approval.

DP-1041, Gandy-Marley Inc.: Larry Gandy, President, proposes to renew the Discharge Permit for the discharge of up to 210,000 gallons per month of domestic septage, wastewater treatment plant sludge, grease trap waste, and grit trap waste and up to 10,000 cubic yards per month of hydrocarbon contaminated soil to a land disposal site. Potential contaminants associated with this type of discharge include nitrogen compounds, metals, and organic compounds. The facility is located on Hwy 380, approximately 33 miles northwest of Tatum, in Sections 8 and 9, T11S, R31E, Chaves County. Groundwater most likely to be affected is at a depth of approximately 122 feet and had a pre-discharge total dissolved solids concentration of approximately 8,970 milligrams per liter.

DP-878: Rajen Dairy #2 proposes to renew the Discharge Permit for the discharge of up to 79,000 gallons per day of agricultural wastewater from the production area of a dairy facility. Potential contaminants from this type of discharge include nitrogen compounds. The facility and discharge locations are located at 1157 Curry Road 7, approximately two miles south of Clovis, in Sections 34, 35, and 36, T02N, R35E, Curry County. Groundwater most likely to be affected is at a depth of approximately 320 feet below ground surface and had a pre-discharge total dissolved solids concentration of 180 milligrams per liter.

DP-1163: North Point Dairy proposes to renew the Discharge Permit for the discharge of up to 180,000 gallons per day of wastewater from the production area of a dairy facility. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 2149 Curry Rd H, in Sections 15, 21, 22, 27, and 28, T04N, R36E, Curry County. Groundwater most likely to be affected is at a depth of approximately 387 to 423 feet and had a pre-discharge total dissolved solids concentration of 260 milligrams per liter.

DP-1174, West Mesa Industrial Park Wastewater Treatment Facility: The City of Las Cruces proposes to renew the Discharge Permit for the discharge of up to 400,000 gallons per day of domestic and industrial wastewater to a treatment and disposal system. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 999 Crawford Road, approximately 7 miles west of Las Cruces, in Section 35, T23S, R01W, Dona Ana County. The disposal area is located in Section 2, T24S, R01W, Doña Ana County. Groundwater most likely to be affected is at a depth of approximately 318 feet and had a pre-discharge total dissolved solids concentration of 687 milligrams per liter.

DP-1886, Bien Nacido LLC: Athena Valdez proposes to discharge up to 10,000 gallons per day of domestic septage to disposal cells. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 6149 Seven Rivers Highway, approximately 5 miles South of Artesia, in Section 20, T18S, R26E, Eddy County. Groundwater most likely to be affected is at a depth of approximately 150 feet and had a pre-discharge total dissolved solids concentration of 1,660 milligrams per liter.

DP-1651, Banner Mill: Pyramid Peak Mining LLC proposes to renew the Discharge Permit for the discharge of up to 246,000 gallons per day of mill tailing slurry to a high-density polyethylene lined tailing impoundment. Potential contaminants from this type of discharge include total dissolved solids, sulfate, and metals. The facility is located on State Road 494, approximately 4.5 miles southwest of Lordsburg, in Sections 14 & 23, T23S, R19W, Hidalgo County. Groundwater most likely to be affected is at a depth of approximately 709 feet and had a pre-discharge total dissolved solids concentration of 1,800 milligrams per liter.



DP-1132: The Radioactive Liquid Waste Treatment Facility (RLWTF) is a wastewater treatment facility that receives and treats radioactive liquid waste (RLW) from waste generating locations at Los Alamos National Laboratory (LANL). The Discharge Permit authorizes the use of the RLWTF's multiple systems and associated units, including: the influent collection system; the influent storage system, i.e., the Waste Management Risk Mitigation Facility (WMRM); the low-level radioactive liquid waste treatment system; the transuranic wastewater treatment system; and the secondary treatment system. RLW treatment processes include chemical treatment in a reaction tank, filtration, ion exchange, and reverse osmosis. The Discharge Permit authorizes the discharge of treated water via the Mechanical Evaporator System (MES) and the Solar Evaporative Tank (SET) at TA-52. The discharge of treated water at an outfall (Outfall 051) is authorized by a National Pollutant Discharge Elimination System (NPDES) permit issued by the United States Environmental Protection Agency (EPA) pursuant to the federal Clean Water Act Section 402, 33 U.S.C § 1342. Up to 40,000 gallons per day may be discharged via the three processes identified above. The discharge may contain water contaminants with concentrations above the standards of 20.6.2.3103 NMAC and may contain toxic pollutants as defined in 20.6.2.7.T NMAC. The discharge is located within LANL, approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21 and 22, Township 19N, Range 06E, Los Alamos County. Groundwater most likely to be affected ranges from depths of approximately one foot to 1,306 feet and has a total dissolved solids concentration ranging from approximately 162 to 255 milligrams per liter.

DP-1865: Southwest Wines proposes the discharge of up to 25,000 gallons per day of agricultural wastewater from a winery. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 1325 De Baca Rd. SE, Deming, approximately 6 miles southeast of Deming, in Section 34, T23S, R08W, Luna County. Groundwater most likely to be affected is at a depth of approximately 114 feet and has a total dissolved solids concentration of 215 milligrams per liter.

DP-1154: Native Pastures Dairy proposes to renew and modify the Discharge Permit for the discharge of up to 49,500 gallons per day of wastewater from the production area of a dairy facility. Potential contaminants from this type of discharge include nitrogen compounds. The facility and discharge locations are located at 1437 NM 88, approximately 11 miles southeast of Portales, in Sections 27 and 28, T02S, R36E, Roosevelt County. Groundwater most likely to be affected is at a depth of approximately 93 feet and had a pre-discharge total dissolved solids concentration of 1,240 milligrams per liter.

DP-1246: Hide-A-Way Dairies proposes to renew and modify the Discharge Permit for the discharge of up to 122,500 gallons per day of wastewater from the production area of a dairy facility. Potential contaminants from this type of discharge include nitrogen compounds. The facility and discharge locations are located at 563 N. RR 3 approximately 9 miles southeast of Clovis, in Section 24, T01N, R36E, Roosevelt County. Groundwater most likely to be affected is at a depth of approximately 269 feet and had a pre-discharge total dissolved solids concentration of 340 milligrams per liter.

DP-1531: Arch Diamond Dairy proposes to renew the Discharge Permit for the discharge of up to 65,000 gallons per day of wastewater from the production area of a dairy facility. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 1406 NM 88 (S RR 10), in Sections 17, 20, and 21, T02S, R36E, Roosevelt County. Groundwater most likely to be affected is at a depth of approximately 85 feet and had a pre-discharge total dissolved solids concentration of 960 milligrams per liter.

DP-1784, New Mexico Highlands University proposes to renew the Discharge Permit for the discharge of up to 35,000 gallons per day of reclaimed domestic wastewater to athletic fields, parks, and landscaped areas on campus. Potential contaminants associated with this type of discharge include nitrogen compounds. The facility is located at 800 W. National Ave., Las Vegas, San Miguel County. Groundwater most likely to be affected is at a depth of approximately 7 feet and had a pre-discharge a total dissolved solids concentration of approximately 1,400 to 6,200 milligrams per liter.



DP-1682, Rio West Desalination Water Treatment Plant: Recorp Investments, Inc. proposes to discharge brackish water to a disposal system. Discharges may be the result of an accidental release from the wellhead, an emergency discharge during repair/evaluation of the wells, well testing, or a pump test. A maximum discharge of 1,368,000 gallons would occur if a 48-hour pump test is conducted. Potential contaminants from this type of discharge include inorganic compounds, chloride, sulfate, dissolved solids, metals, and radionuclides. The facility is located at latitude 35.283824 N and longitude -106.924596 W, approximately 15 miles northwest of Rio Rancho, in Section 10, T12N, R01W, Sandoval County. Groundwater most likely to be affected is at a depth of approximately 85 feet and had a pre-discharge total dissolved solids concentration of 618 milligrams per liter.

DP-75, Bishop's Lodge: BL Santa Fe, LLC proposes to renew and modify the Discharge Permit for the discharge of up to 50,000 gallons per day of domestic wastewater to a treatment and disposal system. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 1297 Bishop's Lodge Road, Santa Fe, Santa Fe County. Groundwater most likely to be affected is at a depth of approximately 23 feet and had a pre-discharge total dissolved solids concentration of approximately 300 milligrams per liter.

DP-1869: The Club at Las Campanas proposes to discharge up to 320,000 gallons per day of reclaimed wastewater for irrigation. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at 437 Las Campanas Dr, Santa Fe, Santa Fe County. Groundwater most likely to be affected is at a depth of approximately 279 feet and had a pre-discharge total dissolved solids concentration of approximately 200 milligrams per liter.

Prior to ruling, NMED will allow thirty days after the date of publication of this notice during which time written comments may be submitted and a public hearing may be requested. Requests for public hearing shall be in writing and shall set forth the reasons why a hearing should be held. A hearing will be held if NMED determines that there is substantial public interest. NMED maintains a facility-specific mailing list for persons who wish to receive future notices. To request additional information, to be placed on a facility-specific mailing list, to obtain a copy of a draft permit or associated Public Involvement Plan, or to submit a comment or a request for hearing, contact the GWQB at PO Box 5469, Santa Fe, NM 87502-5469, (505) 827-2900. Telephone conversation assistance is available through Relay New Mexico at no charge for people who are deaf, hard of hearing, or have difficulty speaking on the phone, by calling 1-800-659-1779; TTY users: 1-800-659-8331; Spanish: 1-800-327-1857. NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Parts 5 and 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, you may contact: Kristine Yurdin, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, nd.coordinator@state.nm.us, (505) 827-2855. If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at <https://www.env.nm.gov/non-employee-discrimination-complaint-page/> to learn how and where to file a complaint of discrimination.



## Departamento del Medio Ambiente de Nuevo México - Oficina para el Control de la Calidad de las Aguas Subterráneas

La Oficina de Calidad de Aguas Subterráneas (GWQB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés) proporciona aviso de conformidad con 20.6.2.3108.H NMAC de que los siguientes Permisos de Descarga de Aguas Subterráneas han sido propuestos para su aprobación. DP-1682, Planta de tratamiento de desalinización de agua Rio West: Recorp Investments, Inc., propone descargar agua salobre a un sistema de eliminación. Las descargas pueden ser el resultado de un derrame accidental de la cabeza del pozo, una descarga de emergencia durante la reparación/evaluación de los pozos, pruebas de pozos o una prueba de bomba. Se produciría una descarga máxima de 1,368,000 galones si se realiza una prueba de bomba de 48 horas. Los posibles contaminantes asociados con este tipo de descarga incluyen compuestos inorgánicos, cloruro, sulfato, sólidos disueltos, metales, y radionúclidos. La instalación está ubicada en la latitud 35.283824 N y longitud -106.924596 W, aproximadamente a 15 millas al noroeste de Rio Rancho, en la Sección 10, T12N, R01W, condado de Sandoval. El agua subterránea que tiene más probabilidad de verse afectada se encuentra a una profundidad aproximada de 85 pies y tenía una concentración de sólidos disueltos totales antes del vertido de 618 miligramos por litro. Antes de la resolución NMED permitirá un periodo de treinta días, después de la fecha de publicación de este aviso, durante el cual se pueden presentar comentarios por escrito y se puede solicitar una audiencia pública. Las solicitudes de audiencia pública deben presentarse por escrito a indicar los motivos por los que se debería celebrar la audiencia. Se celebrará una audiencia si el NMED determina que hay considerable interés público. NMED mantiene una lista de correo específica para cada instalación para las personas que deseen recibir avisos en el futuro. Para solicitar información adicional, para ser incluido en la lista de correo específica de la instalación, para obtener una copia de un borrador de permiso o de un plan de participación público asociado, o para enviar un comentario o una solicitud para audiencia, comuníquese con GWQB en PO Box 5469, Santa Fe, NM 87502-5469, (505) 827-2900. Hay disponible asistencia telefónica de conversación sin costo alguno a través de Relay New Mexico para personas sordas, con dificultades auditivas o que tengan dificultad para hablar por teléfono, llamando al 1-800-659-1779; usuarios de TTY: 1-800-659-8331; español: 1-800-327-1857. NMED no discrimina por motivos de raza, color, origen nacional, discapacidad, edad o sexo en la administración de sus programas o actividades, según lo exigido por las leyes y los reglamentos correspondientes. NMED es responsable de la coordinación de los esfuerzos de cumplimiento y la recepción de consultas relativas a los requisitos de no discriminación implementados por 40 C.F.R. Partes 5 y 7, incluido el Título VI de la Ley de Derechos Civiles de 1964, según enmendada; Sección 504 de la Ley de Rehabilitación de 1973; la Ley de Discriminación por Edad de 1975, Título IX de las Enmiendas de Educación de 1972 y la Sección 13 de las Enmiendas a la Ley Federal de Control de Contaminación del Agua de 1972. Si usted tiene preguntas sobre este aviso o sobre cualquier programa, política o procedimiento de no discriminación de NMED, usted puede comunicarse con la Coordinadora de No Discriminación: Kristine Yurdin, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@state.nm.us. Si usted piensa que ha sido discriminado/a con respecto a un programa o actividad de NMED, usted puede comunicarse con la Coordinadora de No Discriminación antes indicada o visitar nuestro sitio web en <https://www.env.nm.gov/non-employee-discrimination-complaint-page/> para aprender cómo y dónde presentar una queja de discriminación.





## New Mexico Environment Department – Ground Water Quality Bureau

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) hereby provides notice pursuant to 20.6.2.3108.H NMAC that the following Groundwater Discharge Permits have been proposed for approval. DP-1132: The Radioactive Liquid Waste Treatment Facility (RLWTF) is a wastewater treatment facility that receives and treats radioactive liquid waste (RLW) from waste generating locations at Los Alamos National Laboratory (LANL). The Discharge Permit authorizes the use of the RLWTF's multiple systems and associated units, including: the influent collection system; the influent storage system, i.e., the Waste Management Risk Mitigation Facility (WMRM); the low-level radioactive liquid waste treatment system; the transuranic wastewater treatment system; and the secondary treatment system. RLW treatment processes include chemical treatment in a reaction tank, filtration, ion exchange, and reverse osmosis. The Discharge Permit authorizes the discharge of treated water via the Mechanical Evaporator System (MES) and the Solar Evaporative Tank (SET) at TA-52. The discharge of treated water at an outfall (Outfall 051) is authorized by a National Pollutant Discharge Elimination System (NPDES) permit issued by the United States Environmental Protection Agency (EPA) pursuant to the federal Clean Water Act Section 402, 33 U.S.C § 1342. Up to 40,000 gallons per day may be discharged via the three processes identified above. The discharge may contain water contaminants with concentrations above the standards of 20.6.2.3103 NMAC and may contain toxic pollutants as defined in 20.6.2.7.T NMAC. The discharge is located within LANL, approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21 and 22, Township 19N, Range 06E, Los Alamos County. Groundwater most likely to be affected ranges from depths of approximately one foot to 1,306 feet and has a total dissolved solids concentration ranging from approximately 162 to 255 milligrams per liter. Prior to ruling, NMED will allow thirty days after the date of publication of this notice during which time written comments may be submitted and a public hearing may be requested. Requests for public hearing shall be in writing and shall set forth the reasons why a hearing should be held. A hearing will be held if NMED determines that there is substantial public interest. NMED maintains a facility-specific mailing list for persons who wish to receive future notices. To request additional information, to be placed on a facility-specific mailing list, to obtain a copy of a draft permit or associated Public Involvement Plan, or to submit a comment or a request for hearing, contact the GWQB at PO Box 5469, Santa Fe, NM 87502-5469, (505) 827-2900. Telephone conversation assistance is available through Relay New Mexico at no charge for people who are deaf, hard of hearing, or have difficulty speaking on the phone, by calling 1-800-659-1779; TTY users: 1-800-659-8331; Spanish: 1-800-327-1857. NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Parts 5 and 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, you may contact: Kristine Yurdin, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, nd.coordinator@state.nm.us, (505) 827-2855. If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at <https://www.env.nm.gov/non-employee-discrimination-complaint-page/> to learn how and where to file a complaint of discrimination.

# AFFIDAVIT OF PUBLICATION


## STATE OF NEW MEXICO

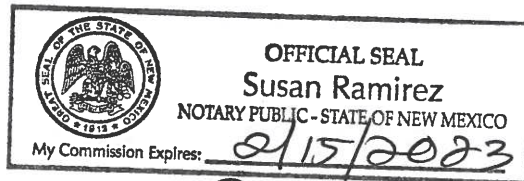
County of Bernalillo      SS

ENGLISH

Elise Rodriguez , the undersigned, on oath states that she is an authorized Representative of The Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which hereto attached, was published in said paper in the regular daily edition, for 1 time(s) on the following date(s):

07/19/2019

  
\_\_\_\_\_



Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 19 day of July of 2019

PRICE \$594.30

Statement to come at the end of month.

ACCOUNT NUMBER 1007595





**New Mexico Environment Department – Ground Water Quality Bureau**

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Journal: July 19, 2019

NOTICE OF SALE  
 Defendants:  
 RBS Citizens N.A.,  
 NATIONAL ASSOCIATION  
 STOTT, and CITIZENS BANK  
 JOHN L. STOTT, CODY W.  
 vs.  
 Plaintiff,  
 WELLS FARGO BANK, N.A.  
 No. D-202-CV-2018-07107  
 DISTRICT  
 STATE OF NEW MEXICO  
 COUNTY OF BERNALILLO  
 SECOND JUDICIAL  
 DISTRICT  
 AT SALE ARE ADVISED TO  
 MAKE THEIR OWN EXAM-  
 INATION OF THE TITLE AND  
 PROPERTY AND TO CON-  
 SULT THEIR OWN ATTOR-  
 NEY BEFORE BIDDING. BY:  
 Robert Doyle c/o Legal Proc-  
 ess Network P.O. Box 51526  
 Albuquerque, NM 87181 2  
 NM-14-632557-JUD IDSPub  
 #0154970 7/19/2019 7/  
 26/2019 8/2/2019 8/9/2019  
 Journal: July 19, 26, August 2,  
 9, 2019

STATE OF NEW MEXICO  
 COUNTY OF BERNALILLO  
 SECOND JUDICIAL  
 DISTRICT  
 NOTICE IS HEREBY GIVEN  
 THAT FRANCISCO EMIESTO PACHECO, a resident of the City of Albuquerque, County of Bernalillo State of New Mexico has filed a Petition to Change name in the Second Judicial District Court, Bernalillo County, New Mexico wherein he/she seeks to change his/her name from Francisco EMIESTO PACHECO to Ernest Francisco PACHECO and that this Petition will be heard before the Honorable Victor S. Lopez, District Judge on the 14th day of August 2019, at the hour of 11:40 a.m., at the Bernalillo Courthouse, Rm. 520 Albuquerque, New Mexico. Respectfully Submitted,  
 JAMES A. NOEL  
 District Court Clerk  
 By: /s/ LEANNE LECOMPTE  
 Deputy Court Clerk

NOTICE OF PETITION TO CHANGE NAME (ADULT)  
 CHANGE NAME (ADULT)  
 NOTICE IS HEREBY GIVEN  
 IF THERE IS A CONFLICT BETWEEN THE LEGAL DESCRIPTION AND THE street address, the legal description shall control. The sale is to begin at 2:00 am on September 12, 2019, at the San Juan County Courthouse, City of Aztec, County of San Juan, State of New Mexico, at which time I will sell to the highest and best bidder for cash, in lawful currency of the United States of America, the Property to pay expenses of sale, and to satisfy the foreclosure judgment granted on July 1, 2019, in the total amount of \$54,861.98, with interest at the rate of 5.7400% per annum from October 1, 2018 through the date of the sale. The sale is subject to the entry of an Order by this Court, approving the sale. NOTICE IS FURTHER GIVEN that the re- al property and improvements

SOUTH 89° 11' EAST 530.86 FEET FROM THE CENTER OF THE NORTHEAST QUAR- TER OF SAID SECTION 22, THENCE NORTH 02° 02' WEST 166.00 FEET; THENCE SOUTH 89° 11' THENCE SOUTH 89° 11' EAST 262.21 FEET; THENCE SOUTH 02° 02' EAST 166.00 FEET; THENCE NORTH 89° 11' WEST 262.21 FEET TO THE POINT OF BEGINNING. IF THERE IS A CONFLICT BETWEEN THE LEGAL DESCRIPTION AND THE street address, the legal de- scription shall control. The sale is to begin at 2:00 am on September 12, 2019, at the San Juan County Courthouse, City of Aztec, County of San Juan, State of New Mexico, at which time I will sell to the highest and best bidder for cash, in lawful currency of the United States of America, the Property to pay expenses of sale, and to satisfy the foreclo- sure judgment granted on Ju- ly 1, 2019, in the total amount of \$54,861.98, with interest at the rate of 5.7400% per an- num from October 1, 2018 through the date of the sale. The sale is subject to the entry of an Order by this Court, ap- proving the sale. NOTICE IS FURTHER GIVEN that the re- al property and improvements

# AFFIDAVIT OF PUBLICATION

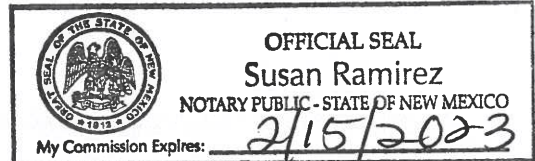
## STATE OF NEW MEXICO

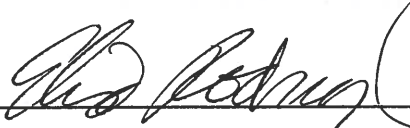
County of Bernalillo      SS

SPANISH

Elise Rodriguez , the undersigned, on oath states that she is an authorized Representative of The Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which hereto attached, was published in said paper in the regular daily edition, for 1 time(s) on the following date(s):

07/19/2019



  
\_\_\_\_\_



Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 19 day of July of 2019

PRICE \$329.00

Statement to come at the end of month.

ACCOUNT NUMBER 1007595





Departamento del Medio Ambiente de Nuevo México - Oficina para el Control de la Calidad de las Aguas Subterráneas

La Oficina de Calidad de Aguas Subterráneas (GWQB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés) proporciona aviso de conformidad con 20.6.2.3108.H NMAC de que los siguientes Permisos de Descarga de Aguas Subterráneas han sido propuestos para su aprobación. **DP-1132:** La Planta de Tratamiento de Residuos Líquidos Radioactivos (RLWTF por su sigla en inglés) es una planta de tratamiento de aguas residuales que recibe y trata residuos líquidos radioactivos (RLW por su sigla en inglés) de los sectores generadores de residuos de Laboratorio Nacional Los Alamos (LANL). El Permiso de Descarga autoriza el uso de múltiples sistemas y de unidades asociadas de la planta RLWTF, que incluyen: el sistema de recolección de afluentes; el sistema de almacenamiento de afluentes, que corresponde a las Instalaciones de Mitigación de Riesgo del Manejo de Residuos (WMRM por su sigla en inglés); el sistema de tratamiento de residuos líquidos de bajo nivel radioactivo; el sistema de tratamiento de aguas residuales transuránicas; y el sistema de tratamiento secundario. Los procesos de tratamiento de RLW incluyen tratamiento químico en un tanque de reacción, filtración, intercambio iónico y ósmosis inversa. El Permiso de Descarga autoriza la descarga del agua tratada por medio del Sistema Evaporador Mecánico (MES por su sigla en inglés) y el Tanque de Evaporación Solar (SET) en el Área Técnica TA-52. La descarga de agua tratada en un desagüe (Desagüe 051) está autorizada por un permiso del Sistema Nacional de Eliminación de Descargas de Contaminantes (NPDES por su sigla en inglés) otorgado por la Agencia de Protección Ambiental (EPA por su sigla en inglés) de Estados Unidos conforme a la Ley Federal de Agua Limpia, Sección 402, 33 U.S.C § 1342. Mediante los tres procesos antes identificados, se podrán descargar hasta 40,000 galones por día. La descarga podrá contener contaminantes del agua con concentraciones superiores a los estándares de 20.6.2.3103 NMAC y podrá contener contaminantes tóxicos según lo definido en 20.6.2.7.T NMAC. La descarga se encuentra dentro del LANL, aproximadamente 1.5 millas al sur de Los Alamos, Nuevo México, en las Secciones 16, 17, 20, 21 y 22; Distrito Municipal (Township) 19N; Zona (Range) 06E; condado de Los Alamos. Las aguas subterráneas con mayor probabilidad de ser afectadas se encuentran en un rango de profundidades de uno a 1,306 pies aproximadamente, y tienen una concentración de sólidos disueltos totales en un rango de 162 a 255 miligramos por litro aproximadamente. Antes de la resolución NMED permitirá un periodo de treinta días, después de la fecha de publicación de este aviso, durante el cual se pueden presentar comentarios por escrito y se puede solicitar una audiencia pública. Las solicitudes de audiencia pública deben presentarse por escrito a indicar los motivos por los que se debería celebrar la audiencia. Se celebrará una audiencia si el NMED determina que hay considerable interés público. NMED mantiene una lista de correo específica para cada instalación para las personas que deseen recibir avisos en el futuro. Para solicitar información adicional, para ser incluido en la lista de correo específica de la instalación, para obtener una copia de un borrador de permiso o de un plan de participación público asociado, o para enviar un comentario o una solicitud para audiencia, comuníquese con GWQB en PO Box 5469, Santa Fe, NM 87502-5469, (505) 827-2900. Hay disponible asistencia telefónica de conversación sin costo alguno a través de Relay New Mexico para personas sordas, con dificultades auditivas o que tengan dificultad para hablar por teléfono, llamando al 1-800-659-1779; usuarios de TTY: 1-800-659-8331; español: 1-800-327-1857. NMED no discrimina por motivos de raza, color, origen nacional, discapacidad, edad o sexo en la administración de sus programas o actividades, según lo exigido por las leyes y los reglamentos correspondientes. NMED es responsable de la coordinación de los esfuerzos de cumplimiento y la recepción de consultas relativas a los requisitos de no discriminación implementados por 40 C.F.R. Partes 5 y 7, incluido el Título VI de la Ley de Derechos Civiles de 1964, según enmendada; Sección 504 de la Ley de Rehabilitación de 1973; la Ley de Discriminación por Edad de 1975, Título IX de las Enmiendas de Educación de 1972 y la Sección 13 de las Enmiendas a la Ley Federal de Control de Contaminación del Agua de 1972. Si usted tiene preguntas sobre este aviso o sobre cualquier programa, política o procedimiento de no discriminación de NMED, usted puede comunicarse con la Coordinadora de No Discriminación: Kristine Yurdin, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@state.nm.us. Si usted piensa que ha sido discriminado/a con respecto a un programa o actividad de NMED, usted puede comunicarse con la Coordinadora de No Discriminación antes indicada o visitar nuestro sitio web en <https://www.env.nm.gov/non-employee-discrimination-complaint-page/> para aprender cómo y dónde presentar una queja de discriminación.

Journal: July 19, 2019





**NEW MEXICO ENVIRONMENT DEPARTMENT**  
GROUND WATER QUALITY BUREAU



**FACT SHEET – DP-1132**

**DRAFT Groundwater Discharge Permit DP-1132**

**Facility Name:** Radioactive Liquid Waste Treatment Facility

**Facility Location:** Within Los Alamos National Laboratory, approximately 1.5 miles south of Los Alamos, New Mexico  
Sections 16, 17, 20, 21 and 22, Township 19N, Range 06E

**County:** Los Alamos County

**Applicant:** United States Department of Energy (DOE)  
National Nuclear Security Administration (NNSA)  
Los Alamos Field Office  
Jody Pugh, Assistant Manager  
Mission Assurance & Infrastructure  
3747 W. Jemez Road, MS A316  
Los Alamos, NM 87544

Triad National Security, LLC  
Enrique Torres, Division Leader  
Environmental Protection & Compliance Division  
PO Box 1663, MS K491  
Los Alamos, NM 87545

**Proposed Permitting Action:** Issuance of a Discharge Permit

**Regulatory Authority:** Water Quality Control Commission's Ground and Surface Water Protection Regulations, 20.6.2 NMAC

**Issuing Agency:** Ground Water Quality Bureau of the New Mexico Environment Department

**GWQB Contact:** Andrew Romero  
PO Box 5469, Santa Fe, NM 87502-5469  
Phone: (505) 827-0076  
Email: andrewc.romero@state.nm.us

## **FACT SHEET – DP-1132**

The New Mexico Environment Department has prepared this Fact Sheet in association with the referenced groundwater discharge permitting action to provide information regarding the applicant, a brief description of the proposed discharge, information about how a person may become involved in this permitting action, and a brief summary of the basis of the draft permit conditions. This Fact Sheet is provided to the applicant along with the draft discharge permit when, through a public notice, all parties are provided an opportunity to comment on the permit and to request a public hearing.

### **Description of the Proposed Discharge**

The Radioactive Liquid Waste Treatment Facility (RLWTF or Facility) is a wastewater treatment facility that receives and treats radioactive liquid waste (RLW) from waste generating locations at Los Alamos National Laboratory (LANL). The Discharge Permit authorizes the use of the RLWTF's multiple systems and associated units, including: the influent collection system; the influent storage system, i.e., the Waste Management Risk Mitigation Facility (WMRM); the low-level radioactive liquid waste treatment system; the transuranic wastewater treatment system; and the secondary treatment system. RLW treatment processes include chemical treatment in a reaction tank, filtration, ion exchange, and reverse osmosis. The Discharge Permit authorizes the discharge of treated water via the Mechanical Evaporator System (MES) and the Solar Evaporative Tank (SET) at TA-52. The discharge of treated water at an outfall (Outfall 051) is authorized by a National Pollutant Discharge Elimination System (NPDES) permit issued by the United States Environmental Protection Agency (EPA) pursuant to the federal Clean Water Act Section 402, 33 U.S.C § 1342. Up to 40,000 gallons per day (gpd) may be discharged via the three processes identified above. The discharge may contain water contaminants with concentrations above the standards of 20.6.2.3103 NMAC and may contain toxic pollutants as defined in 20.6.2.7.T NMAC. The radioactive constituents in these standards include combined Radium-226 and Radium-228, in addition to total dissolved uranium and cobalt. The Facility, through its association with the Department of Energy and its U.S. defense related activities, is self-regulating for the management of all other radionuclides. The discharge is located within LANL, which is located approximately 1.5 miles south of Los Alamos, New Mexico, in Sections 16, 17, 20, 21 and 22, Township 19N, Range 06E, Los Alamos County. Groundwater most likely to be affected ranges from depths of approximately one foot to 1,306 feet and has a total dissolved solids concentration ranging from approximately 162 to 255 milligrams per liter.

### **Rationale for Second Hearing**

A public hearing was held on the issuance of DP-1132 on April 19, 2018. On June 18, 2019, the Water Quality Control Commission (WQCC) ruled that the Hearing Officer's job application and subsequent hiring by one of the parties created an improper appearance of bias potentially affecting the Secretary's deliberation and issuance of DP-1132. The WQCC then ruled that, pursuant to NMSA 1978, Section 74-6-5(Q), 20.1.3.16(A)(3) NMAC, and 20.1.3.16(f)(3) NMAC, the Secretary's Order from the first hearing is vacated and the matter be remanded to the New Mexico Environment Department for a new hearing with a newly appointed Hearing Officer.

## FACT SHEET – DP-1132

### Comment Period / Hearing

NMED will notify the public of the availability of the draft Discharge Permit and this Fact Sheet in a state-wide and a local newspaper of general circulation and will allow 30 days after this notification for any interested party to submit comments. To obtain a copy of this draft Discharge Permit, visit the Ground Water Quality Bureau's (GWQB) website at <https://www.env.nm.gov/gwqb/> or contact the GWQB Contact listed at the beginning of this Fact Sheet. To submit a comment, contact the GWQB Contact listed at the beginning of this Fact Sheet.

NMED will notify the public of a second hearing regarding the draft Discharge Permit in the same newspapers utilized for the notice of the availability of the draft Discharge Permit. A hearing has been scheduled to begin September 24, 2019, at the Fuller Lodge in Los Alamos.

### Regulatory Framework

The Ground and Surface Water Protection Regulations, 20.6.2 NMAC, establish the regulatory framework for controlling discharges onto or below the surface of the ground through the issuance of groundwater discharge permits. The purpose of the regulations pertaining to groundwater discharge permits, as stated in 20.6.2.3101 NMAC, is "to protect all groundwater of the state of New Mexico which has an existing concentration of 10,000 mg/l or less of total dissolved solids, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of groundwater inflow, for uses designated" in the Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC).

Persons proposing to discharge effluent or leachate in such a manner that it could move directly or indirectly into groundwater must obtain and comply with a discharge permit (20.6.2.3104 NMAC). To obtain a discharge permit, an applicant must submit an application (or "discharge plan" – 20.6.2.7 NMAC) proposing methods/techniques to be used or processes expected to naturally occur to ensure that the discharge of water contaminants does not result in the contamination of ground or surface water (20.6.2.3106 NMAC).

In reviewing and approving an application, NMED must ensure that the discharge plan will not result in a hazard to public health, undue risk to property, exceedance of the groundwater standards at any place of withdrawal of water for present or reasonably foreseeable future use, or violation of a stream standard (Subsections 20.6.3109.C and H NMAC). "Hazard to public health" is defined in 20.6.2.7 NMAC and pertains to the exceedance of the groundwater standards in a drinking water supply. 20.6.2.3103 NMAC establishes the groundwater standards.

20.6.2.3109.B NMAC directs the NMED Secretary to "approve, approve with conditions, or deny" a discharge permit application, after the administrative record is complete and all required information is available. This regulation authorizing permit approval "with conditions" provides the fundamental authority for including conditions in discharge permits.

## FACT SHEET – DP-1132

### Basis for Draft Permit Conditions

The conditions in this draft Discharge Permit are organized into the following Sections: Operational Plan, Monitoring and Reporting, Contingency, Closure, and General Requirements. The draft Permit conditions conform to the requirements of the regulations and are generally consistent with similar conditions in other groundwater discharge permits issued by the department.

#### A. Operational Plan Conditions Section

Conditions in this Section require the permittee to properly operate and maintain the treatment and disposal system; to conduct testing and inspections to make sure all components of the treatment and disposal system are functioning as intended; to restrict access to the system so that unauthorized persons can neither damage the system nor be exposed to unsafe conditions; and to post appropriate advisory signs at the facility or discharge locations.

This Section also requires the Applicants to provide plans and specifications for any Facility expansion, alteration, or process modification, and to obtain Department approval prior to commencing these changes. The requirements in this Section conform in-part to the requirement of 20.6.2.1202 NMAC that a permittee proposing the construction or modification of a facility that will change the character of the discharge shall file associated plans and specifications with the Department.

This Section requires the Applicants to submit verification that all Facility units and systems intended to convey, store, treat or dispose of an untreated liquid or semi-liquid waste stream have sufficient secondary containment. This requirement conforms to 20.6.2.3106.D NMAC which requires that a discharge plan shall set forth in detail the flow characteristics of the discharge, set forth the design of the site, and set forth any additional information necessary to ensure that compliance with the discharge permit will not result in concentrations in excess of the standards at any place of water withdrawal.

This Section includes effluent quality limits for discharges of treated RLW to Outfall 051 to prevent exceedances of groundwater standards. Associated with this requirement is a table of chemical constituents and effluent quality limits derived from 20.6.2.3103 NMAC, Standards for Ground Water. This Section addresses limits for the toxic pollutants in 20.6.2.7.T NMAC (i.e., the concentrations listed in Table A-1 of the Department's Risk Assessment Guidance for Site Investigation and Remediation). For any water contaminant that is not listed in Table 1 of this Discharge Permit, or in Table A-1 of the Risk Assessment Guidance, the limit shall be the most recent EPA Regional Screening Level (RSL) for residential tap water. This Section further specifies that water contaminants subject to effective and enforceable limitations in NPDES Permit No. NM0028355 for discharges to Outfall 051 are exempt from the condition's limits.



## FACT SHEET – DP-1132

This Section includes effluent quality limits for discharges of treated RLW to the MES and SET in order prevent contamination of groundwater if an unauthorized discharge from either of these units were to occur. These limitations conform to the requirement of 20.6.2.3109.C NMAC that a discharge plan will not result in either concentrations in excess of the standards of 20.6.2.3103 NMAC or the presence of any toxic pollutant at any place of withdrawal of water for present or reasonably foreseeable future use. This Section includes a table of chemical constituents and effluent quality limits derived either from 20.6.2.3103 NMAC, Standards for Ground Water, or from the drinking waste standards set forth in the Safe Drinking Water Act.

This Section requires the installation and calibration of flow meters on influent and effluent lines at the Facility, including effluent meters associated with the MES, the SET, and Outfall 051. These requirements conform to 20.6.2.3107.A NMAC specifying that a discharge plan include provisions regarding the installation, use, and maintenance of effluent monitoring devices, and conforms to the requirement of 20.6.2.3109.C(3)(c)(i) NMAC that a discharge plan include adequate provision for flow monitoring so that the amount being discharged can be determined. Upon installation of the flow meters, the Applicants would be obligated to establish a meter calibration method for each meter, specify a periodicity for meter calibration, and specify an accuracy limit for the various meter types. This Section requires a calibration report for each flow meter be prepared at a minimum annually.

### B. Monitoring and Reporting Conditions Section

Conditions in this Section require the permittee to monitor and report on various aspects of the discharge system to verify that operations are within the Discharge Permit limits and that the Permit is achieving the expected results. Monitoring and reporting requirements are authorized by 20.6.2.3107.A NMAC. Pursuant to 20.6.2.3109.H NMAC, a discharge permit may not be approved without provision for flow measurement and sampling.

This Section requires the submittal of quarterly monitoring reports that contain the following items: influent volumes of RLW and Transuranic waste water received at the RLWTF, discharge volumes, analytical results of sampling of groundwater monitoring wells, effluent waste streams discharged to Outfall 051, the SET, and the MES, groundwater flow direction, and groundwater elevation contour maps.

This Section also requires the installation of a moisture monitoring system for detection of unauthorized releases from the SET and for the establishment of soil moisture baseline conditions prior to initiating discharge to the SET. The soil moisture monitoring system, together with the unit's leak detection system, are means to evaluate the effectiveness of the zero-liquid-discharge design of the SET.

This Section requires the installation of two replacement monitoring wells in the alluvial aquifer at a location hydrologically downgradient of Outfall 051 to replace two improperly constructed wells.

## FACT SHEET – DP-1132

### C. Contingency Plan Conditions Section

Contingency conditions in this Section establish required corrective actions or require the permittee to propose corrective actions for NMED approval in the case of failure of the discharge system. Contingency plans are authorized by 20.6.2.3107.A(10) NMAC. As applicable to the specific discharge system, standard contingency conditions address the exceedance of groundwater standards, exceedance of contaminant discharge limits, damage to impoundment liners, lack of required freeboard in impoundments, and monitoring well deficiencies (e.g., improper construction, improper location for monitoring the intended source, insufficient water for sampling). Contingency requirements are included in conditions throughout the Discharge Permit, not just this Section. The permittee is required to report and address unauthorized discharges in accordance with 20.6.2.1203 NMAC.

### D. Closure Conditions Section

Conditions in this Section prescribe measures and timeframes for closing part or all of the facility so that discharges can no longer occur and so that the exceedance of groundwater standards does not occur after the cessation of the operation. If contamination does occur during this period of activity, closure conditions require remediation. Closure requirements are authorized by 20.6.2.3107.A(11) NMAC, which also stipulates that closure requirements survive the termination or expiration of the Discharge Permit.

This Section requires the cessation of operation of six specific units at the Facility because the units are single-walled units and have no effective secondary containment, thus posing a risk of groundwater contamination if the integrity of the units were compromised. Upon cessation of operation of a unit, the applicants are obligated to submit a stabilization work plan for the unit or system that has permanently ceased to operate. The purpose of these conditions is to ensure that, upon cessation of use, all units or systems at the Facility can no longer receive an influent or discharge of contaminated wastewater and the unit or system no longer has the potential of causing a release of wastewater.

An overall closure plan for the facility and its components is attached to and would be approved as part of the Discharge Permit.

Groundwater monitoring is required after the discharge ceases until eight quarters of sampling confirm no exceedance of standards. This two-year period allows for the potential movement of contaminants through the vadose zone and is consistent with the time period established in remediation programs demonstrating that remediation is complete, e.g., 20.6.2.4103 NMAC (abatement plans) and 20.5.119.1929 NMAC (petroleum storage tank systems).

This Section requires that any corrective action (e.g., investigation, cleanup) for potential and actual releases of contaminants into soils and groundwater at solid waste management units (SWMUs) and areas of concern (AOCs) at the Facility be performed under the Consent Order and not under this Discharge Permit. This is required so that agency required corrective action under

## FACT SHEET – DP-1132

the Discharge Permit is consistent with the Compliance Order on Consent (June 2016, Consent Order) entered into between the New Mexico Environment Department and the DOE pursuant to the New Mexico Hazardous Waste Act, NMSA 1978, §74-4-10 and the New Mexico Solid Waste Act, NMSA 1978, §74-9-36(D).

### E. General Terms and Conditions Section

These general terms and conditions are standard in all discharge permits. The permittee is required to maintain certain records and provide them if requested to NMED, as authorized by Subsections 20.6.2.3107. A and D NMAC; and to notify NMED of proposed changes to the volume, location, or character of the discharge, as this may require a “discharge permit modification” as defined in 20.6.2.7.D NMAC and is consistent with the notification requirement in 20.6.2.3107.C NMAC.

This Section also notifies the permittee of requirements contained in the Ground and Surface Water Regulations (regarding transfer of the permit, permit fees, and submitting construction plans and specifications) and contained in the Water Quality Act (allowing inspections, civil and criminal penalties, duty to comply with other laws).

This Section requires that specific documents required under this draft Discharge Permit are to be posted to the Electronic Reading room within a thirty-day period. Documents are listed as either Mandatory or Voluntary.



**DEPARTAMENTO DE MEDIO AMBIENTE DE NUEVO MÉXICO**  
**OFICINA DE CALIDAD DE AGUAS SUBTERRÁNEAS**  
**HOJA DE DATOS - DP-1132**



**BORRADOR del Permiso de Descarga de Aguas Subterráneas DP-1132**

**Nombre de la Instalación:** Instalación de Tratamiento de Residuos Líquidos Radiactivos

**Ubicación de las Instalaciones:** Dentro del Laboratorio Nacional de Los Alamos, aproximadamente a 1.5 millas al sur de Los Alamos, Nuevo México. Secciones 16, 17, 20, 21 y 22, Municipio 19N, Rango 06E

**Condado:** Condado de Los Alamos

**Solicitante:** Departamento de Energía de los Estados Unidos (DOE, por sus siglas en inglés)  
Administración Nacional de Seguridad Nuclear (NNSA, por sus siglas en inglés)  
Oficina local en Los Alamos  
Jody Pugh, Assistant Manager  
Misión de Aseguramiento e Infraestructura  
3747 W. Jemez Road, MS A316  
Los Alamos, NM 87544

Triad National Security, LLC  
Enrique Torres, Division Leader  
División de Protección Ambiental y Cumplimiento  
PO Box 1663, MS K491  
Los Alamos, NM 87545

**Acción de Permiso Propuesta:** Emisión de un Permiso de Descarga

**Autoridad Reguladora** Reglamentos de Protección de Aguas Subterráneas y Superficiales de la Comisión de Control de Calidad del Agua, 20.6.2 NMAC

**Agencia Emisora:** Oficina de Calidad de Aguas Subterráneas (GWQB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México

## HOJA DE DATOS - DP-1132

### Contacto de GWQB:

Andrew Romero  
P.O. Box 5469, Santa Fe, NM 87502-5469  
Teléfono: (505) 827-0076  
Correo electrónico: [andrewc.romero@state.nm.us](mailto:andrewc.romero@state.nm.us)

El Departamento del Medio Ambiente de Nuevo México ha preparado esta Hoja Informativa en asociación con la acción de permiso de descarga de aguas subterráneas a la que se hace referencia para proporcionar información sobre el solicitante, una breve descripción de la descarga propuesta, información sobre cómo una persona puede participar en esta acción de permiso y un breve resumen del borrador con la base de las condiciones del permiso. Esta hoja informativa se proporciona al solicitante junto con el borrador del permiso de descarga cuando, a través de un aviso público, todas las partes tienen la oportunidad de hacer comentarios sobre el permiso y solicitar una audiencia pública.

### Descripción de la Descarga Propuesta

La Instalación de Tratamiento de Residuos Líquidos Radiactivos (RLWTF, por sus siglas en inglés o Instalación) es una instalación de tratamiento de aguas residuales que recibe y trata residuos líquidos radiactivos (RLW, por sus siglas en inglés) de los lugares que generan residuos en el Laboratorio Nacional de Los Alamos (LANL). El Permiso de Descarga autoriza el uso de los múltiples sistemas y unidades asociadas de RLWTF, que incluyen: el sistema de recolección de afluentes; el sistema de almacenamiento de afluentes, es decir, el Centro de Mitigación de Riesgo de Manejos de Residuos (WMRM, por sus siglas en inglés); el sistema de tratamiento de residuos líquidos radiactivos de bajo nivel; el sistema transuránico de tratamiento de aguas residuales; y el sistema de tratamiento secundario. Los procesos de tratamiento de RLW incluyen el tratamiento químico en un tanque de reacción, filtración, intercambio iónico y ósmosis inversa. El Permiso de Descarga autoriza la descarga de agua tratada a través del Sistema de Evaporador Mecánico (MES, por sus siglas en inglés) y el Tanque de Evaporación Solar (SET, por sus siglas en inglés) en TA-52. La descarga de agua tratada en un emisario (Emisario 051) está autorizada por un permiso del Sistema Nacional de Eliminación de Descargas de Contaminantes (NPDES, por sus siglas en inglés) emitido por la Agencia de Protección Ambiental de los Estados Unidos (EPA, por sus siglas en inglés) de conformidad con la Sección 402, 33 U.S.C § 1342 de la Ley de Agua Limpia. Se pueden descargar hasta 40,000 galones por día (gpd) a través de los tres procesos identificados anteriormente. La descarga puede contener contaminantes del agua en concentraciones superiores a los estándares de 20.6.2.3103 NMAC y puede contener contaminantes tóxicos como se define en 20.6.2.7.T NMAC. Los componentes radiactivos en estos estándares incluyen Radio-226 y Radio-228 combinados, además del total de uranio y cobalto disueltos. La instalación, a través de su asociación con el Departamento de Energía y sus actividades relacionadas con la defensa de los Estados Unidos, se autorregula para la gestión de todos los demás radionúclidos. La descarga se encuentra dentro de LANL, el cual se ubica aproximadamente a 1.5 millas al sur de Los Alamos,

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Nuevo México, en las Secciones 16, 17, 20, 21 y 22, Municipio 19N, Rango 06E, condado de Los Alamos. El agua subterránea con mayor probabilidad de ser afectada va desde una profundidad aproximada de un pie hasta 1,306 pies y tiene una concentración de sólidos disueltos totales que varía aproximadamente de 162 a 255 miligramos por litro.

### **Razón Fundamental para la Segunda Audiencia**

Se llevó a cabo una audiencia pública sobre la emisión de DP-1132 el 19 de abril de 2018. El 18 de junio de 2019, la Comisión de Control de la Calidad del Agua (WQCC, por sus siglas en inglés) dictaminó que la solicitud de empleo de Oficial de Audiencias y la contratación posterior por una de las partes crearon una apariencia indebida de parcialidad que podría afectar la deliberación del Secretario y la emisión del DP-1132. La WQCC dictaminó entonces que, de conformidad con NMSA 1978, artículo 74-6-5(Q), 20.1.3.16(A)(3) NMAC y 20.1.3.16(f)(3) NMAC, la Orden del Secretario de la primera audiencia queda vacante y el asunto será enviado al Departamento de Medio Ambiente de Nuevo México para una nueva audiencia con un oficial de audiencia recién nombrado.

### **Período de Comentarios/Audiencia**

NMED notificará al público la disponibilidad del borrador del Permiso de Descarga y esta Hoja Informativa en un periódico estatal y local de circulación general y permitirá 30 días después de esta notificación para que cualquier parte interesada envíe sus comentarios. Para obtener una copia de este borrador de Permiso de Descarga, visite el sitio web de la Oficina de Calidad de Aguas Subterráneas (GWQB) en <https://www.env.nm.gov/gwqb/> o comuníquese con el contacto de GWQB que se encuentra al principio de esta Hoja Informativa. Para enviar un comentario, comuníquese con el contacto de GWQB que se encuentra al principio de esta hoja informativa.

NMED notificará al público de una segunda audiencia sobre el borrador del Permiso de Descarga en los mismos periódicos utilizados para la notificación de la disponibilidad del borrador del Permiso de Descarga. Se ha programado una audiencia para el 24 de septiembre de 2019 en Fuller Lodge en Los Alamos.

### **Marco Reglamentario**

El Reglamento de Protección del Aguas Subterráneas y Superficiales, 20.6.2 NMAC, establece el marco reglamentario para controlar las descargas en o debajo de la superficie del suelo mediante la emisión de permisos de descarga de aguas subterráneas. El propósito de las regulaciones relativas a los permisos de descarga de aguas subterráneas, según lo establecido en 20.6.2.3101 NMAC, es "proteger todas las aguas subterráneas del estado de Nuevo México que tienen una concentración existente de 10,000 mg/l o menos de sólidos disueltos totales, para uso presente y uso potencial futuro como suministro de agua doméstica y agrícola, y para proteger aquellos segmentos de aguas superficiales que están ganando debido a la entrada de aguas subterráneas, para usos designados" en los estándares para aguas interestatales y aguas

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dentro del estado (20.6.4 NMAC).

Las personas que propongan descargar efluentes o lixiviados de manera tal que puedan moverse directa o indirectamente al agua subterránea deben obtener y cumplir un permiso de descarga (20.6.2.3104 NMAC). Para obtener un permiso de descarga, el solicitante debe presentar una solicitud (o "plan de descarga" - 20.6.2.7 NMAC) que proponga métodos/técnicas que se utilizarán o procesos que se espera que ocurran naturalmente para garantizar que la descarga de contaminantes del agua no resulte en la contaminación de aguas subterráneas o superficiales (20.6.2.3106 NMAC).

Al revisar y aprobar una solicitud, NMED debe garantizar que el plan de descarga no suponga un peligro para la salud pública, un riesgo indebido para la propiedad, la superación de los estándares de aguas subterráneas en ningún lugar de extracción de agua de uso presente o uso futuro razonablemente previsible, o violación de un estándar de corrientes (Subsecciones 20.6.3109.C y H NMAC). "El peligro para la salud pública" se define en 20.6.2.7 NMAC y se refiere a la superación de los estándares de agua subterránea en un suministro de agua potable. 20.6.2.3103 NMAC establece los estándares de agua subterránea.

20.6.2.3109.B NMAC ordena al secretario de NMED a "aprobar, aprobar con condiciones o denegar" una solicitud de permiso de descarga, una vez que el registro administrativo esté completo y toda la información requerida esté disponible. Este reglamento que autoriza la aprobación del permiso "con condiciones" proporciona la autoridad fundamental para incluir condiciones en los permisos de descarga.

### **Bases para el Borrador de Condiciones del Permiso**

Las condiciones en este borrador de Permiso de Descarga están organizadas en las siguientes Secciones: Plan Operativo, Monitoreo e Informes, Contingencia, Cierre y Requisitos Generales. Las condiciones del borrador del Permiso cumplen con los requisitos de las regulaciones y son generalmente consistentes con las condiciones similares en otros permisos de descarga de aguas subterráneas emitidos por el departamento.

#### **A. Sección de Condiciones del Plan Operativo**

Las condiciones en esta Sección requieren al titular del permiso operar y mantener adecuadamente el sistema de tratamiento y eliminación; realizar pruebas e inspecciones para asegurarse de que todos los componentes del sistema de tratamiento y eliminación funcionen según lo previsto; restringir el acceso al sistema para que las personas no autorizadas no puedan dañar el sistema ni exponerse a condiciones inseguras; y colocar letreros de aviso apropiados en la instalación o lugares de descarga.

Esta Sección también requiere que los Solicitantes proporcionen planes y especificaciones para cualquier ampliación, alteración o modificación del proceso de la Instalación, y que obtengan la aprobación del Departamento antes de comenzar con estos cambios. Los requisitos de esta

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Sección se ajustan en parte al requisito de 20.6.2.1202 NMAC de que un titular del permiso que propone la construcción o modificación de una instalación que cambiará el carácter de la descarga deberá presentar los planes y especificaciones asociados al Departamento.

Esta Sección requiere que los Solicitantes presenten una verificación de que todas las unidades y sistemas de la Instalación destinados a transportar, almacenar, tratar o eliminar un flujo de residuos líquidos o semilíquidos no tratados tienen suficiente contención secundaria. Este requisito cumple con 20.6.2.3106.D NMAC que requiere que un plan de descarga establezca en detalle las características de flujo de la descarga, establezca el diseño del sitio y establezca cualquier información adicional necesaria para garantizar que el cumplimiento con el permiso de descarga no dará lugar a concentraciones en exceso de los estándares en ningún lugar de extracción de agua.

Esta sección incluye límites de calidad de efluentes para las descargas de RLW tratadas al Emisario 051 para evitar excedencias de los estándares de aguas subterráneas. Asociado a este requisito se encuentra una tabla de componentes químicos y límites de calidad de efluentes derivados de 20.6.2.3103 NMAC, estándares para aguas subterráneas. Esta Sección aborda los límites para los contaminantes tóxicos en 20.6.2.7.T NMAC (es decir, las concentraciones enumeradas en la Tabla A-1 de la Guía de Evaluación de Riesgos del Departamento para la Investigación y Remediación del Sitio). Para cualquier contaminante de agua que no esté incluido en la Tabla 1 de este Permiso de Descarga, o en la Tabla A-1 de la Guía de Evaluación de Riesgos, el límite será el Nivel de Cribado Regional de la EPA (RSL, por sus siglas en inglés) más reciente para el agua residencial. Esta Sección además especifica que los contaminantes del agua sujetos a limitaciones efectivas y exigibles en el Permiso NPDES No. NM0028355 para descargas al Emisario 051 están exentos de los límites de la condición.

Esta sección incluye los límites de calidad de efluentes para las descargas de RLW tratadas a MES y SET para prevenir la contaminación de las aguas subterráneas si se produjera una descarga no autorizada de cualquiera de estas unidades. Estas limitaciones cumplen con el requisito de 20.6.2.3109.C NMAC de que un plan de descarga no generará concentraciones superiores a los estándares de 20.6.2.3103 NMAC ni la presencia de ningún contaminante tóxico en ningún lugar de extracción de agua para uso en el presente o para uso en un futuro razonablemente previsible. Esta sección incluye una tabla de componentes químicos y límites de calidad de efluentes derivados de 20.6.2.3103 NMAC, estándares para aguas subterráneas, o de los estándares de residuos en agua potable establecidas en la Ley de Agua Potable Segura.

Esta Sección requiere la instalación y calibración de medidores de flujo en las líneas de afluentes y efluentes en la Instalación, incluidos los medidores de efluentes asociados con el MES, el SET y el Emisario 051. Estos requisitos se ajustan a 20.6.2.3107.A NMAC que especifica que el plan de descarga incluye disposiciones relativas a la instalación, uso y mantenimiento de dispositivos de monitoreo de efluentes, y cumple con el requisito 20.6.2.3109.C (3) (c) (i) NMAC de que un plan de descarga incluye una provisión adecuada para el monitoreo de flujo, de modo que la cantidad que se descarga puede ser determinada. Tras la instalación de los medidores de flujo, los solicitantes estarían obligados a establecer un método de calibración de



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medidor para cada medidor, especificar una periodicidad para la calibración del medidor y especificar un límite de precisión para los distintos tipos de medidores. Esta sección requiere que se prepare un informe de calibración para cada medidor de flujo como mínimo anualmente.

### B. Sección de Condiciones de Monitoreo y Reporte

Las condiciones en esta Sección requieren que el titular del permiso monitoree e informe sobre diversos aspectos del sistema de descarga para verificar que las operaciones se encuentran dentro de los límites del Permiso de Descarga y que el Permiso está logrando los resultados esperados. Los requisitos de monitoreo y reporte están autorizados por 20.6.2.3107.A NMAC. De conformidad con 20.6.2.3109.H NMAC, un permiso de descarga no puede ser aprobado sin la provisión de medición de flujo y muestreo.

Esta Sección requiere la presentación de informes de monitoreo trimestrales que contengan los siguientes elementos: volúmenes de afluentes de RLW y aguas residuales Transuránicas recibidas en la RLWTF, volúmenes de descarga, resultados analíticos de los muestreos de pozos de monitoreo de aguas subterráneas, corrientes de residuos de efluentes descargados en el Emisario 051, el SET y el MES, dirección del flujo de las aguas subterráneas y mapas de contorno de la elevación de las aguas subterráneas.

Esta Sección también requiere la instalación de un sistema de monitoreo de humedad para la detección de fugas no autorizadas del SET y para el establecimiento de las condiciones de referencia de la humedad del suelo antes de iniciar la descarga al SET. El sistema de monitoreo de humedad del suelo, junto con el sistema de detección de fugas de la unidad, son medios para evaluar la efectividad del diseño de descarga cero de líquidos del SET.

Esta Sección requiere la instalación de dos pozos de monitoreo de reemplazo en el acuífero aluvial en un lugar hidrológicamente más abajo del Emisario 051 para reemplazar dos pozos mal construidos.

### C. Sección de Condiciones del Plan de Contingencia

Las condiciones de contingencia en esta Sección establecen las acciones correctivas requeridas o requieren que el titular del permiso proponga acciones correctivas para la aprobación por el NMED en caso de fallo del sistema de descarga. Los planes de contingencia están autorizados por 20.6.2.3107.A (10) NMAC. Según corresponda al sistema de descarga específico, las condiciones de contingencia estándar abordan la superación de los estándares de aguas subterráneas, la superación de los límites de descarga de contaminantes, daños a los revestimientos de las represas, falta de un *franceboard* requerido en las represas y el monitoreo de las deficiencias del pozo (por ejemplo, construcción inadecuada, ubicación inadecuada para el monitoreo de la fuente prevista, agua insuficiente para el muestreo). Los requisitos de contingencia se incluyen en las condiciones a lo largo del Permiso de Descarga, no

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solo en esta Sección. El titular del permiso tiene la obligación de informar y abordar las descargas no autorizadas de acuerdo con 20.6.2.1203 NMAC.

### D. Sección de Condiciones de Cierre

Las condiciones en esta Sección prescriben medidas y plazos para cerrar parte o la totalidad de la instalación para que las descargas ya no puedan ocurrir y así la superación de los estándares de aguas subterráneas no ocurran después del cese de la operación. Si se produce contaminación durante este período de actividad, las condiciones de cierre requieren remediación. Los requisitos de cierre están autorizados por 20.6.2.3107.A (11) NMAC, que también estipula que los requisitos de cierre sobreviven a la terminación o vencimiento del Permiso de Descarga.

Esta Sección requiere el cese de la operación de seis unidades específicas en la Instalación porque las unidades son unidades de pared simple y no tienen una contención secundaria efectiva, lo que representa un riesgo de contaminación del agua subterránea si la integridad de las unidades se ve comprometida. Al cesar la operación de una unidad, los solicitantes están obligados a presentar un plan de trabajo de estabilización para la unidad o sistema que ha dejado de operar permanentemente. El propósito de estas condiciones es asegurar que, al cesar el uso, todas las unidades o sistemas en la Instalación ya no puedan recibir un afluente o descarga de aguas residuales contaminadas y la unidad o sistema ya no tenga el potencial de poder causar una fuga de aguas residuales.

Se adjunta un plan general de cierre para la instalación y sus componentes, que sería aprobado como parte del Permiso de descarga.

Se requiere monitoreo del agua subterránea después de que cese la descarga hasta que ocho trimestres de muestreo confirmen que no se exceden los estándares. Este período de dos años permite el movimiento potencial de contaminantes a través de la zona vadosa y es consistente con el período de tiempo establecido en los programas de remediación que demuestran que la remediación está completa, por ejemplo, 20.6.2.4103 NMAC (planes de reducción) y 20.5.119.1929 NMAC (sistemas de tanques de almacenamiento de petróleo).

Esta Sección requiere que cualquier acción correctiva (por ejemplo, investigación, limpieza) para emisiones potenciales y reales de contaminantes en suelos y aguas subterráneas en las unidades de manejo de residuos sólidos (SWMU, por sus siglas en inglés) y áreas de preocupación (AOCs, por sus siglas en inglés) en la Instalación se realice bajo la Orden de Consentimiento y no bajo este Permiso de Descarga. Esto se requiere para que la acción correctiva requerida por la agencia bajo el Permiso de Descarga sea consistente con la Orden de Cumplimiento de Consentimiento (junio de 2016, Orden de Consentimiento) entre el Departamento de Medio Ambiente de Nuevo México y el DOE de conformidad con la Ley de Residuos Peligrosos de Nuevo México, NMSA 1978, §74-4-10 y la Ley de Residuos Sólidos de Nuevo México, NMSA 1978, §74-9-36 (D).

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### E. Sección de Términos y Condiciones Generales

Estos términos y condiciones generales son estándar en todos los permisos de descarga. Se requiere que el titular del permiso mantenga ciertos registros y los proporcione a NMED, si así lo solicita, según lo autorizado por las Subsecciones 20.6.2.3107. A y D NMAC; y para notificar a NMED los cambios propuestos al volumen, la ubicación o el carácter de la descarga, ya que esto puede requerir una "modificación del permiso de descarga" como se define en 20.6.2.7.D NMAC y es consistente con el requisito de notificación en 20.6.2.3107. C NMAC.

Esta Sección también notifica a los titulares de los requisitos contenidos en los reglamentos de aguas subterráneas y superficiales (en relación con la transferencia del permiso, las tarifas de permisos y la presentación de planes y especificaciones de construcción) y contenidos en la Ley de Calidad del Agua (que permite inspecciones, sanciones civiles y penales, y el deber de cumplir con otras leyes).

Esta Sección requiere que los documentos específicos requeridos en virtud de este borrador del Permiso de Descarga se publiquen en la sala de lectura electrónica dentro de un período de treinta días. Los documentos están listados como Obligatorios o Voluntarios.



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*LA-UR:* 19-26427  
*Locates Action No.:* U1801172  
*Date:* **JUL 22 2019**

**GROUND WATER**  
**JUL 22 2019**  
**BUREAU**

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Santa Fe, NM 87502

**Subject: Monitoring Report, Radioactive Liquid Waste Treatment Facility, 2<sup>nd</sup> Quarter 2019**

Dear Ms. Hunter:

The U.S. Department of Energy and Triad National Security, LLC (DOE/Triad) voluntarily submit the attached monitoring report for Los Alamos National Laboratory's Radioactive Liquid Waste Treatment Facility (RLWTF) at Technical Area (TA)-50. The report covers the monitoring period April 1 to June 30, 2019, and provides information on the following:

- ✓ Facility Maintenance and Repair Activities
- ✓ Daily Low-Level and TRU Influent Volumes
- ✓ Daily Discharge Volumes to the MES, Outfall 051, and SET
- ✓ Effluent Monitoring: Outfall 051 and MES
- ✓ Ground Water Monitoring: MCOI-6



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Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at [Karen.Armijo@nnsa.doe.gov](mailto:Karen.Armijo@nnsa.doe.gov), or Robert S. Beers by telephone at (505) 667-7969 or by email at [bbeers@lanl.gov](mailto: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 RLWTF Second 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 Outfall 051 monthly treated effluent monitoring results  
Attachment 5 MES monthly treated effluent results  
Attachment 6 MES quarterly treated effluent results  
Attachment 7 MCOI-6 quarterly groundwater monitoring report  
Attachment 8 Monitoring wells location map

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# ATTACHMENT 1

RLWTF Second Quarter Monitoring Report for 2019

EPC-DO: 19-249

LA-UR-19-26427

Date: JUL 22 2019

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### Facility Maintenance and Repair Activities

- ✓ **Attachment 2** provides a summary of the maintenance and repair activities conducted at the Radioactive Liquid Waste Treatment Facility (RLWTF) during the monitoring period.
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### Influent Volumes: Low-Level Radioactive Waste Water

- ✓ **Attachment 3** provides the total daily and monthly volumes of low-level radioactive waste water (RLW) received by the RLWTF during the monitoring period.
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### Influent Volumes: Transuranic Waste Water

- ✓ **Attachment 3** provides the total daily and monthly volumes of transuranic (TRU) influent waste water received by the RLWTF during the monitoring period.
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### Discharge Volumes: MES, Outfall 051, and SET

- ✓ **Attachment 3** provides the daily volume of treated effluent discharged to the Mechanical Evaporator System (MES) and Outfall 051 during the monitoring period.
  - ✓ No treated effluent was discharged to the Solar Evaporative Tank System (SET) during the monitoring period.
- 

### Effluent Monitoring:

- ✓ **Outfall 051 Monthly.** Treated effluent was discharged through Outfall 051 on June 18, 2019. A monthly sample of treated effluent was collected for water contaminants listed in 20.6.2.3103 NMAC and Toxic Pollutants as defined in 20.6.2.7.WW NMAC. Analytical results are provided in **Attachment 4, Tables 1, 2, and 3.** Table 1 lists results for general inorganics, metals, radioactivity, and perchlorate. Table 2 lists all detected organic compounds. Table 3 lists all organic compounds not detected by the analytical laboratory. All results were less than NMWQCC Regulation 3103 Ground Water Standards and NMED Risk Assessment Guidance Table A-1 Tap Water Limits.

The following two organic compounds were detected in the June 18<sup>th</sup> sample of treated effluent discharged through Outfall 051:

- Chloroform was detected at a concentration of 13.9 µg/L. The NMWQCC Regulation 3103 Ground Water Standard for chloroform is 100 µg/L.



- Bromodichloromethane was detected at a concentration of 0.94J 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.

- ✓ **MES Monthly.** Monthly sampling of treated effluent discharged to the MES was conducted on April 9, May 14, and June 11, 2019, for Total Kjeldahl Nitrogen (TKN), Nitrate+ Nitrite as Nitrogen (NO<sub>3</sub>+NO<sub>2</sub>-N), Total Dissolved Solids (TDS), Chloride (Cl), Fluoride (F) and perchlorate. Analytical results are provided in **Attachment 5, Tables 1, 2, and 3**. All results were less than NMWQCC Regulation 3103 Ground Water Standards and NMED Risk Assessment Guidance Table A-1 Tap Water Limits.
- ✓ **MES Quarterly.** Quarterly sampling of treated effluent discharged to the MES was conducted on June 11, 2019, for water contaminants listed in 20.6.2.3103 NMAC and Toxic Pollutants as defined in 20.6.2.7.WW NMAC. Analytical results are provided in **Attachment 6, Tables 1, 2, and 3**. Table 1 contains results for all general inorganics, metals, radioactivity, and perchlorate. Table 2 contains detected organic compounds. Table 3 contains organic compounds not detected by the analytical laboratory. All results were less than NMWQCC Regulation 3103 Ground Water Standards and NMED Risk Assessment Guidance Table A-1 Tap Water Limits.

The following organic compound was detected in the June 11<sup>th</sup> sample:

- Di-n-butylphthalate was detected at a concentration of 0.57 µg/L. The NMED Risk Assessment Guidance Table A-1 Tap Water Limit for Di-n-butylphthalate is 885 µg/L. The analytical laboratory assigned “J” and “B” flags to indicate the result is an estimated value (J) and the presence of the analyte in the blank (B).
- ✓ **SET.** No treated effluent was discharged to the SET during the monitoring period.

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#### Ground Water Monitoring: MCOI-6.

- ✓ **Attachment 7** provides the complete ground water monitoring report from the quarterly sampling of perched/intermediate ground water monitoring well MCOI-6 on May 13, 2019. Quarterly results for TKN, NO<sub>3</sub>+NO<sub>2</sub>-N, TDS, chloride, fluoride, and perchlorate are provided in **Table 1**. All results from the May 13<sup>th</sup> 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 ( $\text{NO}_3+\text{NO}_2\text{-N}$ ) was detected at a concentration of 11.1 mg/L; the NMWQCC Regulation 3103 Ground Water Standard is 10 mg/L. The average  $\text{NO}_3+\text{NO}_2\text{-N}$  concentration at MCOI-6 during the 5-yr period from 2014 through 2018 was 9.0 mg/L. The maximum  $\text{NO}_3+\text{NO}_2\text{-N}$  concentration during the reference period was 11.5 mg/L. Detections of  $\text{NO}_3+\text{NO}_2\text{-N}$  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  $\text{NO}_3+\text{NO}_2\text{-N}$  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 93.6  $\mu\text{g/L}$ ; the NMED Risk Assessment Guidance Table A-1 Tap Water Limit is 13.8  $\mu\text{g/L}$ . The average perchlorate concentration at MCOI-6 during the 5-yr period from 2014 through 2018 was 72.9  $\mu\text{g/L}$ . The maximum perchlorate concentration during the reference period was 124  $\mu\text{g/L}$ . 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 Consent Order, the Chromium Investigation Monitoring Group.

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A map showing the location of ground water monitoring wells MCOI-6, R-1, R-14, R-46 and R-60 is provided as **Attachment 8**.

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# ATTACHMENT 2

Summary of maintenance and repair activities  
conducted at the RLWTF

EPC-DO: 19-249

LA-UR-19-26427

Date: JUL 22 2019

**DP-1132 Report: Second Quarter 2019  
RLWTF Maintenance**

Structures	Description	Built	Task Type				Total
			PM	CO	MD	SR	
Building 1	Original treatment bldg.	1963	89	7	5	3	104
Building 2	Original influent storage bldg.	1963	1	0	0	0	1
Building 66	TRU influent storage	1982	3	0	0	0	3
Building 248	Low-level bottoms storage	1996	1	5	0	0	6
Building 250	Low-level influent storage	2009	30	4	2	0	36
Building 257	Mechanical evaporator	2010	2	1	0	0	3
TA52	Solar evaporation	2011	15	1	1	0	17
<b>Totals</b>			141	18	8	3	170

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

## DP-1132 Report: RLWTF Maintenance / Second Quarter 2019

TA-50-0001 Work Completion Report (04-01-2019 to 07-01-2019)				
Unit	Work Order	Task	Task Type	Task Title
500001	00531444	01	CO	500001 REPLACE LEAKING SECTION OF PIPE FOR 016-CTL-P01
500001	00593439	01	CO	50001 PV-2 POWER CONTROLLER INSTALLATION
500001	00593480	01	CO	500001 REPAIR SMALL DRIP ON RDF SAMPLE SINK
500001	00593520	01	CO	REPLACE FAR-18 FILTERS
500001	00620883	01	CO	500001 LEVEL OFF THE EXISTING PILES OF DIRT FROM THE ASPHALT
500001	00621196	01	CO	500001 RLW ROTARY VACUUM FILTER DRIVE REPAIR
500001	00635229	01	CO	500001 REPLACEMENT OF 3-WAY VALVE 24-SRO-V219
500001	00599479	01	MD	500001 EXCAVATIONS/POTHOLING/UT TESTING TO MORTANDAD OUTFALL
500001	00603392	01	MD	500001 REPLACE RM. 71A SUMP PUMPS
500001	00615426	01	MD	500001 REPLACE SS TUBING ON M8 RO TO PVDF
500001	00618226	01	MD	500001 INSTALL FLOURESCENT LIGHTING IN ROOM 36
500001	00620475	01	MD	500001 INSTALL BOLLARDS TO PROTECT FIRE HYDRANT
500001	00556617	01	PM	500001 PV-008 6MO PM, (MECHANICAL)
500001	00603761	01	PM	50001 & 248 LPT 1YR PM VISUAL
500001	00615837	01	PM	50-1 REPLACE ANNUAL PRE-FILTERS HV-11, HV-012 AND FE-27
500001	00616650	01	PM	500001 FE'S 1YR PM, (MECHANICAL) (11 EA)
500001	00620073	01	PM	500001 5 YR PRV RM 72 PM, REVERSE OSMOSIS (3 EA)
500001	00621753	01	PM	TA-50 FCP 6MO PM, FIRE ALARM SYSTEMS INSPECTION & TESTING
500001	00627291	01	PM	50-0001 (A) MANLIFT JGL/GENIE INSPECTION
500001	00627612	01	PM	500001-60 VP 2YR PM, PRESSURE VESSEL (VISUAL/EXTERNAL)
500001	00628790	01	PM	500001 HWG 1YR PM, HOT WATER HEATERS, 3 EA
500001	00629652	01	PM	500001 BHW 1MO PM (2 EA)
500001	00630711	01	PM	500001 3YR PM ULTRASONIC TESTING
500001	00631601	01	PM	500001 (A) DAD PM
500001	00631604	01	PM	500001 TCA 6MO PM, AUTO DUMP
500001	00631629	01	PM	500001 DAD 6MO PM
500001	00631630	01	PM	500001 EH 6MO PM, ELEVATOR MECH/ELECT
500001	00631633	01	PM	500001 ASE 3MO PM, EXHAUST STACK PUMP (3 EA)
500001	00631636	01	PM	500001 MICROFILTER 3 MONTH PUMP MAINTENANCE
500001	00631638	01	PM	500001 EH 3MO PM, ELEVATOR MECH/ELECT
500001	00631658	01	PM	500001 FEXT 1MO PM
500001	00631661	01	PM	500001 BHW 1MO PM (2 EA)
500001	00631674	01	PM	500001 LTET 1MO PM
500001	00631697	01	PM	500001 LTE 1MO PM
500001	00631711	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00634042	01	PM	50-1 (A) RUA MAINTENANCE (TRANE) 14 EA
500001	00634046	01	PM	500001 (6M) DEIONIZED WATER BOTTLE CHANGE OUT



## DP-1132 Report: RLWTF Maintenance / Second Quarter 2019

TA-50-0001 Work Completion Report (04-01-2019 to 07-01-2019)				
Unit	Work Order	Task	Task Type	Task Title
500001	00634047	01	PM	500001 RM 36 (6M) CHEMICAL FEED PUMP MAINTENANCE 2 EA
500001	00634049	01	PM	500001 RM 24 (6M) SRO, AIT VERIFY ENSURE ACCURACY PM (2 EA)
500001	00634070	01	PM	50-1 PH ANALYZER 2MO CALIBRATION 2 EA
500001	00634076	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00634107	01	PM	500001 BHW 1MO PM (2 EA)
500001	00634117	01	PM	500001 LTE 1MO PM
500001	00634119	01	PM	500001 LTET 1MO PM
500001	00634141	01	PM	500001 FEXT 1MO PM
500001	00635035	01	PM	50-1 ELECTRICAL EQUIPMENT 5YR PM GROUP 3
500001	00635038	01	PM	500001 RVF ANNUAL PM
500001	00636498	01	PM	500001 CA'S 1YR PM, (MECHANICAL)
500001	00636504	01	PM	500001 ANNUAL RM24 SRO PUMPS (CAT & GOULDS) PM
500001	00636507	01	PM	500001 (A) DT MAGNAHELIC VERIFICATION
500001	00636509	01	PM	500001 DRE 1YR PM, (MECHANICAL) 6 EA
500001	00636512	01	PM	500001 (A) NATURAL GAS SEISMIC SHUTOFF VALVE INSPECT PM 3 EA
500001	00636513	01	PM	500001 CA'S 6MO PM, (MECHANICAL)
500001	00636522	01	PM	500001 DRE 1YR PM, (ELECTRICAL) 6 EA
500001	00636529	01	PM	500001 SPW 3 MO FIRE SUPPRESSION SYSTEMS PM
500001	00636530	01	PM	500001 LUBE 6MO PM, OPS EQUIPMENT LUBRICATION
500001	00636533	01	PM	500001 GFCI (6M) SERVICE INSPECTIONS
500001	00636534	01	PM	500001 PV-008 3MO PM, (MECHANICAL)
500001	00636555	01	PM	500001 PV-007 3 MO PM, (MECHANICAL)
500001	00636572	01	PM	500001 PERFORM WEEKLY EYEWASH/ SAFETY SHOWER TESTING
500001	00636581	01	PM	500001 BHW 1MO PM (2 EA)
500001	00636586	01	PM	500001 LTE 1MO PM
500001	00636588	01	PM	500001 LTET 1MO PM
500001	00636610	01	PM	500001 FEXT 1MO PM
500001	00636846	01	PM	500001 TK 3YR PM, PRESS GAUGE CAL/REPLACE
500001	00637826	01	PM	500001 FE-2 2YR ROUGHING FILTER REPLACEMENT 2 EA
500001	00638210	01	PM	500001 & 500248 WINDSOCK 1YR PM (INSPECTION)
500001	00638212	01	PM	500001 BFP'S 1YR PM, 13 EA (RAD AREAS)
500001	00638213	01	PM	500001 BFP'S 1YR PM, 2 EA (RAD AREAS)
500001	00638215	01	PM	500001 BHW 1YR PM, SUMMER LAY-UP (SHUTDOWN)
500001	00638216	01	PM	RLW HOOD VENTILATION TEST 1YR
500001	00638219	01	PM	500001 RM 24 (6M) CHEMICAL FEED PUMP MAINTENANCE PM
500001	00639066	01	PM	50-1 RM 36 ANNUAL PRO/HWE CIRCULATION HEATER (1 EA)
500001	00639067	01	PM	50-1 RM24 ANNUAL SRO/HWE CONTROL CABINET CLEANING

DP-1132 Report: RLWTF Maintenance / Second Quarter 2019

TA-50-0001 Work Completion Report (04-01-2019 to 07-01-2019)				
Unit	Work Order	Task	Task Type	Task Title
500001	00639068	01	PM	500001 EH (1YR) PM, ELEVATOR 3RD PARTY INSP
500001	00639095	01	PM	500001 LUBE 6MO PM, HEATING & VENTILATION (MECHANICAL) 5 EA
500001	00639096	01	PM	50-1 PH ANALYZER 6MO CALIBRATION 13 EA
500001	00639098	01	PM	500001 EH 3MO PM, ELEVATOR MECH/ELECT
500001	00639105	01	PM	500001 MICROFILTER 3 MONTH PUMP MAINTENANCE
500001	00639106	01	PM	50-1 PH ANALYZER 2MO CALIBRATION 2 EA
500001	00639112	01	PM	500001 LTE 1MO PM
500001	00639161	01	PM	500001 BHW 1MO PM (2 EA)
500001	00639172	01	PM	500001 LTET 1MO PM
500001	00639408	01	PM	500001 FAR 3MO PM (9 EA)
500001	00640686	01	PM	500001 EW 1YR PM, EYEWASH STATIONS
500001	00640687	01	PM	500001 EH-001 1YR PM, ELEVATOR MECH/ELECT
500001	00641510	01	PM	500001 CM-11 (1YR) PM, MECHANICAL
500001	00641517	01	PM	500001 RM24 (ANNUAL) TK-25 LIT-1004 VERIFY & ENSURE ACCURACY
500001	00641523	01	PM	50-1-116B CM-003/HE-005: 1-YR PM MECH/ELECT
500001	00641525	01	PM	500001 CM-010/HE-008 (1YR) PM, MECH/ELECT MAINT
500001	00641619	01	PM	500001 BHW 1MO PM (2 EA)
500001	00642237	01	PM	50-1 CA PRV 5 YEAR MAINTENANCE
500001	00643331	01	PM	500001 BHW 1YR PM, INSPECTION & MAINTENANC
500001	00643777	01	PM	500001 SPW/SPH 1 YR FIRE SUPPRESSION SYSTEMS PM
500001	00643810	01	PM	500001 PV-007 3 MO PM, (MECHANICAL)
500001	00643813	01	PM	50-1 PH ANALYZER 2MO VERIFICATION 2 EA
500001	00643829	01	PM	500001 FEXT 1MO PM
500001	00643882	01	PM	500001 BHW 1MO PM (2 EA)
500001	00643887	01	PM	500001 LTE 1MO PM
500001	00643889	01	PM	500001 LTET 1MO PM
500001	00645369	01	PM	500001 PV-008 6MO PM, (MECHANICAL)
500001	00431503	01	SR	500001 REPLACE PUMPS & VALVES ON CHEM. FEED SYSTEM
500001	00519123	01	SR	500001 PERFORM UT ON SLUDGE PIPE
500001	00620474	01	SR	500001 REPLACE CRACKED FLANGE GASKET ON SRO



## DP-1132 Report: RLWTF Maintenance / Second Quarter 2019

## TA-50-0250 Work Completion Report (04-01-2019 to 07-01-2019)

Unit	Work Order	Task	Task Type	Task Title
500250	00628010	01	CO	500250 EXTEND THE LENGTH OF THE SUMP ALARM PROBES
500250	00629896	01	CO	500250 TROUBLESHOOT/REPAIR OF VALVE RLW-VE-010 & RLW-VE-011
500250	00634879	01	CO	500250 REPAIR LIGHTNING PROTECTION SYSTEM
500250	00644123	01	CO	500250 WMRM PAINT ELECTRICAL STANDOFF AREA AT CDD-AQ
500250	00601386	01	MD	500250 INSTALL INFLUENT HOLDING TANK AND FLOW METER
500250	00623118	01	MD	500250 PROVIDE REMOTE TEST FUNCTION FOR SUMP AND LEAK ALARMS
500250	00631622	01	PM	500250 FEXT 1YR PM
500250	00631637	01	PM	500250 SHS 3MO PM, SAFETY SHOWER
500250	00631671	01	PM	500250 LTNT 1MO PM
500250	00633062	01	PM	500250 LTE 1YR PM
500250	00633063	01	PM	500250 LPT 1YR PM, VISUAL INSPECTION
500250	00634122	01	PM	500250 LTET 1MO PM
500250	00634124	01	PM	500250 LTE 1MO PM
500250	00634139	01	PM	500250 LTNT 1MO PM
500250	00634146	01	PM	500250 FEXT 1MO PM
500250	00636501	01	PM	500250 (A) VERIFY & ENSURE ACCURACY TANK LEVEL INDIC PM 6 EA
500250	00636515	01	PM	50-250 3MO DIESEL GENERATOR PM
500250	00636535	01	PM	50-250 3MO SPW SYSTEM PM
500250	00636591	01	PM	500250 LTET 1MO PM
500250	00636593	01	PM	500250 LTE 1MO PM
500250	00636608	01	PM	500250 LTNT 1MO PM
500250	00636615	01	PM	500250 FEXT 1MO PM
500250	00639093	01	PM	500250 GFCI (6M) SERVICE INSPECTIONS
500250	00639104	01	PM	500250 SHS 3MO PM, SAFETY SHOWER
500250	00639111	01	PM	500250 FEXT 1MO PM
500250	00639139	01	PM	500250 LTE 1MO PM
500250	00639169	01	PM	500250 LTNT 1MO PM
500250	00639171	01	PM	500250 LTET 1MO PM
500250	00641541	01	PM	50-250 3MO DIESEL GENERATOR PM
500250	00641570	01	PM	500250 LTNT 1MO PM
500250	00643325	01	PM	50-250 5YR SPW SYSTEM PM
500250	00643335	01	PM	50-250 1YR SPW SYSTEM PM
500250	00643827	01	PM	500250 LTNT 1MO PM
500250	00643834	01	PM	500250 FEXT 1MO PM
500250	00643892	01	PM	500250 LTET 1MO PM
500250	00643894	01	PM	500250 LTE 1MO PM

DP-1132 Report: RLWTF Maintenance / Second Quarter 2019

**TA-52-0181 Work Completion Report (04-01-2019 to 07-01-2019)**

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

**TA-52-0182 Work Completion Report (04-01-2019 to 07-01-2019)**

Unit	Work Order	Task	Task Type	Task Title
520182	00642757	01	CO	520182 REPAIR GATE
520182	00603296	01	MD	520182 REPLACE PRIMARY MEMBRANE LEAK DETECTION
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
520182	00639124	01	PM	TA52-182 MONTHLY NON TRITIUM LIGHTS PM
520182	00639125	01	PM	TA52-182 FEXT 1MO PM
520182	00643870	01	PM	TA52-182 MONTHLY EMERGENCY LIGHTS PM
520182	00643873	01	PM	TA52-182 FEXT 1MO PM

**TA-52-0183 Work Completion Report (01-01-2019 to 03-31-2019)**

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



**DP-1132 Report: RLWTF Maintenance / Second Quarter 2019**

**TA-50-0002 Work Completion Report (04-01-2019 to 07-01-2019)**

Unit	Work Order	Task	Task Type	Task Title
500002	00625946	01	PM	500002 1 YR WATER TIGHTNESS MORTANDAD CANYON

**TA-50-0066 Work Completion Report (04-01-2019 to 07-01-2019)**

Unit	Work Order	Task	Task Type	Task Title
500066	00627613	01	PM	500066 CPL 1YR PM CONTROL PANEL
500066	00636497	01	PM	500066 (A) MAGNAHELIC VERIFICATION
500066	00636510	01	PM	500066 (A) VERIFY & ENSURE ACCURACY TANK LEVEL INDICATOR

**TA-50-0248 Work Completion Report (04-01-2019 to 07-01-2019)**

Unit	Work Order	Task	Task Type	Task Title
500248	00631621	01	PM	500248 TK 3YR PM, ULTRASONIC TANK INSPECTION (TK-A,B,C & D)
500248	00636552	01	PM	500248 PUMPS 3MO PM (2 EA.)
500248	00639089	01	PM	500248 LUBE 6MO PM, MIXER LUBRICATION
500248	00643326	01	PM	500248 TK 3YR PM, ULTRASONIC TANK INSPECTION (TK-3 & TK-17)
500248	00643783	01	PM	500248 HUE 1YR PM
500248	00608908	01	CO	500248 REPLACE PRESSURE GAGES ON PUMPS 5 AND 6

**TA-50-0257 Work Completion Report (04-01-2019 to 07-01-2019)**

Unit	Work Order	Task	Task Type	Task Title
500257	00636549	01	PM	50-257 3MO EVAP BOILER PM
500257	00643801	01	PM	50-257 3MO EVAP BOILER PM
500257	00599309	01	CO	500257 CLEAR EVAPORATOR BOILING CHAMBER DRAIN LINE

Acronyms used by LANL Maintenance:

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

# **ATTACHMENT 3**

**RLWTF daily influent and effluent**

**EPC-DO: 19-249**

**LA-UR-19-26427**

**Date:           JUL 22 2019**

**RLWTF Monitoring Report: Second Quarter 2019  
Daily Influent and Effluent Volumes**

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
Totals, 2019-Q2	776,995	668,137	80,798	0	302
Sub-total, April	239,180	229,407	0	0	0
Sub-total, May	325,325	184,970	0	0	0
Sub-total, June	212,490	253,761	80,798	0	302

All flows are in Liters.

1-Apr	10,522	14,911	0	0	0
2-Apr	6,737	15,173	0	0	0
3-Apr	9,992	7,457	0	0	0
4-Apr	7,456	0	0	0	0
5-Apr	10,560	0	0	0	0
6-Apr	5,791	4,589	0	0	0
7-Apr	5,375	15,020	0	0	0
8-Apr	14,799	15,247	0	0	0
9-Apr	6,510	15,233	0	0	0
10-Apr	8,138	6,219	0	0	0
11-Apr	8,100	4,611	0	0	0
12-Apr	7,570	3,792	0	0	0
13-Apr	6,662	0	0	0	0
14-Apr	7,608	0	0	0	0
15-Apr	9,620	0	0	0	0
16-Apr	7,494	0	0	0	0
17-Apr	8,251	0	0	0	0
18-Apr	7,835	4,825	0	0	0
19-Apr	7,381	14,824	0	0	0
20-Apr	7,078	14,997	0	0	0
21-Apr	6,510	14,997	0	0	0
22-Apr	6,662	11,762	0	0	0
23-Apr	7,684	3,756	0	0	0
24-Apr	8,289	0	0	0	0
25-Apr	8,024	8,290	0	0	0
26-Apr	8,176	14,738	0	0	0
27-Apr	6,094	14,738	0	0	0
28-Apr	5,640	14,738	0	0	0
29-Apr	7,343	9,487	0	0	0
30-Apr	11,279	0	0	0	0

**RLWTF Monitoring Report: Second Quarter 2019**  
**Daily Influent and Effluent Volumes (Liters)**

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
1-May	8,554	6,652	0	0	0
2-May	8,251	7,031	0	0	0
3-May	7,986	5,072	0	0	0
4-May	10,825	14,493	0	0	0
5-May	10,674	14,493	0	0	0
6-May	16,730	9,394	0	0	0
7-May	8,403	0	0	0	0
8-May	9,992	0	0	0	0
9-May	16,578	8,039	0	0	0
10-May	9,652	14,372	0	0	0
11-May	8,176	3,857	0	0	0
12-May	7,305	0	0	0	0
13-May	8,327	0	0	0	0
14-May	14,421	10,526	0	0	0
15-May	11,279	9,599	0	0	0
16-May	10,409	11,870	0	0	0
17-May	10,333	3,596	0	0	0
18-May	8,895	0	0	0	0
19-May	8,251	0	0	0	0
20-May	10,182	0	0	0	0
21-May	10,939	0	0	0	0
22-May	9,845	0	0	0	0
23-May	10,220	0	0	0	0
24-May	11,128	4,065	0	0	0
25-May	10,522	5,819	0	0	0
26-May	9,955	14,473	0	0	0
27-May	10,030	14,473	0	0	0
28-May	10,939	14,361	0	0	0
29-May	11,052	4,000	0	0	0
30-May	15,481	0	0	0	0
31-May	9,992	8,786	0	0	0
1-Jun	8,554	14,223	0	0	0
2-Jun	8,630	14,275	0	0	0
3-Jun	9,235	4,848	0	0	0
4-Jun	9,198	0	0	0	0
5-Jun	9,273	7,698	0	0	0
6-Jun	9,311	13,952	0	0	0
7-Jun	7,078	4,054	0	0	0
8-Jun	4,618	4,948	0	0	0
9-Jun	4,656	13,970	0	0	0
10-Jun	9,349	8,678	0	0	0
11-Jun	7,456	3,836	0	0	0

**RLWTF Monitoring Report: Second Quarter 2019  
Daily Influent and Effluent Volumes (Liters)**

Date	Low-level Influent	Effluent MES	Effluent Outfall	Effluent SET	Transuranic Influent
12-Jun	7,381	0	0	0	0
13-Jun	7,949	5,994	0	0	302
14-Jun	3,293	13,945	0	0	0
15-Jun	6,548	14,077	0	0	0
16-Jun	4,391	14,077	0	0	0
17-Jun	5,450	3,671	0	0	0
18-Jun	5,526	0	80,798	0	0
19-Jun	6,435	8,179	0	0	0
20-Jun	7,381	13,089	0	0	0
21-Jun	7,911	4,849	0	0	0
22-Jun	5,753	8,896	0	0	0
23-Jun	5,905	14,077	0	0	0
24-Jun	10,712	7,613	0	0	0
25-Jun	6,927	6,443	0	0	0
26-Jun	8,819	12,764	0	0	0
27-Jun	6,662	12,766	0	0	0
28-Jun	7,608	14,314	0	0	0
29-Jun	5,678	8,528	0	0	0
30-Jun	4,807	0	0	0	0



# ATTACHMENT 4

Outfall 051 monthly treated effluent monitoring results

EPC-DO: 19-249

LA-UR-19-26427

Date: JUL 22 2019

Table 1. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged Through Outfall 051, June 18, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Total Dissolved Solids	143	mg/L		Y	N	EPA:160.1	1000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aluminum	19.3	ug/L	U <sup>4</sup>	N	N	EPA:200.8	5000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Arsenic	2.00	ug/L	U	N	N	EPA:200.8	10
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Barium	1.54	ug/L	J <sup>5</sup>	Y	N	EPA:200.8	2000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Boron	85.7	ug/L		Y	N	EPA:200.7	750
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Cadmium	0.300	ug/L	U	N	N	EPA:200.8	5
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chloride	53.9	mg/L		Y	N	EPA:300.0	250
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chromium	3.00	ug/L	U	N	N	EPA:200.8	50
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Cobalt	1	ug/L		Y	N	EPA:200.8	50
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Copper	11	ug/L		Y	N	EPA:200.8	1000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Cyanide (Total)	0.00167	mg/L	U	N	N	EPA:335.4	0.2
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Fluoride	0.116	mg/L		Y	N	EPA:300.0	1.6
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Iron	44.9	ug/L	J	Y	N	EPA:200.7	1000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Lead	0.500	ug/L	U	N	N	EPA:200.8	15
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Manganese	21.4	ug/L		Y	N	EPA:200.7	200
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Mercury	0.067	ug/L	U	N	N	EPA:245.2	2
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Molybdenum	0.200	ug/L	U	N	N	EPA:200.8	1000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nickel	6.59	ug/L		Y	N	EPA:200.8	200
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Selenium	2.00	ug/L	U	N	N	EPA:200.8	50
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Silver	0.300	ug/L	U	N	N	EPA:200.8	50
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Sulfate	7.04	mg/L		Y	N	EPA:300.0	600
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Uranium	0.17	ug/L	J	Y	N	EPA:200.8	30
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Zinc	7.79	ug/L	J	N	N	EPA:200.7	10000
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nitrate-Nitrite as N	7.63	mg/L		Y	N	EPA:353.2	10
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Total Kjeldahl Nitrogen	1.69	mg/L		Y	N	EPA:351.2	NA
calculated	NPDES Outfall 051051	06-18-2019	Total Nitrogen <sup>1</sup>	9.32	mg/L				calculated	15 mg/L
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Radium-226	0.165	pCi/L	U	N	N	EPA:903.1	5pCi/L <sup>2</sup>
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Radium-228	0.319	pCi/L	U	N	N	EPA:904	5pCi/L <sup>2</sup>
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Perchlorate	0.050	ug/L	U	N	N	SW-846:6850	13.8 ug/L

Table 2. Organic Compounds Detected During Monthly Sampling of RLWTF Treated Effluent Discharged Through Outfall 051, June 18, 2019.

NP051-19-181578	NPDES Outfall 051051	06-18-2019	Bromodichloromethane	0.94	ug/L	J	Y	N	SW-846:8260B	1.34 ug/L <sup>3</sup>
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chloroform	13.9	ug/L		Y	N	SW-846:8260B	100 ug/L

## Notes:

<sup>1</sup>Total Nitrogen is the sum of Nitrate-Nitrite as N and Total Kjeldahl Nitrogen<sup>2</sup>Limit applies to the sum of Ra-226 + Ra-228<sup>3</sup>NMED Risk Assessment Guidance, Table A-1, Tap Water Limit<sup>4</sup>U means the analyte is classified as not detected<sup>5</sup>J means the analytical results is classified as an estimated value

Table 3. Organic Compounds Not Detected During Monthly Sampling of RLWTF Treated Effluent Discharged Through Outfall 051, June 18, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aldrin	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	BHC[alpha-]	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	BHC[beta-]	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	BHC[gamma-]	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chlordane(alpha/gamma)	0.0814	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chlordane[alpha-]	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chlordane[gamma-]	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	DDT[4,4'-]	0.0106	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dieldrin	0.0106	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Endosulfan I	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Endosulfan II	0.0106	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Endrin	0.0106	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Heptachlor	0.00707	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Toxaphene (Technical Grade)	0.160	ug/L	U	N	N	SW-846:8081B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1016	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1221	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1232	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1242	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1248	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1254	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Aroclor-1260	0.034	ug/L	U	N	N	SW-846:8082
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Benzene	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Bromoform	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Bromomethane	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Carbon Tetrachloride	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chlorobenzene	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Chloromethane	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dibromoethane[1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichlorobenzene[1,4-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichlorodifluoromethane	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichloroethane[1,1-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichloroethane[1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichloroethene[1,1-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichloroethene[cis-1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichloroethene[trans-1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichloropropene[cis/trans-1,3-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Ethylbenzene	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Methyl tert-Butyl Ether	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Methylene Chloride	1.00	ug/L	U	N	N	SW-846:8260B

Table 3. Organic Compounds Not Detected During Monthly Sampling of RLWTF Treated Effluent Discharged Through Outfall 051, June 18, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Tetrachloroethane[1,1,2,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Tetrachloroethene	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Toluene	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trichloroethane[1,1,1-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trichloroethane[1,1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trichloroethene	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trichlorofluoromethane	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Vinyl Chloride	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Xylene (Total)	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Xylene[1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Xylene[1,3-]+Xylene[1,4-]	0.300	ug/L	U	N	N	SW-846:8260B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Anthracene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Azobenzene	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Benzidine	3.90	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Benzo(a)pyrene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Benzo(b)fluoranthene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Benzo(k)fluoranthene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Bis(2-chloroethyl)ether	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Bis(2-ethylhexyl)phthalate	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichlorobenzidine[3,3'-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dichlorophenol[2,4-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Diethylphthalate	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dimethyl Phthalate	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Di-n-butylphthalate	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dinitro-2-methylphenol[4,6-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dinitrophenol[2,4-]	5.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dinitrotoluene[2,4-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Dinitrotoluene[2,6-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Diphenylamine	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Fluoranthene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Fluorene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Hexachlorobenzene	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Hexachlorobutadiene	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Hexachlorocyclopentadiene	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Hexachloroethane	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Isophorone	3.50	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Methylnaphthalene[1-]	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Methylnaphthalene[2-]	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Naphthalene	0.300	ug/L	U	N	N	SW-846:8270D



Table 3. Organic Compounds Not Detected During Monthly Sampling of RLWTF Treated Effluent Discharged Through Outfall 051, June 18, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nitrobenzene	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nitrosodiethylamine[N-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nitrosodimethylamine[N-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nitroso-di-n-butylamine[N-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Nitrosopyrrolidine[N-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Oxybis(1-chloropropane)[2,2'-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Pentachlorobenzene	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Pentachlorophenol	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Phenanthrene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Phenol	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Pyrene	0.300	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Tetrachlorobenzene[1,2,4,5]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Total PAHs	0.0	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trichlorophenol[2,4,5-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trichlorophenol[2,4,6-]	3.00	ug/L	U	N	N	SW-846:8270D
NP051-19-181578	NPDES Outfall 051051	06-18-2019	HMX	0.0825	ug/L	U	N	N	SW-846:8330B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	RDX	0.0825	ug/L	U	N	N	SW-846:8330B
NP051-19-181578	NPDES Outfall 051051	06-18-2019	Trinitrotoluene[2,4,6-]	0.0825	ug/L	U	N	N	SW-846:8330B

# ATTACHMENT 5

MES monthly treated effluent results

EPC-DO: 19-249

LA-UR-19-26427

Date:           JUL 22 2019



**Table 1. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the MES, April 9, 2019.**

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
RLWTF-19-174668	RLWTF_MES 01	04-09-2019	Total Dissolved Solids	186	mg/L		Y	N	EPA:160.1	1000
RLWTF-19-174668	RLWTF_MES 01	04-09-2019	Chloride	26.0	mg/L		Y	N	EPA:300.0	250
RLWTF-19-174668	RLWTF_MES 01	04-09-2019	Fluoride	0.186	mg/L		Y	N	EPA:300.0	1.6
RLWTF-19-174668	RLWTF_MES 01	04-09-2019	Total Kjeldahl Nitrogen	2.00	mg/L		Y	N	EPA:351.2	NA
RLWTF-19-174668	RLWTF_MES 01	04-09-2019	Nitrate-Nitrite as Nitrogen	7.62	mg/L		Y	N	EPA:353.2	10
RLWTF-19-174668	RLWTF_MES 01	04-09-2019	Perchlorate	0.050	ug/L	U <sup>1</sup>	N	N	SW-846:6850	13.8

**Table 2. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the MES, May 14, 2019.**

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
RLWTF-19-174661	RLWTF_MES 01	05-14-2019	Total Dissolved Solids	356	mg/L		Y	N	EPA:160.1	1000
RLWTF-19-174661	RLWTF_MES 01	05-14-2019	Chloride	14.3	mg/L		Y	N	EPA:300.0	250
RLWTF-19-174661	RLWTF_MES 01	05-14-2019	Fluoride	0.158	mg/L		Y	N	EPA:300.0	1.6
RLWTF-19-174661	RLWTF_MES 01	05-14-2019	Total Kjeldahl Nitrogen	0.560	mg/L		Y	N	EPA:351.2	NA
RLWTF-19-174661	RLWTF_MES 01	05-14-2019	Nitrate-Nitrite as Nitrogen	9.48	mg/L		Y	N	EPA:353.2	10
RLWTF-19-174661	RLWTF_MES 01	05-14-2019	Perchlorate	0.050	ug/L	U	N	N	SW-846:6850	13.8

**Table 3. Analytical Results from Monthly Sampling of RLWTF Treated Effluent Discharged to the MES, June 11, 2019.**

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
RLWTF-19-174662	RLWTF_MES 01	06-11-2019	Total Dissolved Solids	61.4	mg/L		Y	N	EPA:160.1	1000
RLWTF-19-174662	RLWTF_MES 01	06-11-2019	Chloride	1.70	mg/L		Y	N	EPA:300.0	250
RLWTF-19-174662	RLWTF_MES 01	06-11-2019	Fluoride	0.0877	mg/L	J <sup>2</sup>	Y	N	EPA:300.0	1.6
RLWTF-19-174662	RLWTF_MES 01	06-11-2019	Total Kjeldahl Nitrogen	1.12	mg/L		Y	N	EPA:351.2	NA
RLWTF-19-174662	RLWTF_MES 01	06-11-2019	Nitrate-Nitrite as Nitrogen	0.360	mg/L		Y	N	EPA:353.2	10
RLWTF-19-174662	RLWTF_MES 01	06-11-2019	Perchlorate	0.050	ug/L	U	N	N	SW-846:6850	13.8

**Notes:**

<sup>1</sup>U means the analyte is classified as not detected

<sup>2</sup>J means the analytical result is classified as an estimated value

# ATTACHMENT 6

MES quarterly treated effluent results

EPC-DO: 19-249

LA-UR-19-26427

Date:           JUL 22 2019

Table 1. Analytical Results from Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES, May 14, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aluminum	19.3	ug/L	U <sup>3</sup>	N	N	EPA:200.8	5000
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Arsenic	2.00	ug/L	U	N	N	EPA:200.8	10
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Barium	2.85	ug/L	J <sup>4</sup>	Y	N	EPA:200.8	2000
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Boron	61	ug/L		Y	N	EPA:200.7	750
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Cadmium	0.789	ug/L	J	Y	N	EPA:200.8	5
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chromium	3.00	ug/L	U	N	N	EPA:200.8	50
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Cobalt	2.39	ug/L		Y	N	EPA:200.8	50
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Copper	28.2	ug/L		Y	N	EPA:200.8	1000
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Cyanide (Total)	0.00167	mg/L	U	N	N	EPA:335.4	200
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Iron	176	ug/L		Y	N	EPA:200.7	1000
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Lead	0.912	ug/L	J	Y	N	EPA:200.8	15
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Manganese	54.9	ug/L		Y	N	EPA:200.7	200
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Mercury	0.067	ug/L	U	N	N	EPA:245.2	2
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Molybdenum	0.948	ug/L	J	Y	N	EPA:200.8	1000
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Nickel	17.6	ug/L		Y	N	EPA:200.8	200
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Selenium	2.00	ug/L	U	N	N	EPA:200.8	50
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Silver	0.300	ug/L	U	N	N	EPA:200.8	50
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Uranium	0.191	ug/L	J	Y	N	EPA:200.8	30
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Zinc	17.5	ug/L	J	N	N	EPA:200.7	10000
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Radium-226	0.295	pCi/L	U	N	N	EPA:903.1	5 <sup>1</sup>
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Radium-228	0.273	pCi/L	U	N	N	EPA:904	5 <sup>1</sup>
Field test	RLWTF_MES 01	05-14-2019	pH	7.9	su	NA	NA	N	field	6 to 9

Table 2. Organic Compounds Detected During Quarterly Sampling of RLWTF Treated Effluent Discharged to the MES, May 14, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Di-n-butylphthalate	0.570	ug/L	BJ	N	N	SW-846:8270D	885 ug/L <sup>2</sup>

## Notes:

<sup>1</sup>Limit applies to the sum of Ra-226 + Ra-228<sup>2</sup>NMED Risk Assessment Guidance, Table A-1, Tap Water Limit<sup>3</sup>U means the analyte is classified as not detected<sup>4</sup>J means the analytical results is classified as an estimated value<sup>5</sup>B indicates possible blank contamination

Table 3. Organic Compounds Not Detected During Quarterly Sampling of Discharges to the MES, May 14, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aldrin	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	BHC[alpha-]	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	BHC[beta-]	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	BHC[gamma-]	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chlordane(alpha/gamma)	0.077	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chlordane[alpha-]	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chlordane[gamma-]	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	DDT[4,4'-]	0.010	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dieldrin	0.010	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Endosulfan I	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Endosulfan II	0.010	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Endrin	0.010	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Heptachlor	0.007	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Toxaphene (Technical Grade)	0.150	ug/L	U	N	N	SW-846:8081B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1016	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1221	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1232	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1242	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1248	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1254	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Aroclor-1260	0.035	ug/L	U	N	N	SW-846:8082
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Benzene	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Bromodichloromethane	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Bromofarm	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Bromomethane	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Carbon Tetrachloride	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chlorobenzene	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chloroform	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Chloromethane	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dibromoethane[1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichlorobenzene[1,4-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichlorodifluoromethane	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichloroethane[1,1-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichloroethane[1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichloroethene[1,1-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichloroethene[cis-1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichloroethene[trans-1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichloropropene[cis/trans-1,3-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Ethylbenzene	0.300	ug/L	U	N	N	SW-846:8260B



Table 3. Organic Compounds Not Detected During Quarterly Sampling of Discharges to the MES, May 14, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Methyl tert-Butyl Ether	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Methylene Chloride	1.000	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Tetrachloroethane[1,1,2,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Tetrachloroethene	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Toluene	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trichloroethane[1,1,1-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trichloroethane[1,1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trichloroethene	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trichlorofluoromethane	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Vinyl Chloride	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Xylene (Total)	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Xylene[1,2-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Xylene[1,3-]+Xylene[1,4-]	0.300	ug/L	U	N	N	SW-846:8260B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Anthracene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Azobenzene	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Benzidine	3.900	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Benzo(a)pyrene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Benzo(b)fluoranthene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Benzo(k)fluoranthene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Bis(2-chloroethyl)ether	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Bis(2-ethylhexyl)phthalate	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichlorobenzidine[3,3'-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dichlorophenol[2,4-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Diethylphthalate	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dimethyl Phthalate	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dinitro-2-methylphenol[4,6-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dinitrophenol[2,4-]	5.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dinitrotoluene[2,4-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Dinitrotoluene[2,6-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Diphenylamine	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Fluoranthene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Fluorene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Hexachlorobenzene	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Hexachlorobutadiene	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Hexachlorocyclopentadiene	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Hexachloroethane	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Isophorone	3.500	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Methylnaphthalene[1-]	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Methylnaphthalene[2-]	0.300	ug/L	U	N	N	SW-846:8270D

Table 3. Organic Compounds Not Detected During Quarterly Sampling of Discharges to the MES, May 14, 2019.

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Naphthalene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Nitrobenzene	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Nitrosodiethylamine[N-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Nitrosodimethylamine[N-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Nitroso-di-n-butylamine[N-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Nitrosopyrrolidine[N-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Oxybis(1-chloropropane)[2,2'-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Pentachlorobenzene	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Pentachlorophenol	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Phenanthrene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Phenol	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Pyrene	0.300	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Tetrachlorobenzene[1,2,4,5]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Total PAHs	0.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trichlorophenol[2,4,5-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trichlorophenol[2,4,6-]	3.000	ug/L	U	N	N	SW-846:8270D
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	HMX	0.084	ug/L	U	N	N	SW-846:8330B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	RDX	0.084	ug/L	U	N	N	SW-846:8330B
RLWTF-19-180364	RLWTF_MES 01	05-14-2019	Trinitrotoluene[2,4,6-]	0.084	ug/L	U	N	N	SW-846:8330B



# ATTACHMENT 7

MCOI-6 quarterly ground water monitoring report

EPC-DO: 19-249

LA-UR-19-26427

Date: JUL 22 2019

**Table 1. Analytical Results from Quarterly Groundwater Sampling at Perched/Intermediate Monitoring Well MCOI-6, May 13, 2019.**

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Filtered	Lab Method	Groundwater Limits
CAMO-19-175132	MCOI-6	5/13/2019	Total Dissolved Solids	483	mg/L	H <sup>1</sup>	Y	Y	EPA:160.1	1000
CAMO-19-175132	MCOI-6	5/13/2019	Chloride	50.8	mg/L	H	Y	Y	EPA:300.0	250
CAMO-19-175132	MCOI-6	5/13/2019	Fluoride	0.58	mg/L		Y	Y	EPA:300.0	1.6
CAMO-19-175133	MCOI-6	5/13/2019	Total Kjeldahl Nitrogen	0.17	mg/L		Y	N	EPA:351.2	NA
CAMO-19-175132	MCOI-6	5/13/2019	Nitrate-Nitrite as Nitrogen	11.1	mg/L		Y	Y	EPA:353.2	10
CAMO-19-175132	MCOI-6	5/13/2019	Perchlorate	93.6	ug/L	H	Y	Y	SW-846:6850	13.8

**Notes:**

<sup>1</sup>H means that the analytical hold time was exceeded.



**DP-1132, Condition No. 36, Groundwater Monitoring Report, MCOI-6, May 13, 2019.**

a	Sample Date	05/13/2019
b	Sample Time	13:03
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))	6143.98
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)	37.57
i	Total volume of water purged prior to sample collection (gal).	117.8
j	Physical parameters including temperature, conductivity, pH, oxidation/reduction potential.	DO (mg/L): 7.24 Oxidation/Reduction Potential (MV): 197.3 Temp (deg C): 16.8 pH (SU): 7.16 Turbidity (NTU): 0.077 Specific Conductance ( $\mu$ S/cm): 547
k	Description of sample methods	See Attached Chain-of-Custody
l	Chain-of custody.	Attached
m	Location Map	Attachment 8

# ATTACHMENT 8

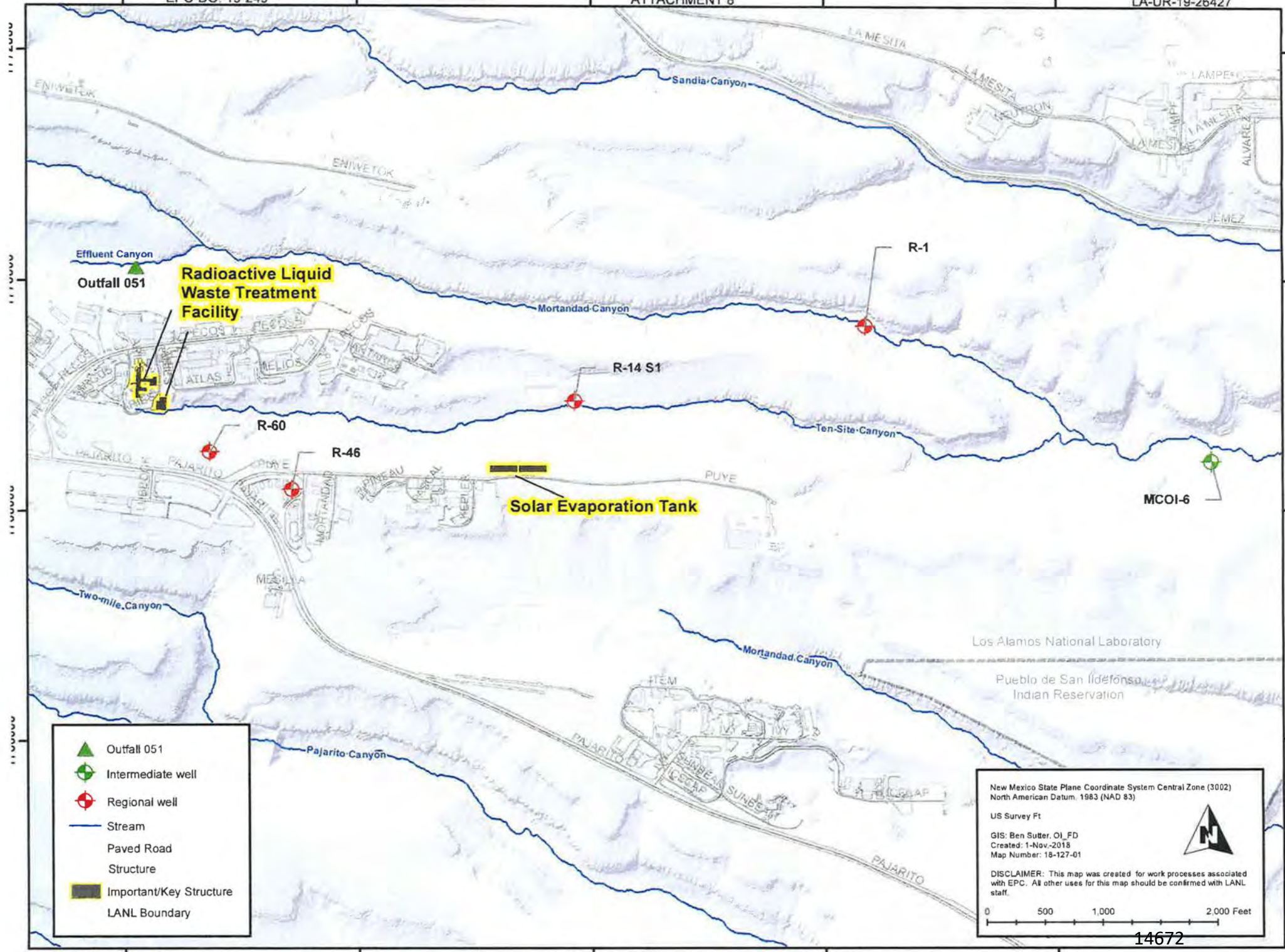
Monitoring wells location map







EPC-DO: 19-249

LA-UR-19-26427

Date: JUL 22 2019





-  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.

