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*Symbol: EPC-DO: 19-052
LA-UR: 19-21332
Locates Action No.: U1801172
Date: FEB 26 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 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.

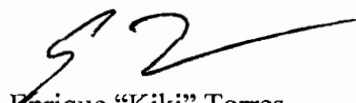
Interim Actions

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.

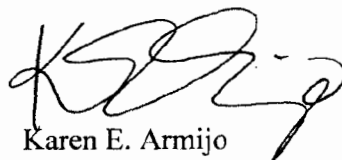
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this status report.

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

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

Tag Name	Location	Alarm Type	Malfunction Type
PLC11 SM749	TA-03-029	RLWCS ¹ 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

¹Radioactive 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.

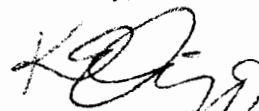
Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this report.

Sincerely,



Taunia S. Van Valkenburg
Group Leader

Sincerely,



Karen E. Armijo
Permitting and Compliance Program Manager

Ms. Michelle Hunter
EPC-DO-18-365

- 3 -

ARG:KEA:MTS:RSB/jdm

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Date: **DEC 04 2018**

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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.

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

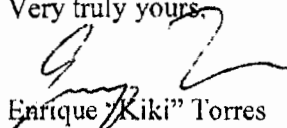
- PLC11_SM749 and PLC11_SM776 have probable breaks in underground communication wiring. These will be upgraded with wireless communication devices. For alarm PLC11_SM749, installation and testing is scheduled to be completed by December 15, 2018. For alarm PLC11_SM776, installation and testing is scheduled to be completed February 15, 2019.

Interim Actions

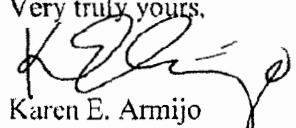
Until communication is re-established with alarms PLC11_SM749 and PLC11_SM776, the RLWTF will continue to perform weekly visual inspections of these vaults. If liquid is discovered during a weekly inspection, the liquid will be sampled to determine if the water is due to vault infiltration, or due to a leak in the primary pipe.

Please contact Karen E. Armijo by telephone at (505) 665-7314 or by email at Karen.Armijo@nnsa.doe.gov, or Robert S. Beers by telephone at (505) 667-7969 or by email at hbeers@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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