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Date: **MAY 01 2018**
Symbol: EPC-DO: 18-187
LA-UR: 18-23218
Locates Action No.: N/A

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 Quarterly Report, First Quarter 2018, TA-50 Radioactive Liquid Waste Treatment Facility

This letter from the U.S. Department of Energy and Los Alamos National Security, LLC (DOE/LANS) is the first quarter 2018 Discharge Plan DP-1132 report for the Technical Area (TA)-50 Radioactive Liquid Waste Treatment Facility (RLWTF). Since the first quarter of 1999, DOE/LANS have provided the New Mexico Environment Department (NMED) with voluntary quarterly reports containing analytical results from effluent and groundwater monitoring.

During the first quarter of 2018, no effluent was discharged to either National Pollutant Discharge Elimination System (NPDES) Outfall 051 or to the solar evaporative tank system (SET) at TA-52; all effluent was evaporated on-site at the mechanical evaporator system (MES).

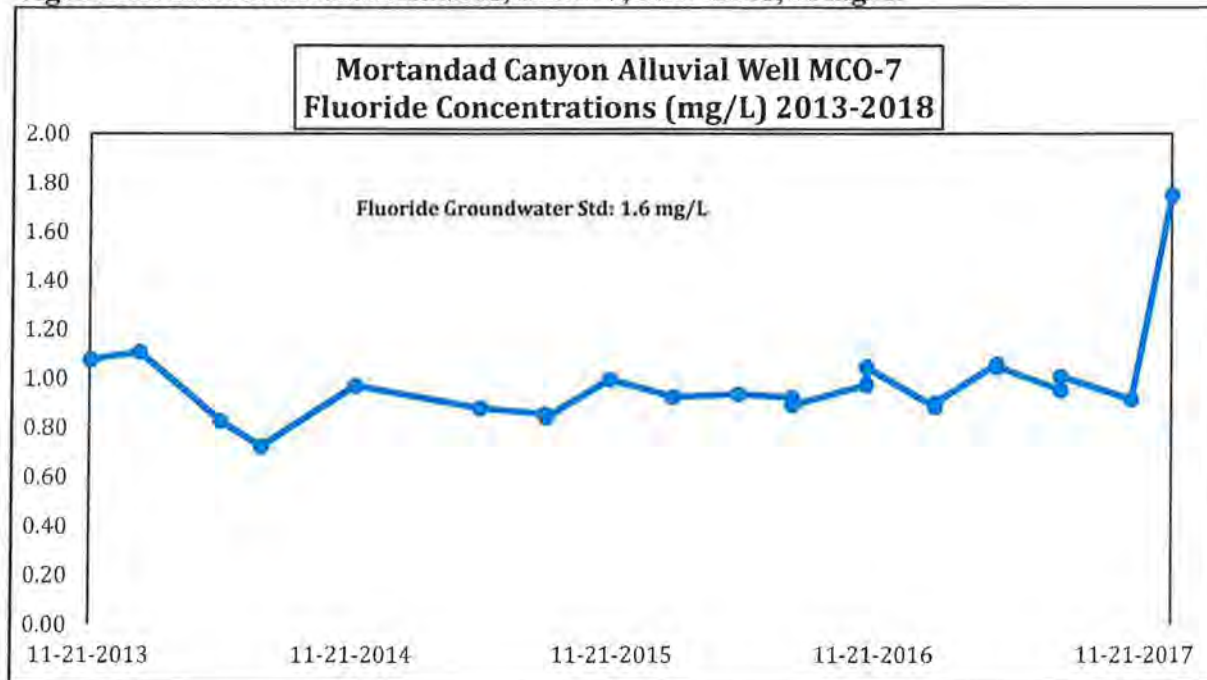
Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells

Table 1.0 (attached) presents the analytical results from sampling conducted at Mortandad Canyon alluvial wells MCO-6 and MCO-7 during the first quarter of 2018. No sample was collected from alluvial well MCO-4b because there was insufficient water in the well. No sample was collected from alluvial well MCO-3 because the well was damaged beyond repair during a flood event in September 2013. Samples were submitted to GEL Laboratories LLC for analysis. All results from the sampling of intermediate and regional aquifer wells in Mortandad Canyon can be accessed online at the Intellus New Mexico environmental monitoring data web site (<http://www.intellusnmdata.com>).



As shown in the attached Table 1.0, the reported fluoride concentration at monitoring well MCO-7 on January 11, 2018 was 1.75 mg/L, greater than the New Mexico Water Quality Control Commission (NMWQCC) Regulation 3103 ground water standard of 1.6 mg/L. A review of fluoride concentrations at MCO-7 over the past 5 yrs—presented in Figure 1.0 below—shows that the reported concentration of 1.75 mg/L is not consistent with the previous 22 sample results. The average fluoride concentration at MCO-7 over the 5-yr review period is 0.95 mg/L. As you may be aware, DOE/LANS has not discharged to NPDES Outfall 051 since November 2010. Monitoring well MCO-7 will be resampled in the 2nd quarter of 2018 and the results reported to NMED in the August 1, 2018, monitoring report.

Figure 1.0. Fluoride Concentrations, MCO-7, 2013-2018, in mg/L.



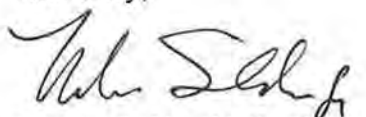
TA-50 RLWTF Effluent Monitoring Results

No final weekly composite (FWC) samples were collected during the first quarter of 2018 because no effluent was discharged to Mortandad Canyon.

No final monthly composite (FMC) samples were collected during the first quarter of 2018 because no effluent was discharged to Mortandad Canyon.

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

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GROUND WATER

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Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells

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*Discharge Plan DP-1132 Quarterly Report
1st Quarter, 2018*

Table 1.0. Mortandad Canyon Alluvial Well Sampling, 1st Quarter 2018.

Sampling Location	Sample Field Prep (F/UF) ¹	Sample Date	Perchlorate (µg/L)	NO ₃ +NO ₂ -N (mg/L)	TKN (mg/L)	NH ₃ -N (mg/L)	TDS (mg/L)	F (mg/L)
MCO-3		Damaged ⁴	Damaged ⁴	Damaged ⁴	Damaged ⁴	Damaged ⁴	Damaged ⁴	Damaged ⁴
MCO-4B	F	1/25/2018	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵
MCO-6	F	1/25/2018	6.8	0.90	0.20	0.12	250	0.88
MCO-7	F	1/11/2018	6.5	1.65	0.06	0.04	284	1.75
NM WQCC 3103 Groundwater Standards			NA²	10 mg/L³	NA²	NA²	1000 mg/L	1.6 mg/L

Notes:

¹F means the sample was filtered. UF means the sampled was not filtered.

²NA means that there is no NM WQCC 3103 standard for this analyte.

³The NM WQCC 3103 Groundwater Standard is for NO₃-N.

⁴Damaged means that the well was damaged beyond repair during a flood event in Mortandad Canyon in September 2013.

⁵Dry means there was not sufficient water for sampling.

J flag indicates an estimated value.

U flag means the result was less than the analytical laboratory's Method Detection Limit (MDL).