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Date: APR 2 6 2012
Refer To: ENV-RCRA-12-0096
LAUR: 12-20577

Mr. Jerry Schoeppner, Acting 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 Mr. Schoeppner:

SUBJECT: DISCHARGE PLAN DP-1132 QUARTERLY REPORT, FIRST QUARTER 2012, 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 2012 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 2012, no effluent was discharged by the TA-50 RLWTF through National Pollutant Discharge Elimination System (NPDES) Outfall 051to Mortandad Canyon; all effluent was evaporated on-site at the effluent evaporator.

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Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells

Table 1.0 presents the analytical results from sampling conducted at Mortandad Canyon alluvial wells MCO-6 and MCO-7 during the first quarter of 2012. No samples were collected from alluvial wells MCO-3 and MCO-4B; MCO-3 was unsafe to sample because of snow and ice at the well site and there was insufficient water present for sample collection at MCO-4B. Samples from MCO-6 and MCO-7 were submitted to GEL Laboratories LLC (GEL) for analysis. All of the analytical results were below the New Mexico Water Quality Control Commission (NMWQCC) 3103 standards for nitrate-nitrogen (NO_3-N), fluoride (F), and total dissolved solids (TDS). Analytical 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).

TA-50 RLWTF Effluent Monitoring Results

Table 2.0 reports the analytical results from the weekly composite sampling of RLWTF effluent discharged through NPDES Outfall 051 to Mortandad Canyon. The final weekly composite (FWC) samples are flow-proportioned composite samples prepared from each tank of effluent discharged to Mortandad Canyon during a 7-day period. Samples are submitted to GEL for analysis. No FWC samples were collected during the first quarter of 2012 because no RLWTF effluent was discharged to Mortandad Canyon.

Table 3.0 reports the final monthly composite (FMC) sample results for NO_3-N, ClO_4, F, and TDS for the first quarter of 2012. No FMC samples were collected during the first quarter of 2012 because no effluent was discharged to Mortandad Canyon.

Please contact Robert S. Beers by telephone at (505) 667-7969 or by email at bbeers@lanl.gov if you have questions regarding this report.

Sincerely,

Alison M. Dorries
Division Leader
Environmental Protection Division
Los Alamos National Security, LLC

Sincerely,

Gene E. Turner
Environmental Permitting Manager
Environmental Projects Office
Los Alamos Site Office
U.S. Department of Energy

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Table 1.0. Mortandad Canyon Alluvial Well Sampling, 1st Quarter, 2012.

Sampling Location	Sample Field Prep (F/UF)[1]	Sample Date	Perchlorate (ug/L)	NO_3+NO_2-N (mg/L)	TKN[2] (mg/L)	NH3-N (mg/L)	TDS (mg/L)	F (mg/L)
MCO-3	F	Ice[4]	Ice[4]	Ice[4]	Ice[4]	Ice[4]	Ice[4]	Ice[4]
MCO-4B	F	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]	Dry[5]
MCO-6	F	3/23/2012	4.15	0.83	0.14	0.06	241	0.97
MCO-7	F	3/22/2012	7.47	1.2	0.25	0.04	281	0.94
NMWQCC 3103 Groundwater Standards			*NA*[2]	*10 mg/L*[3]	*NA*[2]	*NA*[2]	*1000 mg/L*	*1.6 mg/L*

Notes:

[1]All samples filtered with the exception of TKN.

[2]NA means that there is no NMWQCC 3103 standard for this analyte.

[3]The NMWQCC 3103 Groundwater Standard is for NO_3-N.

[4]Ice means that ice and snow blocked safe access to the well.

[5]Dry means that there was insufficient water in the well for sampling.

J- means that the reported value is expected to be more uncertain than usual with a potential negative bias.

J+ means that the reported value is expected to be more uncertain than usual with a potential positive bias.

J means the reported value is greater than the Method Detection Limit (MDL) but less than the Reporting Limit (RL).

Table 2.0. RLWTF Final Weekly Composite (FWC) Effluent Sampling, 1st Quarter, 2012.

			Analysis by RLWTF[1]		Analysis by General Engineering Laboratories, Inc.			
Monitoring Period	**Sample Composite Date**	**Sample ID#**	**NO_3-N (mg/L)**	**NO_2-N (mg/L)**	**NO_3+NO_2-N (mg/L)**	**Perchlorate (ug/L)**	**Fluoride (mg/L)**	**TDS (mg/L)**
January	1/2/12	No Discharge[2]	-----	-----	-----	-----	-----	-----
	1/9/12	No Discharge	-----	-----	-----	-----	-----	-----
	1/16/12	No Discharge	-----	-----	-----	-----	-----	-----
	1/23/12	No Discharge	-----	-----	-----	-----	-----	-----
	1/30/12							
February	2/6/12	No Discharge	-----	-----	-----	-----	-----	-----
	2/13/12	No Discharge	-----	-----	-----	-----	-----	-----
	2/20/12	No Discharge	-----	-----	-----	-----	-----	-----
	2/27/12	No Discharge	-----	-----	-----	-----	-----	-----
March	3/5/12	No Discharge						
	3/12/12	No Discharge	-----	-----	-----	-----	-----	-----
	3/19/12	No Discharge	-----	-----	-----	-----	-----	-----
	3/26/12	No Discharge	-----	-----	-----	-----	-----	-----
1st Quarter 2012 Averages[3]			-----	-----	-----	-----	-----	-----
NMWQCC 3103 Groundwater Standards			***10 mg/L***	***NA[5]***	***10 mg/L[4]***	***NA[5]***	***1.6 mg/L***	***1000 mg/L***

Notes:

[1]Analysis by the TA-50 Radioactive Liquid Waste Treatment Facility's analytical laboratory.

[2]No Discharge means the RLWTF did not discharge effluent through NPDES Outfall 051 during the 7-day period preceding the composite date.

[3]1st quarter 2012 averages include the results from December 2011, if applicable.

[4]The NMWQCC Regulation 3103 groundwater standard is for nitrate (NO_3-N).

[5]NA means that there is no NMWQCC 3103 groundwater standard for this analyte.

Table 3.0. RLWTF Final Monthly Composite (FMC) Effluent Sampling, 1st Quarter, 2012.

Monitoring Period	RLWTF FMC Results[1]			
	NO_3-N (mg/L)	Perchlorate by IC[2] (ug/L)	TDS (mg/L)	F (mg/L)
January 2012	---- No Discharges ----			
February 2012	---- No Discharges ----			
March 2012	---- No Discharges ----			
NMWQCC 3103 Groundwater Standards	*10 mg/L*	*NA*[3]	*1000 mg/L*	*1.6 mg/L*

Notes:

[1]Analysis by the TA-50 Radioactive Liquid Waste Treatment Facility's analytical laboratory.

[2]IC means EPA Method 314.0, perchlorate analysis by Ion Chromatography.

[3]NA means that there is no NM WQCC 3103 standard for this analyte.