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Date: **JUL 17 2012**
Refer To: ENV-RCRA-12-0159
LAUR: 12-22775

Mr. Jerry Schoeppner, 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, SECOND 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 second 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 second quarter of 2012, no effluent was discharged by the TA-50 RLWTF through National Pollutant Discharge Elimination System (NPDES) Outfall 051 to Mortandad Canyon; all effluent was evaporated on-site by the facility's effluent evaporator.

Quarterly Monitoring Results, Mortandad Canyon Alluvial Groundwater Wells

Table 1.0 presents the analytical results from sampling conducted at Mortandad Canyon alluvial wells MCO-3, MCO-6, and MCO-7 during the second quarter of 2012. No samples were collected from alluvial well MCO-4B because there was insufficient water present. Samples from MCO-3, 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 (NO₃-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. No FWC samples were collected during the second quarter of 2012 because no effluent was discharged to Mortandad Canyon.

Table 3.0 reports the final monthly composite (FMC) sample results for NO₃-N, perchlorate (ClO₄), F, and TDS for the second quarter of 2012. No FMC samples were collected during the second 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

AMD:GET:RSB/lm

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Sincerely,



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

Mr. Jerry Schoeppner
ENV-RCRA-12-0159

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Cy (continued):

Randall S. Johnson, E500, (E-File)
Michael T. Saladen, ENV-RCRA, K490, (E-File)
Robert S. Beers, ENV-RCRA, K490
Robert C. Mason, TA55-DO, E583, (E-File)
Clifford W. Kirkland, TA-55 RLW, J910, (E-File)
Victor J. Salazar, TA-55 RLW, E518, (E-File)
John C. Del Signore, TA-55 RLW, E518, (E-File)
IRM-RMMSO, w/enc., A150, (E-File)
ENV-RCRA Correspondence File, w/enc., K490

Discharge Plan DP-1132 Quarterly Report
2nd Quarter, 2012

Table 1.0. Mortandad Canyon Alluvial Well Sampling, 2nd Quarter, 2012.

Sampling Location	Sample Field Prep (F/UF) ¹	Sample Date	Perchlorate (ug/L)	NO ₃ +NO ₂ -N (mg/L)	TKN (mg/L)	NH ₃ -N (mg/L)	TDS (mg/L)	F (mg/L)
MCO-3	F	5/21/2012	0.37	0.35	0.26	0.12	306	0.35
MCO-4B	F	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵	Dry ⁵
MCO-6	F	5/22/2012	3.2	0.84	0.15	0.12	260	0.99
MCO-7	F	5/29/2012	7.1	1.2	0.17	0.045J	286	1.1
NM WQCC 3103 Groundwater Standards			NA ²	10 mg/L ³	NA ²	NA ²	1000 mg/L	1.6 mg/L

Notes:

¹All samples filtered.

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

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

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

⁵Dry 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).

*Discharge Plan DP-1132 Quarterly Report
2nd Quarter, 2012*

Table 2.0. RLWTF Final Weekly Composite (FWC) Effluent Sampling, 2nd Quarter, 2012.

Monitoring Period	Sample Composite Date	Sample ID#	Analysis by RLWTF ¹		Analysis by General Engineering Laboratories, Inc.			
			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)
April	4/2/12	No Discharge ²	----	----	----	----	----	----
	4/9/12	No Discharge	----	----	----	----	----	----
	4/16/12	No Discharge	----	----	----	----	----	----
	4/23/12	No Discharge	----	----	----	----	----	----
	4/30/12		----	----	----	----	----	----
May	5/7/12	No Discharge	----	----	----	----	----	----
	5/14/12	No Discharge	----	----	----	----	----	----
	5/21/12	No Discharge	----	----	----	----	----	----
	5/28/12	No Discharge	----	----	----	----	----	----
June	6/4/12	No Discharge	----	----	----	----	----	----
	6/11/12	No Discharge	----	----	----	----	----	----
	6/18/12	No Discharge	----	----	----	----	----	----
	6/25/12	No Discharge	----	----	----	----	----	----
2nd Quarter 2012 Averages³			----	----	----	----	----	----
NMWQCC 3103 Groundwater Standards			10 mg/L	NA⁵	10 mg/L⁴	NA⁵	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 2nd quarter 2012 averages include the results from March 2012, if applicable.

⁴ The NMWQCC Regulation 3103 groundwater standard is for nitrate (NO₃-N).

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

**Discharge Plan DP-1132 Quarterly Report
2nd Quarter, 2012**

Table 3.0. RLWTF Final Monthly Composite (FMC) Effluent Sampling, 2nd 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)
April 2012	---- No Discharges ----			
May 2012	---- No Discharges ----			
June 2012	---- No Discharges ----			
NMWQCC 3103 Groundwater Standards	10 mg/L	NA ³	1000 mg/L	1.6 mg/L

Notes:

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

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

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