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Los Alamos

NATIONAL LABORATORY

Date: October 27, 2000
In Reply Refer To: ESH-18/WQ&H:00-0352
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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Ms. Phyllis Bustamante
Ground Water Quality Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502

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SUBJECT: GROUND WATER DISCHARGE PLAN (DP-1132), QUARTERLY REPORT, THIRD QUARTER, 2000

Dear Ms. Bustamante:

This letter and the enclosed attachments are intended to serve as Los Alamos National Laboratory's quarterly Ground Water Discharge Plan (DP-1132) report for the Radioactive Liquid Waste Treatment Facility (RLWTF) at TA-50 for the period from July 1 through September 30, 2000. Since the first quarter of 1999, Los Alamos National Laboratory has provided your agency with voluntary quarterly reports containing analytical results from effluent and ground water monitoring and a status report on RLWTF operations.

For the second consecutive quarter, nitrate concentrations in Mortandad Canyon's alluvial ground water remained below the New Mexico Water Quality Control Commission (NM WQCC) Regulation 3103 standard of 10 mg/L. The Laboratory will continue to monitor alluvial ground water in Mortandad Canyon bimonthly.

Attachment 1.0, Table 1.0, presents the analytical results from sampling conducted at the Laboratory's Mortandad Canyon alluvial monitoring wells on August 15, 2000. All of the analytical results from MCO-3, MCO-6, and MCO-7 were below NM WQCC Regulation 3103 standards for nitrate (NO3-N), fluoride (F), and total dissolved solids (TDS). No sample results are available for MCO-4B because insufficient water was available for sample collection. MCO-4B has not had sufficient water for sampling since October 1999.

Attachment 2.0, Table 2.0, presents the analytical results from weekly monitoring of the RLWTF's effluent holding tank. The weekly samples are flow-proportioned composite samples prepared from each batch of effluent generated by the RLWTF during a 7-day period. All sample results shown for the third quarter 2000 were below New Mexico Water Quality Control Commission (NM WQCC) Regulation 3103 standards for nitrate (NO3-N), fluoride (F), and total dissolved solids (TDS). The quarterly average for nitrates in the RLWTF's effluent was 3.29 mg/L.

In addition to weekly composite sampling, the RLWTF also conducts operational screening (using a HACH Kit) for nitrates (NO3-N) in each batch of effluent. Operational screening of effluent samples collected during the third quarter 2000 produced the following maximum, minimum, and average results for nitrate (NO3-N), respectively: 8.3 mg/L, 1.0 mg/L, and 4.37 mg/L.



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Please contact me at 667-7969 if you would like additional information regarding this quarterly report.

Sincerely,



Bob Beers
Water Quality and Hydrology Group

BB/tml

Enclosures: a/s

Cy: S. Wilson, USEPA, Region 6, Dallas, Texas, w/enc.
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D. Erickson, ESH-DO, w/enc., MS K491
L. McAtee, ESH-DO, w/enc., MS K491
S. Rae, ESH-18, w/enc., MS K497
M. Saladen, ESH-18, w/enc., MS K497
D. Woitte, LC/GL, w/enc., MS A187
WQ&H File, w/enc., MS K497
CIC-10, w/enc., MS A150



Radioactive Liquid Waste Treatment Facility
 Ground Water Discharge Plan (DP-1132) Quarterly Report
 3rd Quarter, 2000

Table 1.0. Analytical Results, Mortandad Canyon Alluvial Monitoring Wells (mg/L).

Sampling Location	Sample Date: August 15, 2000				
	NO3-N	TKN	NH3	TDS	F
MCO-3	3	0.2	<0.2	447	0.9
MCO-4B	NS	NS	NS	NS	NS
MCO-6	5.4	0.2	<0.2	342	1.3
MCO-7	9.4	0.2	<0.2	396	1.5
<i>NM WQCC Ground Water Standards</i>	<i>10</i>			<i>1000</i>	<i>1.6</i>

Notes:

NS means that no sample was collected at this well due to insufficient water.

All units: mg/L

Table 2.0. RLWTF Weekly Effluent Monitoring Analytical Results, July-September, 2000.

Monitoring Period	RLWTF Weekly Effluent Monitoring Analytical Results		
	NO3-N (mg/L)	F (mg/L)	TDS (mg/L)
JULY	5.91	0.49	450
	3.34	0.22	292
	3.87	0.26	378
	2.1	0.21	320
	2.31	0.39	246
AUGUST	1.68	0.22	346
	3.11	0.34	388
	2.71	0.15	326
	2.87	0.26	468
SEPTEMBER	3.59	0.53	416
	4.16	0.74	338
	3.84	0.62	282
	4.69	0.95	496
3rd Quarter 2000 Averages (mg/L)	3.29	0.41	365
<i>NM WQCC 3103 Ground Water Standards (mg/L)</i>	<i>10</i>	<i>1.6</i>	<i>1000</i>