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James

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ENTERED

Date: October 29, 2001
In Reply Refer To: ESH-18/WQ&H:01-363
Mail Stop: K497
Telephone: (505) 667-7969

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

**SUBJECT: GROUND WATER DISCHARGE PLAN (DP-1132), QUARTERLY REPORT,
THIRD QUARTER, 2001**

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 July 1 through September 30, 2001. 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.

Attachment 1.0, Table 1.0, presents the analytical results from sampling conducted at the Laboratory's Mortandad Canyon alluvial monitoring wells on September 7, 2001. All of the analytical results from MCO-3, MCO-6, and MCO-7 were below New Mexico Water Quality Control Commission (NM WQCC) Regulation 3103 standards for nitrate (NO₃-N), fluoride (F), and total dissolved solids (TDS) with the exception of a fluoride result from MCO-7 of 1.61 mg/L (NM WQCC Regulation 3103 standard for fluoride is 1.6 mg/L). No sample was collected from alluvial well MCO-4B because there was not sufficient water in the well. Please note that the analytical holding times for all TDS and fluoride samples were missed due to shipping delays incurred after September 11, 2001.

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 were below 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 5.41 mg/L.

In a September 17, 2001, letter I reported to you that the Laboratory was changing to a new analytical laboratory (ESH-18/WQ&H: 01-312) for all DP-1132 analyses. Beginning in late August 2001, all weekly composite samples were shipped to General Engineering Laboratories (GEL), Inc., Charleston, South Carolina, for nitrate/nitrite, TDS, and F analysis. Information regarding GEL's performance and certifications are available upon your request. This change was necessary due to reorganization of the Laboratory's Chemistry Division and, as a result, a downsizing of environmental analytical services.



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 2001 produced the following maximum, minimum, and average results for nitrate (NO₃-N), respectively: 9.8 mg/L, 1.8 mg/L, and 6.2 mg/L.

Please contact me at (505) 667-7969 if you would like additional information regarding this quarterly report.

Sincerely,



Bob Beers
Water Quality and Hydrology Group

BB/tml

Attachments: a/s

Cy: S. Wilson, USEPA, Region 6, Dallas, Texas, w/att.
E. Spencer, USEPA, Region 6, Dallas, Texas, w/att.
J. Bearzi, NMED HRMB, Santa Fe, New Mexico, w/att.
J. Davis, NMED-SWQB, Santa Fe, New Mexico, w/att.
J. Parker, NMED/DOE/OB, Santa Fe, New Mexico, w/att.
R. Ford-Schmid, NMED/DOE/OB, Santa Fe, New Mexico, w/att.
J. Vozella, DOE/LAAO, w/att., MS A316
K. Agogino, DOE/LAAO, w/att., MS A316
J. Holt, ADO, w/att., MS A104
T. Stanford, FWO-DO, w/att., MS K492
B. Ramsey, FWO-DO, w/att., MS K492
D. Mclain, FWO-WFM, w/att., MS J593
R. Alexander, FWO-WFM, w/att., MS E518
D. Moss, FWO-WFM, w/att., MS E518
P. Worland, FWO-WFM, w/att., MS E518
L. McAtee, ESH-DO, w/att., MS K491
P. Thullen, ESH-DO, w/att., MS K491
D. Stavert, ESH-DO, w/att., MS K491
S. Rae, ESH-18, w/att., MS K497
D. Rogers, ESH-18, w/att., MS K497
M. Saladen, ESH-18, w/att., MS K497
WQ&H File, w/att., MS K497
IM-5, w/att., MS A150



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Table 1.0. Mortandad Canyon Alluvial Monitoring Wells Analytical Results (mg/L), 3rd Quarter, 2001.

Sample Location	Sample Date: September 7, 2001				
	NO ₃ -N	TKN	NH ₃	TDS	F
MCO-3	3.06	0.280	<0.0235	347 ¹	0.667 ¹
MCO-3 lab duplicate	3.06	0.240	<0.0235	336 ¹	0.657 ¹
MCO-4B	NS	NS	NS	NS	NS
MCO-6	4.02	0.310	<0.0235	319 ¹	1.22 ¹
MCO-7	5.37	0.220	<0.0235	308 ¹	1.61 ¹
<i>NM WQCC Ground Water Standards</i>	<i>10</i>			<i>1000</i>	<i>1.6</i>

Notes:

¹Holding times were missed for these samples due to shipping delays incurred after September 11, 2001.

NS means that no sample was collected at this well.

All units: mg/L

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Table 2.0. RLWTF Weekly Effluent Monitoring Analytical Results, 3rd Quarter, 2001.

Monitoring Period	Sample Date	Analytical Laboratory	RLWTF Weekly Effluent Monitoring Analytical Results (mg/L)		
			NO3/NO2 (as-N)	Fluoride	TDS
JULY	7/1/01	C-ACS	3.9	1.06	404
	7/8/01	C-ACS	5.2	0.98	426
	7/15/01	C-ACS	3.7	0.65	384
	7/22/01	C-ACS	5.1	0.67	350
	7/29/01	C-ACS	5.6	1.25	476
AUGUST	8/5/01	C-ACS	6.1	0.87	498
	8/12/01	C-ACS	6.3	0.63	290
	8/19/01	C-ACS	7.5	0.78	384
	8/23/01	GEL	6.7	NA	481
	8/26/01	C-ACS	4.8	0.85	328
	8/28/01	GEL	4.4	0.729	356
SEPTEMBER	9/4/01	GEL	3.3	0.712	486
	9/12/01	GEL	6.6	1.46	880
	9/19/01	GEL	6.5	0.957	531
	9/26/01	GEL	results pending	results pending	results pending
3rd Quarter Averages (mg/L)			5.41	0.89	448
<i>NM WQCC 3103 Ground Water Standards (mg/L)</i>			<i>10</i>	<i>1.6</i>	<i>1000</i>

Notes:

C-ACS means Los Alamos National Laboratory's Chemistry Division-Analytical Chemistry Sciences Group

GEL means the General Engineering Laboratory, Charleston, South Carolina.