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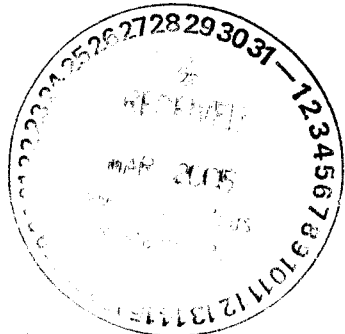
John



Environmental Stewardship Division (ENV-DO)
Water Quality & Hydrology Group (ENV-WQH)
P.O. Box 1663, Mail Stop K497
Los Alamos, New Mexico 87545
(505) 667-7969/FAX: (505) 665-9344

Date: March 25, 2005
Refer To: ENV-WQH: 05-054

Mr. Christopher F. Vick
Ground Water Pollution Prevention Section
Ground Water Quality Bureau
New Mexico Environment Department
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110



SUBJECT: NOTICE OF INTENT TO DISCHARGE PURGE WATER FROM MORTANDAD CANYON ALLUVIAL GROUND WATER WELLS

Dear Mr. Vick:

This Notice of Intent to Discharge (NOI) for purge water from alluvial ground water wells at Los Alamos National Laboratory (LANL) is being submitted for your agency's review and approval pursuant to Section 1201 of the New Mexico Water Quality Control Commission Regulations. Alluvial ground water wells at LANL are purged before sampling to assure that each sample collected is representative of the water in the aquifer. Purged ground water will be discharged to surface of the land in the vicinity of the well.

This NOI covers the periodic discharge of approximately 50 gallons of ground water produced during the purging of the following three alluvial ground water monitoring wells located in Mortandad Canyon: MT-1, MT-2, and MT-3. These wells have been previously sampled under the LANL's Environmental Surveillance Program. However, we are unable to locate any documentation showing that an NOI was approved by your agency for these three wells. This NOI is being submitted to ensure that these wells are covered during future sampling.

The enclosed analytical data indicate that ground water produced from these three wells conforms to the numerical ground water standards in NM WQCC Regulation 3103 and do not contain any toxic pollutants as defined in NM WQCC Regulations. It should be noted that Gross Beta, Tritium, Am-241, Cs-137 were detected in September 4, 1998, sample from MT-3 (see Table 4.0), but all activities were less than applicable EPA drinking water standards and Department of Energy (DOE) Derived Concentration Guides (DCGs) for Drinking Water.



Mr. Christopher F. Vick
ENV-WQH: 05-054

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March 25, 2005

Please call me at (505) 667-7969 if you have any questions regarding this NOI.

Sincerely,



Bob Beers
Water Quality & Hydrology Group

BB/lm

Attachments: a/s

Cy: J. Young, NMED-HWB, Santa Fe, NM, w/att.
M. Leavitt, NMED-SWQB, Santa Fe, NM, w/att.
M. Johansen, NNSA/LASO, w/att., MS A316
S. Yanicek, NMED/DOE/OB, w/att., MS J993
K. Hargis, ENV-DO, w/o att., MS J591
D. Stavert, ENV-DO, w/o att., MS J591
T. George, ENV-DO, w/o att., MS J591
T. Grieggs, ENV-SWRC, w/o att., MS K490
S. Rae, ENV-WQH, w/att., MS K497
D. Rogers, ENV-WQH, w/o att., MS K497
M. Saladen, ENV-WQH, w/o att., MS K497
A. Groffman, ENV-WQH, w/o att., MS M992
ENV-WQH File, w/att., MS K497
IM-5, w/att., MS A150

NOTICE OF INTENT TO DISCHARGE

- 1. Name and address of facility making the discharge.**
Los Alamos National Laboratory
Environmental Stewardship Division (ENV-DO)
P.O. Box 1663
Los Alamos, New Mexico 87545
- 2. Location of the discharge (In Township, Range and Section, if available).**
The following three alluvial monitoring wells in Mortandad Canyon are included in this Notice of Intent (NOI): MT-1, MT-2, and MT-3. The well locations are shown in Map 1.0.
- 3. The means of discharge. (To lagoon, Flowing stream, Water course, Arroyo, Septic tank)**
Ground water produced during well purging will be discharged to the land surface in the vicinity of the well. The discharge will not be permitted to enter a watercourse. When necessary, Best Management Practices (BMPs) will be utilized to minimize erosion.
- 4. The estimated concentration of contaminants (if any) in the discharge.**
The Laboratory's Water Quality Database (WQDB) was queried for all analytical detections (query condition: less than symbol (<) is null) for the three wells referenced above. Queries targeted the following analytical suites: general water chemistry (anions/cations), metals, radiologicals, and organics. These results are presented in Tables 1.0-4.0. A discussion on each well is presented below.

MT-1 and MT-2. No general chemistry, metals, or radiological results are available for these wells. Both wells were sampled on March 25, 2002, for VOA and SVOA analytes with no detections reported. Two wells in the vicinity, MCO-7 and MCO-7.5 (see Map 1.0), have an extensive analytical record; recent sampling results (2003-2004) show that both wells conform to all NM WQCC 3103 Ground Water Standards and do not contain any toxic pollutants as defined in the NM WQCC Regulations.

MT-3. Analytical results from sampling in 1997, 1998, and 1999 show that MT-3 conforms to all NM WQCC 3103 Ground Water Standards with the exception of a fluoride result (1.66 mg/L) in 1998 that exceeded the state ground water standard of 1.6 mg/L. Sampling for radiological analytes in 1998 showed detections for Gross Beta, Tritium, Am-241, and Cs-137 at activities below applicable EPA drinking water standards and Department of Energy (DOE) Derived Concentration Guides (DCGs) for Drinking Water (See Table 3.0). MT-3 was sampled on March 25, 2002, for VOA and SVOA analytes with no confirmed detections; three results were qualified by the analytical laboratory due to blank contamination (see Table 4.0).

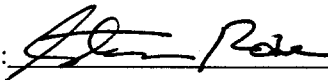
- 5. The type of operation from which the discharge is derived.**
This discharge is from the purging of ground water from alluvial monitoring wells prior to sample collection. Ground water standing in the well casing is subject to chemical reactions over time that may alter its composition. Purging the well assures that the sample collected is representative of the water in the aquifer.

See Attachment 1.0, *Standard Operation Procedure for Groundwater Sampling Using Bladder Pumps* (RRES-WQH-SOP-048.0) for additional detail on the sampling of alluvial monitoring wells.

NOTICE OF INTENT TO DISCHARGE

6. **The estimated flow to be discharged per day.**
Table 4.0 presents the estimated purge volume for each well. The total purge volume per sampling event is less than 50 gallons.

7. **The estimated depth to ground water (if available).**
Depth to the regional aquifer is approximately 950 ft.

Signed: 

Date: March 25, 2005

Steven Rae, Group Leader
Environmental Stewardship Division
Water Quality and Hydrology Group