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Date: MAR 01 2011
Refer To: EP2011-0090

Mr. Brian Snyder, Water Division Director
Acting Public Utilities Division Director
Sangre de Cristo Water Division
City of Santa Fe
801 West San Mateo
P.O. Box 909
Santa Fe, New Mexico 87504

Subject: Los Alamos National Laboratory Sitewide Monitoring Program Drinking Water Results for the City of Santa Fe Buckman Water Supply Wells

Dear Mr. Snyder:

This report, prepared by Los Alamos National Laboratory (the Laboratory), provides the analytical results from the June 8, June 22, and August 24, 2010, sampling of the City of Santa Fe's Buckman Wells No. 1, 6, and 8 for low-level tritium analysis. All results were below the U.S. Environmental Protection Agency (EPA) drinking water standards.

Routine monitoring of select Buckman water supply wells is conducted in accordance with the April 22, 2010, sampling and analysis plan cooperatively developed between the Laboratory and City of Santa Fe staff. Under this plan, Buckman Wells No. 1, 6, and 8 will be sampled quarterly by the Laboratory: twice per year for full-suite analysis (radionuclides [including tritium], general inorganics [including perchlorate], metals [including chromium], and organics) and twice per year for low-level tritium.

The attached CD contains the following items: (1) American Radiation Services International (ARS) data reports and (2) an Excel file of all analytical results (Tables 1 and 2) with a glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes. The analytical results are as follows.

Tritium: Samples from Buckman Wells No. 1, 6, and 8 were submitted to ARS for low-level tritium analysis. Historically, all low-level tritium samples were submitted to the University of Miami Tritium Laboratory (UMTL) for analysis. Beginning in early 2010, however, the Laboratory's contract with UMTL expired and a new contract was awarded to ARS. Accordingly, results from ARS may not be directly comparable to those from UMTL because of differences in

each laboratory's minimum detectable activity (MDA) and counting uncertainty. Analytical results are discussed below and presented in Table 1.

- **June 8, 2010:** Tritium results from the sampling of Buckman Wells No. 1 and 6 were nondetect, as indicated by the secondary validation code "U."

- **June 22, 2010:** The tritium result from the sampling of Buckman Well No. 8 was nondetect, as indicated by the secondary validation code "U."

- **August 24, 2010:** Tritium results from the sampling of Buckman Wells No. 1, 6, and 8 were as follows.

  - Buckman Well No. 1: 3.93 pCi/L
  - Buckman Well No. 1 Field Duplicate: 3.03 pCi/L
  - Buckman Well No. 6: 2.46 pCi/L
  - Buckman Well No. 8: 3.48 pCi/L

  Most of the low-level tritium results reported from these locations since 2001 were nondetect. The method used for the newest results has a higher MDA and perhaps less precision than earlier results. Buckman Wells No. 1, 6, and 8 will be sampled again for low-level tritium during the first quarter of 2011. The EPA maximum contaminant level for tritium in drinking water is 20,000 pCi/L.

Field Parameters: Results from the measurement of field parameters—conductivity, temperature, turbidity, and pH—are presented in Table 2. All results are compliant with the EPA Secondary Drinking Water Regulations.

In summary, all results presented in this report are below EPA drinking water standards. If you would like additional information regarding this report, please contact Bob Beers at (505) 667-7969 (bbeers@lanl.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

MG/CD/SP/BB:sm

Attachment: CD with the following items:
(1) ARS data reports
(2) Excel file of Tables 1–2 and glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes (LA-UR-10-8346)

Cy: (w/att.)
Claudia Borchert, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
Michael Gonzales, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
James Bearzi, NMED-HWB, 2905 Rodeo Park Drive East, Building 1, Santa Fe, NM 87505
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Neil Weber, San Ildefonso Pueblo
Gene Turner, DOE-LASO, MS A316
Bob Beers, ENV-RCRA, MS K490
RPF, MS M707

Cy: (Letter and CD and/or DVD only))
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Hai Shen, DOE-LASO, MS A316
Steve Paris, EP-CAP, MS M992
Suzanne Coyne, IRM-DCS, MS M992
William Alexander, EP-BPS, MS M992

Cy: (w/o att.)
Tom Skibitski, NMED-OB, Santa Fe, NM (date-stamped letter emailed)
Annette Russell, DOE-LASO, MS A316 (date-stamped letter emailed)
Michael B. Mallory, PADOPS, A102 (date-stamped letter emailed)
James C. Cantwell, ADESHQ, MS K491 (date-stamped letter emailed)
Mike Saladen, ENV-RCRA, MS K490 (date-stamped letter emailed)
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