ERID-260222

Los Alamos NATIONAL LABORATORY EST. 1943

confirmed receipt of fax 8.20.14 SM

Environmental Programs
P.O. Box 1663, MS K788
Los Alamos, New Mexico 87545
(505) 606-2337

National Nuclear Security Administration
Los Alamos Field Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-4255/FAX (505) 606-2132

Date: AUG 20 2014
Refer To: EP2014-0416

Nicholas Schiavo, Water 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. Schiavo:

Routine monitoring of select Buckman water supply wells is conducted in accordance with an annual sampling and analysis plan (SAP) cooperatively developed between Los Alamos National Laboratory (the Laboratory) and City of Santa Fe staff. A draft of the 2014–2015 SAP was provided to Alex Puglisi of your staff on April 18, 2014. Pending resolution of comments, the City of Santa Fe and the Laboratory agreed to follow the draft SAP until it is finalized. According to the draft SAP, the Laboratory will sample Buckman Wells Nos. 1, 6, and 8 quarterly: twice per year for radionuclides, general inorganics, metals, and organics, with two additional sample events per year for tritium.

This report, prepared by the Laboratory, provides the analytical results from the June 9, 2014, sampling of the City of Santa Fe Buckman Water Supply Wells Nos. 1, 6, and 8. Samples were analyzed for radionuclides, general inorganics, metals, and organics.

All results were below the U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), except for the following:

- Arsenic was measured in a filtered sample from Buckman Well No. 1 at a concentration of 10.6 µg/L in the primary sample and 11.1 µg/L in a field duplicate; the EPA MCL for arsenic in drinking water is 10 µg/L. Arsenic occurs naturally in this water. The arsenic concentrations found in this well since 2002 range from 9.03 µg/L to 17.6 µg/L.

The attached CD contains an Excel file of the analytical results with a glossary of laboratory qualifier codes, secondary validation codes, and secondary validation reason codes. The analytical results are as follows.

Radiochemistry:

- **Americium-241, Cesium-137, Cobalt-60, Neptunium-237, Plutonium-238, Plutonium-239/240, Potassium-40, Sodium-22, and Strontium-90:** All results were nondetect.

- **Gross Alpha:** The gross-alpha activity in samples ranged from 6.42 pCi/L to 13.1 pCi/L. All results were below the 15 pCi/L EPA MCL for gross alpha in drinking water (excluding uranium and radon but including radium-226). These reported gross-alpha values are not corrected for uranium and radon.

- **Gross Beta:** The gross-beta activity in samples ranged from 3.1 pCi/L to 7.83 pCi/L. All results were below the EPA screening level of 50 pCi/L for gross beta in drinking water.

- **Combined Radium-226 and Radium-228:** The radium-226 activity in samples ranged from 0.554 pCi/L to 1.4 pCi/L. All radium-228 results were nondetect. The results at all locations were below the EPA MCL of 5 pCi/L for the combined radium-226 and radium-228 in drinking water.

- **Tritium:** All tritium results were nondetect. The average minimum detectable activity for the measurements was 6.45 pCi/L. The results at all locations were below the EPA MCL of 20,000 pCi/L for tritium in drinking water.

- **Uranium:** The uranium concentration in samples ranged from 5.06 µg/L to 17.9 µg/L. The results at all locations were below the EPA MCL of 30 µg/L for uranium in drinking water.

- **Uranium-234, Uranium-235/236, Uranium-238:** These isotopes were detected in all samples and reflect presence of natural uranium.

General Inorganics:

- **Perchlorate:** The perchlorate concentration in samples ranged from 0.259 µg/L to 0.385 µg/L. Neither the federal government nor the State of New Mexico has established a drinking water standard for perchlorate. On January 8, 2009, EPA issued an interim health advisory of 15 µg/L for perchlorate in drinking water.

- **Cyanide, Fluoride, and Nitrate+Nitrite:** The cyanide, fluoride, and nitrate+nitrite (as nitrogen) concentrations at all locations were below the EPA primary drinking water standards.

Metals:

- **Arsenic:** The arsenic concentration in samples ranged from 4.24 µg/L to 11.1 µg/L. The Buckman Well No. 1 primary sample and field duplicate results were above the 10 µg/L EPA MCL for arsenic in drinking water.

- **Chromium:** The filtered chromium concentration in samples ranged from 2.41 µg/L to 6.39 µg/L, below the EPA MCL of 100 µg/L and the New Mexico groundwater standard of 50 µg/L.

Organics:

- **High Explosives (HE):** No HE compounds were detected.
- **Polychlorinated Biphenyls (PCBs):** No PCBs were detected.
- **Volatile Organic Compounds (VOCs):** No VOCs were detected.
- **Semivolatile Organic Compounds (SVOCs):** No SVOCs were detected.

In summary, all results presented in this report are below EPA MCLs and New Mexico groundwater standards, with the exception of arsenic at Buckman Well No. 1.

If you have questions, please contact Steve Paris at (505) 606-0915 (smparis@lanl.gov) or Cheryl Rodriguez at (505) 665-5330 (cheryl.rodriguez@nnsa.doe.gov).

Sincerely,

Jeff Mousseau, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

Peter Maggiore, Assistant Manager
Environmental Projects Office
Los Alamos Site Office

JM/PM/DM/SP/DR:sm

Attachment: CD with the following items – Excel file of the analytical results and glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes (LA-UR-14-26424)

Cy: (w/att.)
Laurie King, EPA Region 6, Dallas, TX
Alex Puglisi, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
Bill Schneider, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
Victor Archuleta, City of Santa Fe, 801 West San Mateo, Santa Fe, NM 87505
John Kieling, NMED-HWB, 2905 Rodeo Park Drive East, Bldg 1, Santa Fe, NM 87505
Stephanie Stringer, NMED-DWB, P.O. Box 5469, Santa Fe, NM 87502
Steve Yanicak, NMED-DOE-OB, MS M894
Hai Shen, DOE-NA-LA, MS A316
Cheryl Rodriguez, DOE-NA-LA, MS A316
Tom Carver, DOE-NA-LA, MS A316
Public Reading Room (EPRR)
PRS Database with ER ID (electronic copy)
RPF (electronic copy)

Cy: (w/o att.)
Tom Skibitski, NMED-OB (date-stamped letter emailed)
lasomailbox@nnsa.doe.gov (date-stamped letter emailed)
Annette Russell, DOE-NA-LA (date-stamped letter emailed)
David Rhodes, DOE-NA-LA (date-stamped letter emailed)
Kimberly Davis Lebak, DOE-NA-LA (date-stamped letter emailed)
Carl Beard, PADOPS (date-stamped letter emailed)
Mike Brandt, ADESHQ (date-stamped letter emailed)
Mike Saladen, ENV-RCRA (date-stamped letter emailed)
David Rogers, EP-CAP (date-stamped letter emailed)
Danny Katzman, EP-CAP (date-stamped letter emailed)
Steve Paris, EP-CAP (date-stamped letter emailed)
Craig Douglass, EP-CAP (date-stamped letter emailed)
Dave McInroy, EP-CAP (date-stamped letter emailed)
Jeff Mousseau, ADEP (date-stamped letter emailed)