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✓ called Pete & confirmed (#662-8472) receipt of Fax 7/9/2010 Saundra

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Deliverables Compliance Team

FAX

TO:	Pete Padilla	FR:	Saundra Martinez
FAX #	662-8005	PH:	665-6771
# PAGES:	6 total pages including cover sheet	DATE:	July 9, 2010

RE: LANL Sitewide Monitoring Program Drinking Water Results for the LAC Water Supply Wells

Comments:

Paper copy with CD is in the mail.

If you have any questions, please contact me.

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Date: JUL 0 9 2010
Refer To: EP2010-0317

Mr. Pete Padilla
Environmental Compliance Officer
Department of Public Utilities
County of Los Alamos
P.O. Drawer 1030
Los Alamos, NM 87544

Subject: Los Alamos National Laboratory Sitewide Monitoring Program Drinking Water Results for the Los Alamos County Water Supply Wells

Dear Mr. Padilla:

This report, prepared by Los Alamos National Laboratory (the Laboratory), provides the analytical results from the March 22 and April 2, 2010, sampling and analysis of Los Alamos County Water Supply Wells O-1, O-4, PM-1, PM-3, PM-4, and PM-5. Water supply well PM-2 was out of service at the time of sampling. In addition, tritium results from the November 17, 2009, sampling of water supply wells O-1, O-4, PM-1, PM-3, and PM-5 have been included in this report. All results were below the U.S. Environmental Protection Agency (EPA) primary and secondary drinking water standards, with the exception of the following:

- pH was measured at water supply well O-1 at 8.67 SU. The National Secondary Drinking Water Regulations have established a guideline for pH in drinking water of 6.5–8.5 SU.

Quarterly monitoring of Los Alamos County's (the County's) water supply wells is conducted in accordance with the March 23, 2010, sampling and analysis plan. Under this plan, all County water supply wells will be sampled annually for full-suite analysis (radionuclides, general inorganics, metals, and organics). In addition, selected wells are sampled quarterly for specific contaminants of concern: chromium, perchlorate, diesel range organics (DRO), tritium, volatile organic compounds (VOCs), nitrate+nitrite, molybdenum, and high explosives. Below is a detailed discussion of the analytical results from the first quarter 2010 sampling event.

The attached CD also contains the following items: (1) General Engineering Laboratories, Inc. (GEL) and University of Miami Tritium Laboratory (UMTL) data package; and (2) an Excel file of the analytical results with a glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes. The analytical results are as follows.

Tritium: Analytical results from sampling water supply wells O-1, O-4, PM-1, PM-3, PM-4, and PM-5 for low-level tritium are presented in Table 1.0. Tritium activities at all locations were nondetect (U flag), with the exception of the following:

- Tritium was detected in the November 17, 2009, sample from well O-1 at 16.92 pCi/L. This value is consistent with previous results from O-1 and was below the EPA MCL of 20,000 pCi/L for tritium in drinking water.

General Inorganics: The analytical results from sampling at water supply wells O-1, O-4, PM-1, PM-3, PM-4, and PM-5 for general inorganics are summarized in Table 2.0.

- **Perchlorate:** Perchlorate concentrations at all locations ranged between 0.37 µg/L and 0.45 µg/L at all wells, with the exception of O-1. The perchlorate concentration at O-1 was 1.25 µg/L; this value is consistent with previous measurements taken from this location.

  Currently, 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, replacing the existing preliminary remediation goal of 24.5 µg/L.

- **Nitrate+Nitrite (as Nitrogen):** The nitrate+nitrite (as N) concentration at both PM-4 and PM-5 was 0.37 mg/L, well below the EPA MCL of 10 mg/L.

Metals: The analytical results from sampling at water supply wells O-4, PM-1, PM-3, PM-4, and PM-5 for metals are summarized in Table 3.0.

- **Molybdenum:** The unfiltered molybdenum concentration at O-4 was 1.2 µg/L; there is no EPA MCL for molybdenum in drinking water. The New Mexico groundwater standard for molybdenum is 1000 µg/L (20.6.2.3103 New Mexico Administrative Code [NMAC]).

- **Chromium:** Filtered chromium concentrations at O-4, PM-1, PM-3, PM-4, and PM-5 ranged between nondetect and 3.6 µg/L, well below the EPA MCL of 100 µg/L and the New Mexico groundwater standard of 50 µg/L (20.6.2.3103 NMAC).

In summary, all results presented in this report are below EPA MCLs and New Mexico groundwater standards, with the exception of pH at water supply well O-1.

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