



Environmental Programs

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Date:

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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 November 16, 2010, sampling and analysis of Los Alamos County Water Supply Wells O-1, PM-1, PM-3, and PM-5. Water supply wells O-4, PM-2, and PM-4 were not sampled since they were out of service at the time. All results were below the U.S. Environmental Protection Agency (EPA) primary and secondary drinking water standards.

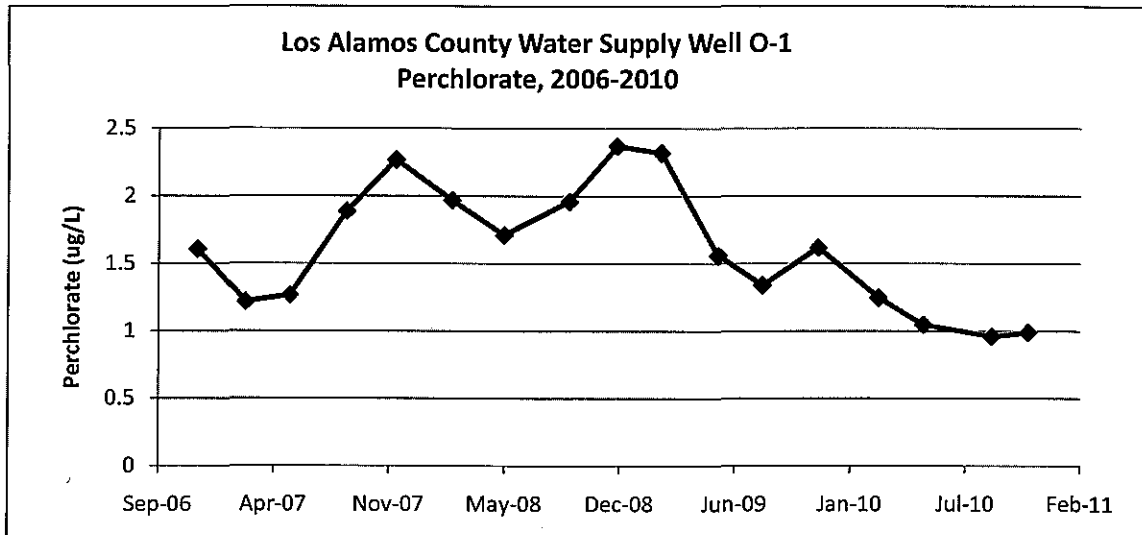
Quarterly monitoring of the county's water supply wells is conducted in accordance with the March 23, 2010, sampling and analysis plan. Under this plan, all Los Alamos County water supply wells will be sampled annually for full-suite analysis (radionuclides, general inorganics, metals, and organics).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

The attached CD contains the following items: (1) General Engineering Laboratories, Inc. (GEL), data packages and (2) an Excel file of the 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: Tritium results from water supply wells PM-1, PM-3, and PM-5 were pending at the time this report was prepared.

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

- Perchlorate:** Perchlorate concentrations at water supply wells O-1, PM-1, PM-3, and PM-5 were 0.99 µg/L, 0.46 µg/L, 0.45 µg/L, and 0.35 µg/L, respectively. As shown in the figure below, perchlorate concentrations at water supply well O-1 have measured approximately 1 µg/L during the last three quarters of 2010, lower than previous measurements collected over the past 4 yr.



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:** The nitrate+nitrite (as N) concentration at PM-5 was 0.33 mg/L, well below the EPA maximum contaminant level (MCL) of 10 mg/L.

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

- Chromium:** The filtered chromium concentrations at PM-1, PM-3, and PM-5 were 5.39 µg/L, 5.73 µg/L, and 6.95 µg/L, respectively. These concentrations are well below the EPA MCL of 100 µg/L and the New Mexico groundwater standard of 50 µg/L.

HE: Water supply well PM-5 was sampled for HE. No HE compounds were detected at concentrations greater than GEL’s method detection limit. The analytical results are presented in Table 2.