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Date: August 23, 2007
Refer To: EP2007-0512

James P. Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Review of July 2007 Groundwater Data

Dear Mr. Bearzi:

The Los Alamos National Laboratory (LANL) Water Stewardship Project (LWSP) met on August 8, 2007, to review new groundwater data received in July 2007. At that time, several groundwater samples were identified with contaminant concentrations above the New Mexico or federal water quality standards. The LWSP director notified the Hazardous Waste Bureau by telephone on July 8, 2007, and followed up with an email on the same day. The instances of a contaminant above a standard for the first time were as follows:

- At Pajarito Canyon intermediate wells 03-B-10 and 03-B-13, chloride was detected above the New Mexico groundwater standard (250 mg/L) at 414 and 387 mg/L, respectively. These wells are located in a parking lot, and the elevated chloride is most likely from the application of road salt.
- Also at 03-B-10, dioxane[1,4-] was detected at 72.7 µg/L and above the U.S. Environmental Protection Agency (EPA) tap screening level of 61.12 µg/L by the semivolatile organic analysis (SVOA) method. Dioxane[1,4-] has previously been detected above the screening level by the volatile organic analysis (VOA) method, which has a higher detection limit of 20 µg/L. The SVOA method detection limit (MDL) is 1 µg/L.
- At alluvial well MCO-2 in Mortandad Canyon, filtered aluminum was detected at 9410 µg/L, above the New Mexico groundwater standard of 5000 µg/L. Turbidity was 278 nephelometric turbidity units (NTUs) during this sampling event.
- Nonfiltered beryllium was detected at 5.8 µg/L and above the EPA maximum contaminant level (MCL) of 4 µg/L at Mortandad Canyon alluvial well MCO-2. Beryllium was not detected in the filtered companion sample. Turbidity was 278 NTUs and may account for the elevated beryllium.

- At Mortandad Canyon intermediate well MCOI-6, dioxane[1,4-] was detected at 63.9 µg/L and above the EPA tap screening level of 61.12 µg/L from a field duplicate sample analyzed by the VOA method. Dioxane[1,4-] was not detected in the field trip blank. The companion primary sample result from the same method was 55.9 µg/L and below the screening level. A result from the same sample by the SVOA method (MDL of 1 µg/L) was 24.1 µg/L. Dioxane[1,4-] has been detected in all seven previous sampling rounds.
- At Sandia Canyon alluvial well SCA-4, arsenic was detected from a nonfiltered sample at 15 µg/L and above the EPA MCL of 10 µg/L. The filtered result was 13 µg/L and also above the MCL. Turbidity was measured at 1000 NTU during sample collection and may have contributed to arsenic concentrations in the nonfiltered sample. This is the first sampling round at this location.
- At Sandia Canyon alluvial well SCA-4, lead was detected from a nonfiltered sample at 19.8 µg/L and above the EPA MCL of 15 µg/L. Lead was not detected in the filtered sample. Turbidity was measured at 1000 NTU during sample collection and is most likely responsible for the high lead concentrations. This is the first sampling round at this location.
- The organic compound acrolein was detected at 9.01 µg/L and above the EPA tap screening level of 0.04 µg/L at Water Canyon spring WA-625. Acrolein was not detected in the corresponding field trip blank. Acrolein has only been detected once out of 1062 previous analyses of groundwater. WA-625 Spring, a new location, represents alluvial groundwater and is located just below the confluence of Water Canyon and Cañon de Valle. This result is from the first sampling round at this location.

This letter is our written submission that indicates in the accompanying report and tables the contaminants that meet the six screening criteria laid out in the Settlement Agreement and Stipulated Final Order signed by the New Mexico Environment Department, U.S. Department of Energy, and Los Alamos National Security, LLC, on June 14, 2007. To meet requirements in Criteria 1, 3, and 4, the report calls out data that are the first exceedance of a standard, data that are the first exceedance of one-half a standard, and, generally, new detections of organic compounds.

If you have questions, please contact Ardyth Simmons at (505) 665-3935 (asimmons@lanl.gov) or Mat Johansen at (505) 665-5046 (mjohansen@doeal.gov).

Sincerely,

Susan G. Stiger, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

David R. Gregory, Project Director
Environmental Operations
Los Alamos Site Office

SGS/DRG/TBA/DR:sm

Enclosure: Report and accompanying tables: "Summary of New Los Alamos National Laboratory Groundwater Data Loaded in July 2007" (LA-UR-07-5615)

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