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Los Alamos National Laboratory
Environmental Programs
Area Fax: (505) 667-5801

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FAX

TO: PETE PADILLA, LAC

FR: SAUNDRA MARTINEZ

FAX # (505) 662-8005

PH: (505) 662-8472

PAGES: 5 including this cover sheet

DATE: June 7, 2013

RE: Los Alamos National Laboratory Sitewide Monitoring Program, Los
Alamos County Water-Supply Wells, 2013-2014 Sampling and Analysis
Plan

Comments:

Paper copy with CD is in the mail.

Please verify receipt of this 5 page fax by calling Sandra Martinez at (505) 670-5807



Environmental Programs

P.O. Box 1663, MS M991
Los Alamos, New Mexico 87545
(505) 606-2337/FAX (505) 665-1812



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

Date: JUN 07 2013
Refer To: EP2013-0088

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, Los Alamos County Water-Supply Wells, 2013–2014 Sampling and Analysis Plan

Under Los Alamos National Laboratory's (the Laboratory's) Sitewide Monitoring Program, all Los Alamos County (the County) water-supply wells are routinely sampled for both general characterization and for specific constituents of interest. The Laboratory and the County have historically conducted an annual review of the sampling and analysis plan (SAP) to ensure it is dynamic, strategic, and mutually beneficial. The attached SAP represents the Laboratory's commitment for the next four quarters of sampling in the 2013–2014 time frame. The sample suites and methods in this plan are the same used for sampling of our monitoring wells under the New Mexico Environment Department–approved Interim Facility-wide Groundwater Monitoring Plan.

Based on a review of analytical results of groundwater samples collected from County wells, the Laboratory recommends the following changes:

- Reduce the frequency of perchlorate sampling at O-1 from quarterly to semiannually because the concentrations of this analyte have dropped dramatically in recent years, from a maximum of 2.97 µg/L in 2004 to 0.756 µg/L in 2012. The latter value is only 50% higher than the background value of 0.51 µg/L.
- Reduce the frequency of perchlorate sampling at O-4, PM-4, and PM-5 from quarterly to semiannually because the concentrations of this analyte have remained at or below background for many years.
- Filtered groundwater samples will be collected for metals analyses, with the exception of mercury.
- Eliminate the analysis of naturally occurring thorium isotopes, which have not been detected.
- Eliminate the analysis of neptunium-237, which also has not been detected.

The Laboratory will continue to follow the historical practice of providing the County with a 60-day review period before water-supply well data are released to the public or posted to a publicly accessible website, Intellus (<http://www.intellusnm.com>).

During the coming year, the Laboratory may find additional monitoring is required for project-specific needs. Any proposed additions to the SAP will be presented in advance to the Water-Quality Steering Committee for its approval.

If you have questions, please contact Steve Paris at (505) 606-0915 (smparis@lanl.gov) or Woody Woodworth at (505) 665-5820 (lance.woodworth@nnsa.doe.gov).

Sincerely,



Jeff Mousseau, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,



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

JM/PM/CD/SP:sm

Attachment: City of Santa Fe Buckman Water Supply Wells, 2013–2014 Sampling and Analysis Plan (LA-UR-13-23555)

Cy: (w/att.)

Laurie King, EPA Region 6, Dallas, TX
Tim Glasco, Utilities Dept., 101 Camino Entrada, Bldg #5, Los Alamos, NM 87544
Wayne Witten, Utilities Dept., 101 Camino Entrada, Bldg #5, Los Alamos, NM 87544
Steve Yanicak, NMED-DOE-OB, MS M894
Cheryl Rodriguez, DOE-NA-00-LA, MS A316
Hai Shen, DOE-NA-00-LA, MS A316
Tom Carver, DOE-NA-00-LA, MS A316
Steve Paris, EP-CAP, MS M992
epccat@lanl.gov
RPF (electronic copy)

Cy: (w/o att.)

Tom Skibitski, NMED-Resource Protection, Santa Fe, NM (date-stamped letter emailed)
lasomailbox@nnsa.doe.gov (date-stamped letter emailed)
Annette Russell, DOE-NA-00-LA (date-stamped letter emailed)
David Rhodes, DOE-NA-00-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-ET (date-stamped letter emailed)
Danny Katzman, EP-ET (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)

Los Alamos County Water-Supply Wells 2013–2014 Sampling and Analysis Plan

Location	Analytical Suites												
	Metals			Organics					Radionuclides		Inorganics		
	Metals ^a	Molybdenum	Chromium	VOCs	SVOCs	PCBs	HEXP ^b	Diesel Range Organics	Radionuclides ^c	Low-Level Tritium	General Inorganics ^d	Nitrate+nitrite	Perchlorate
G-1A	1	— ^e	—	1	1	1	1	—	1	1	1	—	1
G-2A	1	—	—	1	1	1	1	—	1	1	1	—	1
G-3A	1	—	—	1	1	1	1	—	1	1	1	—	1
G-4A	1	—	—	1	1	1	1	—	1	1	1	—	1
G-5A	1	—	—	1	1	1	1	—	1	1	1	—	1
O-1	1	—	—	1	1	1	1	—	1	1, 3	1	—	1, 3
O-4	1	2, 3, 4	—	1	1	1	1	1, 3	1	1, 2, 3, 4	1	—	1, 3
PM-1	1	—	2, 3, 4	1	1	1	1	—	1	1, 3	1	—	1, 3
PM-2	1	—	—	1, 2, 3, 4	1	1	1, 3	—	1	1, 3	1	—	1
PM-3	1	—	2, 3, 4	1	1	1	1	—	1	1, 3	1	—	1, 3
PM-4	1	—	2, 3, 4	1	1	1	1, 3	—	1	1, 2, 3, 4	1	2, 3, 4	1, 3
PM-5	1	—	2, 3, 4	1	1	1	1, 3	—	1	1, 2, 3, 4	1	2, 3, 4	1, 3

Notes:

Sampling frequencies: 1 = Quarter 1 (Apr–June 2013); 2 = Quarter 2 (July–Sept 2013); 3 = Quarter 3 (Oct–Dec 2013); 4 = Quarter 4 (Jan–Mar 2014).

Samples collected for filtered analysis include metals, anions, cations, nitrate plus nitrite, ammonia, total phosphorus, specific conductance, pH, total dissolved solids (TDS), alkalinity, hardness, and perchlorate.

Samples collected for unfiltered analysis include mercury, VOCs, SVOCs, PCBs, high explosive compounds (HEXP), diesel range organics, radionuclides, tritium, total cyanide, total Kjeldahl nitrogen (TKN), and total organic carbon (TOC).

^a Metals analysis includes Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, SiO₂, Sn, Ti, V, U, and Zn.

^b The HEXP analytical suite includes the normal SW-846:8330 analytes plus pentaerythritol tetranitrate; triaminotrinitrobenzene; 3,5-dinitroaniline, tri(o-cresyl)phosphate; 2,4-diamino-6-nitrotoluene; and 2,6-diamino-4-nitrotoluene. These additional analytes are analyzed by SW-846:8321A.

^c The radionuclide suite includes radium-226 and radium-228, americium-241, strontium-90, isotopic uranium, isotopic plutonium, gamma spectroscopy (for cesium-137, cobalt-60, neptunium-237, potassium-40, and sodium-22), gross alpha, gross beta, and gross gamma.

^d General inorganic analysis includes major anions (bromide, chloride, fluoride, sulfate); major cations (calcium, magnesium, sodium, potassium); nitrate plus nitrite (as N); TKN; ammonia; total phosphorus; total cyanide; TOC; TDS; alkalinity; specific conductance; pH; and hardness. TKN, TOC, and total cyanide are analyzed only in unfiltered samples.

^e — = This analytical suite is not scheduled to be collected for this location.