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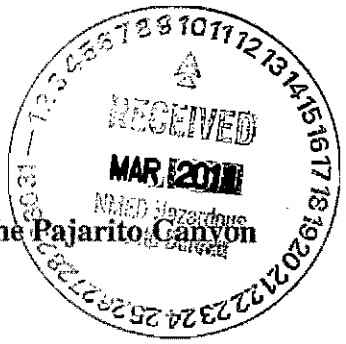
Date: MAR 10 2011
Refer To: EP2011-0069

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



Subject: Submittal of the Results of 2010 Sediment Monitoring in the Pajarito Canyon Watershed

Dear Mr. Bearzi:

Enclosed please find two hard copies with electronic files of the Results of 2010 Sediment Monitoring in the Pajarito Canyon Watershed. As specified in theNovember 13, 2009, Approval with Modifications of the Sampling and Analysis Plan for Sediment Monitoring in the Pajarito Canyon Watershed, the New Mexico Environment Department requested submittal of these data by March 31, 2011. This report fulfills that request.

If you have any questions, please contact Steve Veenis at (505) 667-0013 (veenis@lanl.gov) or Suzy Schulman at (505) 606-1962 (sschulman@doeal.gov).

Sincerely,

B.G. Schulman for MJG

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

David Rhodes, Project Director
Environmental Operations
Los Alamos Site Office

MG/GR/CD/SV/SR:sm

Enclosures: Two hard copies with electronic files – Results of 2010 Sediment Monitoring in the Pajarito Canyon Watershed

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
Suzy Schulman, DOE-LASO, MS A316
Steve Veenis, EP-CAP, MS M992
Steve Reneau, EES-16, MS D452
RPF, MS M707 (w/ two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD and/or DVD only)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
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William Alexander, EP-BPS, MS M992

Cy: (w/o enc.)
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Michael J. Graham, ADEP, MS M991 (date-stamped letter emailed)

Results of 2010 Sediment Monitoring in the Pajarito Canyon Watershed

Introduction

This report presents analytical data obtained from sediment samples in the Pajarito Canyon watershed in 2010 as part of the Los Alamos National Laboratory (LANL or the Laboratory) Environmental Surveillance Program, following a September 2009 sampling and analysis plan (SAP) (LANL 2009, 107340). The New Mexico Environment Department (NMED) issued an approval with modifications for the SAP (NMED 2009, 108123) that included the requirement to provide results of the annual sampling in a report to NMED by March 31 of each calendar year beginning in 2010. This report satisfies that requirement for the 2010 sampling. Information on radioactive materials and radionuclides, including the results of sampling and analysis of radioactive constituents, is voluntarily provided to NMED in accordance with U.S. Department of Energy policy.

Samples Collected

The SAP indicated that seven active stream channel samples would be collected each year in the Pajarito Canyon watershed, and up to an additional eight fine-grained sediment samples were identified as "contingency" samples to be collected in the event large floods occurred (LANL 2009, 107340). No large floods occurred in 2010 in this watershed; therefore, the fine-grained contingency samples were not collected. In addition, because no flow was recorded at the E250 stream gage in Pajarito Canyon above NM 4 during this monitoring period, no samples were collected from the two active stream channel locations specified below E250. Also, there was insufficient sediment to sample at one additional location, the lower retention pond in the material disposal area (MDA) G-6 drainage. Therefore, a total of four active channel sediment samples were collected in the Pajarito Canyon watershed in 2010.

Results

Analytical results for the four sediment samples from the Pajarito Canyon watershed are included electronically as Attachment 1 (on CD). Tables in Attachment 2 (on CD) summarize the frequencies of detected results and identify sampling results above the sediment background values (BVs) for inorganic chemicals and radionuclides or detected results for organic chemicals. These results will also be presented in the 2010 Environmental Surveillance Report, scheduled to be published in September 2011.

One inorganic chemical, antimony, was detected above the sediment BV in a sample collected from the MDA G-7 drainage. This result is similar to previous years (e.g., LANL 2010, 108907). Dioxin and furan congeners and semivolatile organic compounds (SVOCs) were added to the analytical suite for these stations in 2010 at the request of NMED (2009, 108123). Dioxin and furan congeners were detected in each sample. The maximum result, 0.000219 mg/kg for octachlorodibenzodioxin [1,2,3,4,6,7,8,9-] from the MDA G-7 drainage, is less than dioxin and furan congener results in sediment previously measured from other locations farther west in the Pajarito Canyon watershed (LANL 2009, 106939) and from Pueblo Canyon in areas receiving runoff from the Los Alamos townsite (LANL 2005, 091818). No other organic chemicals, including SVOCs, were detected in these samples. Three radionuclides (americium-241, plutonium-238, and plutonium-239/240) were detected above BVs in the sample from the MDA G-7 drainage. These results are similar to previous years (e.g., LANL 2010, 108907).

REFERENCES

The following list includes all documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ER ID. This information is also included in text citations. ER IDs are assigned by the Environmental Programs Directorate's Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau and the Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

LANL (Los Alamos National Laboratory), December 2005. "Los Alamos and Pueblo Canyons Supplemental Investigation Report," Los Alamos National Laboratory document LA-UR-05-9230, Los Alamos, New Mexico. (LANL 2005, 091818)

LANL (Los Alamos National Laboratory), August 2009. "Pajarito Canyon Investigation Report, Revision 1," Los Alamos National Laboratory document LA-UR-09-4670, Los Alamos, New Mexico. (LANL 2009, 106939)

LANL (Los Alamos National Laboratory), September 2009. "Sampling and Analysis Plan for Sediment Monitoring in the Pajarito Canyon Watershed," Los Alamos National Laboratory document LA-UR-09-5858, Los Alamos, New Mexico. (LANL 2009, 107340)

LANL (Los Alamos National Laboratory), March 2010. "Results of 2009 Sediment Monitoring in the Pajarito Canyon Watershed," Los Alamos National Laboratory document LA-UR-10-1362, Los Alamos, New Mexico. (LANL 2010, 108907)

NMED (New Mexico Environment Department), November 13, 2009. "Notice of Approval with Modifications; Sampling and Analysis Plan for Sediment Monitoring in the Pajarito Canyon Watershed," New Mexico Environment Department letter to D. Gregory (DOE-LASO) and D. McInroy (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2009, 108123)

Attachments 1 and 2

Analytical Results
(on CD included with this document)