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Date: SEP 30 2011
Refer To: EP2011-0226

John Kieling, Acting 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 Investigation/Remediation Report for Material Disposal Area B, Solid Waste Management Unit 21-015

Dear Mr. Kieling:

Enclosed please find two hard copies with electronic files of the Investigation/Remediation Report for Material Disposal Area B, Solid Waste Management Unit 21-015.

This investigation/remediation report summarizes the results of the preliminary investigations that were performed to support the investigation/remediation work plan, submitted to the New Mexico Environment Department (NMED) in October 2006, and describes the work performed pursuant to the work plan to satisfy the following four primary objectives.

Objective 1: Characterize types and quantities of waste at Material Disposal Area (MDA) B. Preliminary investigative characterization was performed to define the trench boundaries, estimate waste volumes, and identify probable radiological and chemical contaminants. Once excavation began, wastes were characterized in accordance with the MDA B waste characterization strategy form and sampling and analysis plan.

Objective 2: Remove and properly dispose of the excavated wastes. All wastes were removed from the disposal trenches at MDA B. Overburden that met the criteria established by NMED was used as fill for the excavations. Although the volume of hazardous waste generated was far less than originally anticipated, the volume of low-level waste was almost double the original estimate.

Objective 3: Perform confirmation sampling in the trenches after wastes are removed. The confirmation data collected at MDA B for hazardous constituents demonstrates all sampling results are below the individual residential soil screening levels, except for two concentrations of arsenic. A statistical analysis of the arsenic site data compared with the applicable background data demonstrated that arsenic is not different from background. Only one sample for plutonium-239/240 in the top 10 ft exceeded a residential screening action level (SAL). The 95% upper confidence level for plutonium-239/240 is 17.2 pCi/g, which is well below the residential SAL of 33 pCi/g.

Excavation continued for radionuclides to achieve residential SALs until deeper excavation could not be performed because of safety and/or the practical limitations of slope lay-back requirements.

Objective 4: Prepare and implement a post-remediation sampling and analysis plan to define the nature and extent of any residual contamination. The post-remediation soil boring network consists of seven existing angled borings installed in October 1998 and two vertical soil borings installed in July 2011 as part of the scope for the investigation/remediation work plan. These data, combined with the confirmation sampling data and the MDA V soil-vapor monitoring results, demonstrate that the contaminants present in the waste disposed of at MDA B did not impact the surrounding environment.

If you have any questions, please contact Kevin Finn at (505) 660-7189 (kpfinn@lanl.gov) or Arturo Duran at (505) 665-7772 (arturo.duran@nnsa.doe.gov).

Sincerely,

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

Sincerely,

Pete Maggiore for George J. Rael

George J. Rael, Assistant Manager
Environmental Projects Office
Los Alamos Site Office

MG/GR/AC/KF:sm

Enclosures: Two hard copies with electronic files – Investigation/Remediation Report for Material Disposal Area B, Solid Waste Management Unit 21-015 (LA-UR-11-4845)

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
Arturo Duran, DOE-LASO, MS A316
Kevin Finn, EP-TA-21 Project, MS C348
RPF, MS M707 (electronic copy)
Public Reading Room, MS M992 (hard copy)

Cy: (Letter and CD and/or DVD only)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Candace Christensen, North Wind, Inc. (w/ MS Word files on CD)
William Alexander, EP-BPS, MS M992

Cy: (w/o enc.)
Tom Skibitski, NMED-OB, Santa Fe, NM (date-stamped letter emailed)
Annette Russell, DOE-LASO (date-stamped letter emailed)
Bruce Schappell, EP-TA-21 Project, MS M991 (date-stamped letter emailed)
Michael J. Graham, ADEP, MS M991 (date-stamped letter emailed)