Los Alamos
NATIONAL LABORATORY
EST. 1943

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

RECEIVED
NOV 2010
NMED Hazardous Waste Bureau

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

Date: NOV 29 2010
Refer To: EP2010-0517

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 Periodic Monitoring Report for Vapor-Sampling Activities at Material Disposal Area H, Solid Waste Management Unit 54-004, at Technical Area 54, Fourth Quarter Fiscal Year 2010

Dear Mr. Bearzi:

Enclosed please find two hard copies with electronic files of the Periodic Monitoring Report for Vapor-Sampling Activities at Material Disposal Area H, Solid Waste Management Unit 54-004, at Technical Area 54, Fourth Quarter Fiscal Year 2010.

The analytical results continue to confirm the presence of low concentrations of volatile organic compounds (VOCs) in pore-vapor samples. All VOCs detected during the fourth quarter of fiscal year (FY) 2010 as well as the previous eight quarters of sampling were at concentrations less than those needed to exceed groundwater screening levels (New Mexico Water Quality Control Commission). The most recent four quarters of data (for FY2010) have been collected using stainless-steel sampling systems. Previous sampling was performed with a Flexible Liner Underground Technology (FLUTe) sampling membrane.

A screening value is calculated to evaluate the potential for contamination of groundwater by VOCs in pore gas using risk-based screening levels (section 3.0 of the report). The highest screening value observed for FY2010 was 0.66 for bromodichloromethane. This contaminant was detected only during the first quarter sampling for borehole 54-15462 at depths of 62.5 ft and 152.5 ft. Bromodichloromethane was not detected in the previous four quarters, nor has it been detected since. The highest screening value for FY2009 was 0.45 for butanol [1-]. Butanol is consistently detected at Material Disposal Area (MDA) H, with a maximum screening value in FY2010 of 0.44. However, when the screening value is less than 1, the VOC in pore gas does not have the potential to exceed groundwater screening levels.

Given the consistently very low VOC concentrations detected in pore-gas samples collected over time, Los Alamos National Laboratory (the Laboratory) proposes to provide the first quarter FY2011 periodic monitoring report as scheduled in March 2011 and then move to an annual

sampling and reporting cycle to be performed in the first quarter of each fiscal year until the final remedy for MDA H is selected.

If you have any questions, please contact Jarrett Rice at (505) 665-3874 (wjrice@lanl.gov) or Suzy Schulman at (505) 606-1962 (sschulman@doeal.gov).

Sincerely,

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

Sincerely,

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

MG/GR/AB/JR:sm

Enclosures: Two hard copies with electronic files – Periodic Monitoring Report for Vapor-Sampling Activities at Material Disposal Area H, Solid Waste Management Unit 54-004, at Technical Area 54, Fourth Quarter Fiscal Year 2010 (LA-UR-10-7589)

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
Suzy Schulman, DOE-LASO, MS A316
Jarrett Rice, EP-TA-54 Closure Project, MS M991
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
Hai Shen, DOE-LASO, MS A316
Beth Norris, North Wind, Los Alamos, NM (w/MS Word files on CD)
William Alexander, EP-BPS, MS M992

Cy: (w/o enc.)
Tom Skibitski, NMED-OB, Santa Fe, NM
Annette Russell, DOE-LASO (date-stamped letter emailed)
Andy Baumer, EP-TA-54 Closure Project, MS C348 (date-stamped letter emailed)
Michael J. Graham, ADEP, MS M991 (date-stamped letter emailed)