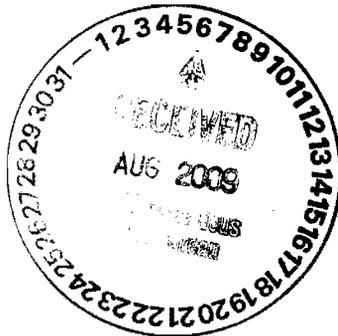


*Environmental Programs*  
P.O. Box 1663, MS M991  
Los Alamos, New Mexico 87545  
(505) 606-2337/FAX (505) 665-1812

TA49



*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:* August 5, 2009  
*Refer To:* EP2009-0368

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: Request for Deviations from the Approval with Modifications for the Investigation Work Plan for Sites at Technical Area 49 Outside the Nuclear Environmental Site (NES) Boundary**

Dear Mr. Bearzi:

The purpose of this letter is to request that New Mexico Environment Department (NMED) approve the following two deviations from the Approval with Modifications for the Investigation Work Plan for Sites at Technical Area 49 Outside the Nuclear Environmental Site Boundary.

- (1) Per Specific Comment 6 of the Approval with Modifications NMED letter, dated February 14, 2008, NMED directed Los Alamos National Laboratory (the Laboratory) to excavate test pits to determine the vertical and lateral extent of contamination at four existing trenches located west of Technical Area 49 (TA-49) Area 6. Based on the results of the archaeological assessment described below and in lieu of excavating test pits, the Laboratory proposes to document the assessment of the four trenches in an appendix to the investigation report.

On July 15, 2009, Laboratory personnel performed a field verification and preliminary archaeological survey of the four trenches. These four trenches are located in and around several archaeological sites, including Ancestral Pueblo habitation room blocks and fieldhouses and a homestead-era site. After examining the trench sites, the archaeologists concluded the trenches were probably dug by pot hunters scavenging the site for artifacts.

This conclusion is substantiated by historical photographs, as described in the historical investigation report (HIR) for TA-49 sites outside the nuclear environmental site boundary. The HIR states the trenches were not present in photographs taken in 1935 but were present in photographs taken in 1954 and in subsequent years. Activities first began at TA-49 in 1959. Thus, construction of the trenches predates activities at TA-49. It should be noted that during the 1995 Phase I Resource Conservation and Recovery Act (RCRA) facility investigation (RFI), a radiological survey was performed over the trenches, and a single auger hole was drilled through the bottom of three of the trenches. No contamination was detected, and no debris was found.



During the July 16, 2009, site visit of TA-49, Laboratory personnel provided NMED with information regarding the archaeological assessment. In lieu of additional excavation, NMED personnel recommended the inclusion of an appendix in the investigation report documenting the archaeological assessment. The Laboratory will include an appendix in the investigation report.

- (2) The approved work plan requires drilling four angled boreholes beneath Solid Waste Management Unit (SWMU) 49-004, an open burning/landfill area. However, the presence of overhead power lines precludes drilling on the east side of the SWMU. As discussed with NMED personnel during the July 16, 2009, site visit, the Laboratory proposes drilling four vertical boreholes through the center of the SWMU instead of using angled drilling techniques. A figure showing the proposed borehole locations is attached for NMED's review.

As required by the work plan, the boreholes will be continuously cored and field screened for radioactivity. Samples will be collected from the surface (0 to 6 in.), at the soil (fill)/tuff interface, from the tuff immediately below the soil (fill)/tuff interface, and at the total depth of the borehole. Each borehole will be advanced to a minimum depth of 10 ft below the base of the landfill.

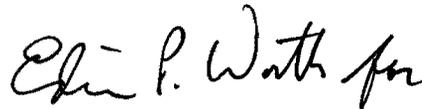
We appreciate the opportunity to visit the site with NMED and discuss the proposed deviations and actions required to successfully execute the work plan. If you have any questions, please contact Stephani Fuller at (505) 412-8937 (sfuller@lanl.gov) or Suzanne Schulman at (505) 606-1962 (sschulman@doeal.gov).

Sincerely,



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

Sincerely,

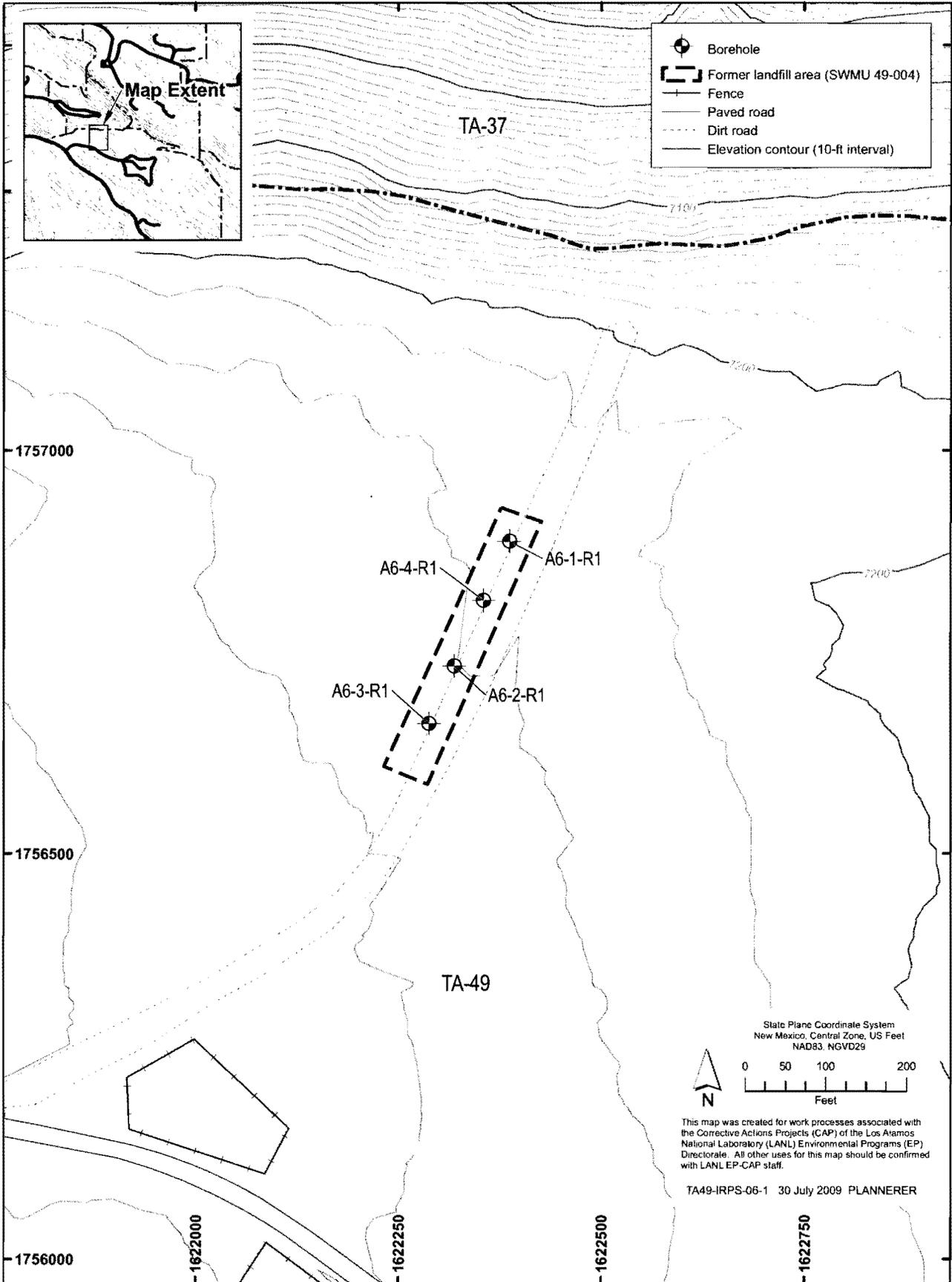


David R. Gregory, Project Director  
Environmental Operations  
Los Alamos Site Office

MG/DG/DM/SF:sm

Attachment: TA-49 Area 6 West proposed boreholes for SWMU 49-004 (LA-UR-09-4927)

Cy: Laurie King, EPA Region 6, Dallas, TX  
Steve Yanicak, NMED-OB, White Rock, NM  
Tom Skibitski, NMED-OB, Santa Fe, NM  
Keyana DeAgüero, DOE-LASO (date-stamped letter emailed)  
Suzy Schulman, DOE-LASO, MS A316  
Stephani Fuller, EP-CAP, MS M992  
Dave McInroy, EP-CAP, MS M992  
Michael J. Graham, ADEP, MS M991  
Alison M. Dorries, EP-WES, MS M996  
Kristine Smeltz, EP-WES, MS M992  
EP-CAP File, MS M992  
RPF, MS M707  
IRM-RMMSO, MS A150 (date-stamped letter emailed)



TA-49 Area 6 West proposed boreholes for SWMU 49-004