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State of New Mexico **ENTERED**  
ENVIRONMENT DEPARTMENT

*Hazardous Waste Bureau*

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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

May 22, 2017

Adam Kusmak  
Chief, Installation Management Flight  
49<sup>th</sup> CES/CEI  
550 Tabosa Avenue  
Holloman AFB, NM 88330

**RE: DISAPPROVAL  
TECHNICAL MEMORANDUM, LF029 OLD ARMY LANDFILL/SWMU 104,  
AUGUST 2016  
HOLLOMAN AIR FORCE BASE, EPA ID # NM6572124422  
HWB-HAFB-16-023**

Dear Mr. Kusmak:

The New Mexico Environment Department (NMED) has reviewed the above referenced document (the *Tech Memo*) submitted by Holloman Air Force Base (the Permittee) on August 26, 2016. NMED hereby issues this Disapproval with the following comment.

From the early 1950s to 1975 the U.S. Army disposed of spent munitions and missiles at LF029 (Solid Waste Management Unit [SWMU] 104). Site reconnaissance conducted during the 2006 supplemental site investigation, including a geophysical survey, revealed surface and shallow subsurface debris consisting of construction and aircraft debris, various munitions and explosives of concern (MEC) and various munitions debris (MD). MEC included missile parts and flare devices and the MD included biological and chemical warfare practice bomblets, which were proved to be inert.

Subsequent surface and shallow subsurface remedial activities have removed all potentially hazardous debris and compliance soil and groundwater sampling activities, including long-term groundwater monitoring between 1997 and 2005, have shown to NMED's satisfaction that historic disposal activities at LF029 have not, to this point, affected soil and groundwater quality. It should

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be noted, however, that a portion of a 1,2-dichloroethane groundwater contaminant plume is encroaching upon the southern section of LF029 from hydrogeologically upgradient site SS-61 to the southeast, which is still undergoing remedial investigation.

Of concern to NMED is that a non-invasive magnetic survey was conducted at LF029 during the 2006 supplemental site investigation and the February 2006 *Passive Soil Gas and Geophysical Survey Results Technical Memorandum* (Page 4-9, Section 4.3.7.2, Conclusions) presenting the results of this survey concluded that "magnetic surveying within the bermed area identified six large magnetic anomalies. It is unknown whether the anomalies represent debris buried beneath the surface debris". Page 6, Section 2.5.1 of the *Tech Memo* regarding the survey concluded that "seven distinct magnetic anomalies were identified at LF029, primarily within the central and north-central portion of the landfill. However, this study was performed prior to the clearance of surface debris, so interference from this material precludes the use of this study to confirm or evaluate the presence or absence of subsurface munitions and/or debris". Given this statement, there is the potential for the presence of subsurface MEC/Material Potentially Presenting an Explosive Hazard (MPPEH) and the six, or seven, subsurface anomalies have not yet been identified nor characterized.

The *Tech Memo* recommends that the potential presence of subsurface MEC/MPPEH be addressed through land use controls (LUCs) and long-term management. LUCs include engineering and institutional controls. Although not specifically requested in the *Tech Memo*, NMED interprets this to be a recommendation for a modification of the facility's Hazardous Waste Permit for the transfer of LF029 (SWMU 104) from the Permit's Appendix 4-A, Table A (*Summary of SWMUs/AOCs Requiring Corrective Action*) to Appendix 4-A, Table C (*Summary of SWMUs/AOCs With Corrective Action Complete With Controls*).

NMED has determined that the failure to identify and characterize the potentially hazardous subsurface anomalies results in the inability to effectively evaluate potential remedies. Therefore, without additional characterization of the subsurface anomalies, NMED cannot agree to transfer LF029 (SWMU 104) from Table A to Table C. NMED notes that surface and shallow subsurface clearance activities were conducted between June 2007 and August 2009. Since that time, there has apparently been no attempt to re-survey the site after the surface debris was removed. And since that time there has been considerable advancement in ground penetrating radar technology.

The Permittee must submit a Work Plan to positively identify and fully characterize the subsurface anomalies to NMED no later than **May 1, 2018**.

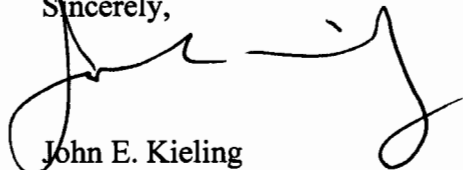
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If you have any questions regarding this letter, please contact Mr. David Strasser of my staff at (505) 222-9526.

Sincerely,



John E. Kieling

Chief

Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
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