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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 14, 2016

DeAnna M. Rothhaupt
Chief, Holloman AFB Environmental
49th CES/CEIE
550 Tabosa Avenue
Holloman AFB, NM 88330

**RE: APPROVAL WITH MODIFICATIONS
REMEDIAL INVESTIGATION REPORT, ABLE 51 AREA MUNITIONS
RESPONSE SITE (MRS) (XU854), POORMAN RANGE MRS (SR864),
BALLISTICS RAIN FIELD MRS (ML865), DEBRIS FIELD MRS (RR869A),
OCTOBER 2015
HOLLOMAN AIR FORCE BASE, EPA ID# NM6572124422
HWB-HAFB-15-016**

Dear Ms. Rothhaupt:

The New Mexico Environment Department (NMED) has reviewed the document: *Remedial Investigation Report, Able 51 Area Munitions Response Site (MRS) (XU854), Poorman Range MRS (SR864), Ballistics Rain Field MRS (ML865), Debris Field MRS (RR869a), Holloman Air Force Base, New Mexico, October 2015*, which was received on October 16, 2015. The Remedial Investigation (RI) Report is hereby approved with modifications described below.

Munitions Response Site (MRS) Able 51 Area (XU854), a 47.7 acre site, was not historically used as a range (no target area). The MRS was primarily used as a launch area for an array of historical missile testing programs and for the launch of manned and unmanned aircraft using rocket boosters. In addition, small arms ammunition and debris associated with recent training activities were located at XU854. A surface clearance and an investigation using Digital Geophysical Methods (DGM), including 11 transects and 12 grids, identified 509 anomalies. All 509 of the anomalies were intrusively investigated and 12 incremental soil samples were collected, and analyzed for perchlorate, explosives, nitrate and nitrocellulose. No munitions and explosives of concern (MEC) were detected and all munitions constituents (MC) detected were

less than the applicable residential soil screening levels. Thus, results indicate that XU854 does not present an unacceptable risk to human health or the environment for MEC and MC. No additional corrective action will be required to assess the presence of MC or MEC unless further information becomes available.

However, the RI Report documented the presence of at least six 25 – 30 gallon drums (not MEC) buried at XU854. A Technical Memorandum dated August 2015 detailing the removal of one of the drums and its surrounding soil and the sampling of its contents and the soil for a waste characterization profile revealed detectable levels of 2-butanone (MEK) and barium. The detected concentrations for both constituents were well below their respective characteristic hazardous waste levels and the material was declared non-hazardous waste and the drum and soils were disposed of as solid waste. An intrusive investigation of subsurface anomalies in the vicinity found five additional 25 – 30 gallon drums. The contents of one of these drums was sampled and the analytical results indicated the presence of butyl benzyl phthalate, a volatile organic compound, above screening levels. The five remaining drums and surrounding soil were left in place and the excavation was covered with plywood and surrounded by snow fencing pending further analytical results and a “determination of a path forward for the site”.

NMED has determined that XU854 is a Solid Waste Management Unit (SWMU) or Area of Concern (AOC), and that it is necessary to add the site to the list of SWMUs/AOCs in the Holloman Air Force Base (the Permittee) RCRA Facility Operating Permit (the Permit) that identifies SWMUs/AOCs requiring Correction Action (i.e., Table A of Permit Part 4, Appendix 4-A). The Permittee must submit a RCRA Facility Investigation Work Plan to NMED, prepared in accordance with Appendix 4-B of the Permit, to investigate and characterize the contents of the remaining drums and surrounding soil on or before June 30, 2016.

The Poorman Range MRS (SR864), a 22.8 acre site, was historically used as a range primarily for training using .50-caliber guns and ammunition including 25 gun placement stations. No free liquids were observed. A surface clearance was performed within 134 grid cells covering the entire footprint of the MRS. An investigation using DGM covered the entire site and identified 994 anomalies. All 994 of the anomalies were intrusively investigated and 3 composite incremental soil samples were collected, and analyzed for perchlorate, explosives, nitrate and nitrocellulose. No MEC was detected and all MCs detected were below soil screening levels. Eighteen surface soil samples were collected and analyzed for lead using X-Ray Fluorescence (XRF). Lead analysis results for the samples ranged from Non-Detect to a maximum of 25 mg/kg. No samples exceeded the human health screening level of 400 mg/kg. Eight surface and two subsurface soil samples were collected and analyzed for Polynuclear Aromatic Hydrocarbon (PAH) analysis. No results exceeded the human health screening level for PAHs. Thus, results indicate that SR864 does not present an unacceptable risk to human health or the environment for MEC and MC. NMED has determined that this site is not a SWMU or AOC, and that it is not necessary to add it to the list of SWMUs/AOCs in the Permit that identifies SWMUs/AOCs requiring Correction Action (i.e., Table A of Permit Part 4, Appendix 4-A).

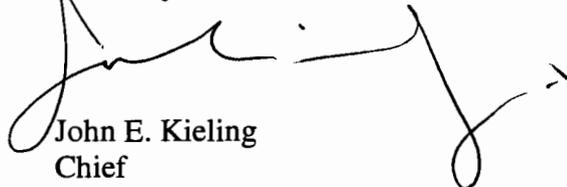
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The Ballistics Rain Field MRS (ML865), an 18.3 acre site, was historically used as a range primarily for testing the effects of rain on artillery including 20 millimeter (mm), 37 mm, 75 mm, 105 mm and 155 mm projectiles. Solid wastes have not been routinely and/or systematically released at the MRS. No free liquids were observed. A surface clearance was performed within 99 grid cells covering the entire footprint of the MRS. An investigation using DGM covered the entire site and identified 6,176 anomalies. Eight composite soil samples were collected, and analyzed for perchlorate, explosives, nitrate and nitrocellulose. No MEC was detected and all MC detected were less than the corresponding residential soil screening levels. The RI Report recommended that further intrusive investigation of all anomalies with responses above site-specific thresholds be conducted at the site. A report of this investigation must be submitted to NMED on or before July 30, 2016. After NMED has reviewed the report on that investigation a decision will be made as to whether further action is necessary to assess the presence of MC and MEC.

The Debris Field MRS (RR869a), a 3.5 acre site, was historically used as a range primarily for training using small arms ammunition, electric squibs, 2.75 and 5 inch rockets and hand grenades. In addition, debris consistent with a possible missile/drone crash were observed. . No free liquids were observed. A surface clearance was performed within 26 grid cells covering the entire footprint of the site. An investigation using DGM, covering the entire site, identified 339 anomalies. All 339 of the anomalies were investigated and 128 subsamples were collected, combined into six incremental soil samples, and analyzed for perchlorate, explosives, nitrate and nitrocellulose. No MEC was detected and all MC detected were at concentrations less than residential soil screening levels. The RI Report recommended that further intrusive investigation of all anomalies with responses above site-specific thresholds be conducted at the site. A report of this investigation shall be submitted to NMED on or before June 27, 2016. Based on review of the report on that investigation, NMED will determine whether further action to assess the presence of MC and MEC is necessary.

If you have any questions regarding this letter, please contact Mr. Brian Salem of my staff at (505) 222-9576.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
B. Salem, NMED HWB
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