



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 22, 2016

Ms. DeAnna Rothhaupt
Chief, Holloman AFB Environmental
49 CES/CEIE
550 Tabosa Avenue
Holloman AFB, NM 88330-8261

**RE: DISAPPROVAL
ACCELERATED CORRECTIVE MEASURES COMPLETION REPORT, SS-61
BUILDING 1001 FUEL SPILL SITE (AOC 1001), APRIL, 2015
HOLLOMAN AIR FORCE BASE, EPA ID # NM6572124422
HWB-HAFB-15-004**

Dear Ms. Rothhaupt:

The New Mexico Environment Department (NMED) has reviewed the above referenced document (the Report) submitted by Holloman Air Force Base (the Permittee) on April 13, 2015. The NMED has determined that the Permittee must address the following deficiencies of the Report.

1. The Report indicates that, as of April 2014, two ground water contamination plumes remain under, and extend beyond the boundaries of, site SS-61 (Area of Concern 1001) after corrective measures were deemed complete by the Permittee. A plume of benzene with concentrations in excess of action levels as specified in Appendix 4-F, Section III.1, *Ground Water Cleanup Levels*, of the facility's Hazardous Waste Permit (the Permit) remains under the central portion of the site. A plume of 1,2-dichloroethane (1,2-DCA) with concentrations in excess of action levels remains under the northwest corner of the site, with a majority of the plume extending to the northwest beyond the boundaries of the site.

In Section 2.10.2 of the Report, the Permittee contends that, because the monitoring wells (MWs) extending in a northerly direction from Dezonía Rd. past Building 1001 have total dissolved solids (TDS) concentrations in excess of 10,000 milligrams per liter (mg/L), they exceed the New Mexico Water Quality Control Commission (NMWQCC) limit as potable

water and thus, the ground water is designated as unfit for human consumption. NMED notes that, as per 20.6.2.3101 NM Administrative Code (NMAC), the NMWQCC standards for maximum allowable concentrations of contaminants are to be applied to ground water with TDS at a concentration of 10,000 mg/L or less. These MWs are located within the 1,2-DCA plume.

The Permittee also contends that the MWs extending in an east-west direction along Dezonía Rd. have TDS concentrations of less than 10,000 mg/L that is caused by dilution of the natural groundwater from leaking underground waterlines extending along Dezonía Rd.; otherwise, TDS concentrations in these MWs would exceed 10,000 mg/L. These MWs are located within the benzene plume. Pursuant to 20.6.2.3101 NMAC, the benzene concentrations in ground water at this location exceed the maximum allowable concentrations for ground water with less than 10,000 mg/L of TDS and the Permittee's assertion that this lower TDS concentration is caused by dilution of the natural groundwater from leaking underground waterlines extending along Dezonía Rd. was not supported with any corroborating evidence in the Report.

As part of the Report's human health risk assessment, Table 7-4(b), *Exposure Model for Future Resident*, under "Routes of Exposure", it shows the "Ingestion of ground water due to domestic use of ground water" as an incomplete exposure pathway. The justification for this finding was that ground water is non-potable because TDS is greater than 10,000 mg/L.

To obtain NMED's concurrence with the Permittee's assertion as to the reason for the lower TDS concentrations in the vicinity of waterlines, the Permittee must submit a work plan to provide evidence corroborating this assertion. Examples of this evidence would be providing soil boring logs for boreholes advanced in close proximity to the waterlines showing wet soils in the vicinity of the water lines, moisture content in soils at and below the depths of the waterlines that are significantly greater than the soil moisture content observed in soil samples collected from previous soil borings located farther from the water lines, water supply records showing unexplained losses of water, or some sort of visual evidence.

2. Ground water contaminated with high levels of 1,2-DCA is frequently associated with 1,2-dibromoethane (EDB). Laboratory analytical summaries provided in the Report indicated that EDB was not detected above the method detection limit (MDL) in any of the ground water samples. However, the laboratory indicates that the MDL for EDB utilizing Environmental Protection Agency (EPA) sampling method 8260B is 0.24 micrograms per liter ($\mu\text{g/L}$). As per the Permit, the action level for EDB, the EPA's Maximum Contaminant Level (MCL), is 0.05 $\mu\text{g/L}$. Therefore, the MDL is almost five times higher than the MCL.

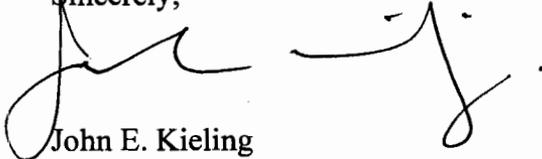
To address this discrepancy, the Permittee must submit a work plan to conduct two additional quarters of ground water sampling at all existing 23 MWs at the site utilizing EPA Method 8011 to detect any EDB concentrations that may be present in ground water at concentrations less than 0.24 $\mu\text{g/L}$ (the previous MDL). The MDL for EPA Method 8011 is calculated to be 0.01 $\mu\text{g/L}$. These water samples must also be analyzed for other volatile organic compounds

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utilizing EPA Method 8260B, as well as for TDS.

The work plan required under this letter must be provided to the NMED on or before **May 16, 2016** in the form of two paper copies and one electronic copy (in MS Word/ EXCEL™ format). If you have any questions regarding this matter, please contact Mr. David Strasser of my staff at (505) 222-9526.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and a long horizontal stroke.

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
C. Amindyas, NMED HWB
D. Strasser, NMED HWB
C. Hendrickson, EPA-Region 6 (6PD-N)
L. King, EPA-Region 6 (6PD-N)
C. Schick, HAFB

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