



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT



Hazardous Waste Bureau

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



DAVE MARTIN
Secretary

BUTCH TONGATE
Deputy Secretary

THOMAS SKIBITSKI
Acting Director
Resource Protection Division

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 18, 2013

Colonel John Kubinec
Base Commander
377 ABW/CC
2000 Wyoming Blvd. SE
Kirtland AFB, NM 87117-5606

John Pike
Director, Environmental Management Services
377 MSG
2050 Wyoming Blvd. SE, Suite 116
Kirtland AFB, NM 87117-5270

**RE: DISAPPROVAL
LONG-TERM GROUNDWATER MONITORING SUMMARY REPORT,
FISCAL YEAR 2010, AUGUST 2011, AND LONG-TERM GROUNDWATER
MONITORING SUMMARY REPORT, FISCAL YEAR 2011, JUNE 2012
KIRTLAND AIR FORCE BASE
EPA ID# NM9570024423
HWB-KAFB-11-015 and HWB-KAFB-12-028**

Dear Col. Kubinec and Mr. Pike:

The New Mexico Environment Department (NMED) has reviewed the U.S. Air Force (Permittee) documents: *Environmental Restoration Program Long-Term Groundwater Monitoring Summary Report, Fiscal Year 2010, August 2011*, received September 28, 2011, and *Long-Term Groundwater Monitoring Summary Report, Fiscal Year 2011, June 2012*, received August 29, 2012. The NMED has identified deficiencies which are enumerated below. NMED's comments are based on the Fiscal Year (FY) 2011 report and also apply to the corresponding portions of the Fiscal Year 2010 report.

Figures 2-1, Regional Groundwater Elevation Map and 2-2, Perched Zone Groundwater Elevation Map

1. The regional water-level contours in the northwest corner of Figure 2-1 do not agree with those shown on Figure 5-2 of the *Quarterly Pre-Remedy Monitoring and Site-Investigation Report for July-September 2012, Bulk Fuels Facility Spill, Solid Waste Management Units*

KAFB4040



ST-106 and SS-111, December 2012 (Figure 5-2). For example, the 4850 feet (ft) elevation contour on Figure 2-1 passes southeast of the intersection of Louisiana and Randolph, whereas on Figure 5-2 the 4858 ft contour is shown at this location. Additionally, the 2-ft difference in water-levels noted for KAFB-0510 between the two reports is another example of unacceptable significant discrepancy. Disagreement among site-specific and base-wide water-level maps and problems with the Permittee's monitoring well construction database have been noted by the NMED regarding other Kirtland Air Force Base (KAFB) documents. It is imperative that various site-specific water-level maps are accurate and correlate with each other and with base-wide maps to demonstrate that KAFB understands groundwater movement on and near the Facility. Therefore, KAFB must reconcile the incongruities amongst water-level maps in the various reports prepared for the Facility. Revise Figure 2-1 in the FY2011 report or Figure 5-2 as necessary to correct the discrepancies.

2. The Permittee's base-wide regional and perched-zone water level maps (Figures 2-1 and 2-2, respectively) do not cover the entire Facility. Water level data are available from other wells located on and near KAFB, including those belonging to the City of Albuquerque and Sandia National Laboratories. Revise Figures 2-1 and 2-2 in the FY2011 report to include all of KAFB.

SWMU WP-026, Golf Course Main Pond

3. Figure 3.1 – The perched groundwater elevation contours shown on Figure 3-1 indicate flow to the southwest; whereas, water elevation contours depicted in Figure 2-2 indicate groundwater flow is to the east. Revise both figures in the FY2011 report as necessary to correct the discrepancy.

4. Section 3.4

- a. Of the four monitoring wells used to draw the groundwater elevation map, one (KAFB-0602) is no longer measured due to fluctuating and falling head, and two others (KAFB-0609 and -0610) are used as extraction wells to remediate nitrate-contaminated groundwater. Only one well, KAFB-0608, is capable of producing accurate water-level data. The Permittee shall provide an explanation as to how water-level data from an unused well and the two extraction wells are used to generate accurate potentiometric surface maps.
- b. The Permittee states in the third paragraph of Section (3.4) that water levels were last measured in KAFB-0602 in June 2008. However, Figure 3-2 shows water-level elevation plots for this well beginning again in 2011. Submit this water-level data to NMED in the revised FY11 Report.

SWMU WP-026, Sewage Lagoons

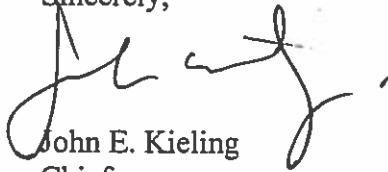
5. The Permittee shall provide explanation as to why KAFB-2625 (TDS=570ppm, NO₃=1.9ppm and 1,1-dichloroethane=4.1ppb, TCE=4.4 ppb [FY2010 data]) is not used as the background monitoring well as it appears on Figure 4-2 that the designated background well, KAFB-0506, is partially downgradient of the lagoons., Well KAFB-506 appears to be impacted by sewage effluent, because groundwater samples collected from the well contain elevated TDS (730ppm) and NO₃ (3.4ppm) and lower concentrations of VOCs (1,1-dichloroethane=2.5ppb, TCE=1.8 ppb [FY2010 data]) in comparison with KAFB-2625.

Figure 5-1, SWMU 6-30, Radioactive Burial Site 11 (RW06)

6. Explain why the 4,930 ft, 4,940 ft and dashed 4,950 ft regional groundwater elevation contours shown on Figure 5-1 are not also shown on Figure 2-1. Revise the two figures in the FY2011 report to correct any discrepancy.

A revised report must be submitted by no later than **April 19, 2013**, that corrects the above noted deficiencies. If you have any questions regarding this matter, please contact Mr. William McDonald of my staff at (505) 222-9582.

Sincerely,



John E. Kieling
Chief

Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
W. Moats, NMED, HWB
W. McDonald, NMED, HWB
L. King, EPA-Region 6 (6PD-N)
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