



**NEW MEXICO  
ENVIRONMENT DEPARTMENT**



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TOM BLAINE, P.E.  
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Environmental Health Division

May 12, 2014

Colonel Tom D. Miller  
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: KIRTLAND AIR FORCE BASE - AIR SPARGE AND SOIL-VAPOR  
EXTRACTION PILOT IMPLEMENTATION WORK PLAN  
BULK FUELS FACILITY SPILL  
SOLID WASTE MANAGEMENT UNITS ST-106 AND SS-111  
KIRTLAND AIR FORCE BASE  
EPA ID# NM9570024423, HWB-KAFB-14-008**

Dear Colonel Miller and Mr. Pike:

The New Mexico Environment Department (NMED) has reviewed the U. S. Air Force (Permittee) document titled *Kirtland Air Force Base – Air Sparge and Soil – Vapor Extraction Pilot Implementation Work Plan* (Work Plan) dated and sent by email on May 8, 2014 and received May 9, 2014. NMED provides the following comments that must be addressed during implementation of the Work Plan.

1. Based on the well construction diagram and the estimated depth to groundwater provided in the Work Plan, the water table is approximately 12 feet above the top of the screen in well KAFB 10617. Therefore, the Permittee must install a monitoring well no more than 20 feet downgradient from the proposed sparge/ soil vapor extraction (SVE) well that is screened across the water table to more effectively monitor the effects of air sparging.
2. The screened interval in the newly installed SVE well must be no more than 30 feet in length and extend to 10 feet above the water table.
3. Baseline vapor measurements of percent oxygen and carbon dioxide and VOCs must be collected from the well casings of the newly installed soil vapor extraction (SVE) well and well KAFB 10617 and the newly installed monitoring well, required by Item 1 above

(MW), after appropriate purging is conducted. In addition, the same measurements must be collected from the SVE well after the proposed vacuum is applied but before air is injected into the newly installed sparge well.

4. Add diesel-range organics (DRO) by modified EPA Method 8015 to the groundwater sample analytical suite. In addition, add gasoline-range organics (GRO) by modified EPA Method 8015 to the groundwater sample analytical suite for groundwater samples collected during system operation.
5. Measure ambient air pressure/vacuum in the newly installed SVE well, the MW and KAFB 10617 prior to the start of any applied vacuum or air injection and include collection of barometric data for all monitoring events.
6. Record the injection pressure (sparge well) and applied vacuum (SVE well) during all monitoring events and measure pressures/vacuums in well KAFB 10617 and the MW during each monitoring event.
7. Collect all data that will be collected during baseline sampling 30 days after discontinuation of operation of the SVE/Sparge system pilot test.

While NMED may not agree with all assertions made by the Permittee in the Work Plan; the technical approach that the Permittee has described is acceptable and the Permittee is hereby authorized to proceed with implementation in accordance with the schedule provided in the Plan. The Permittee must provide summaries of 1) all activities conducted, 2) field measurements and observations, and 3) available analytical results by email on a monthly basis to NMED's Hazardous Waste Bureau by the 15<sup>th</sup> of each month beginning on July 15, 2014. The Permittee also must submit a report to NMED summarizing the results of all activities conducted during the pilot test within 90 days of discontinuation of operation of the SVE/Sparge system but no later than January 31, 2015 as proposed.

Should you have any questions, please contact me at (505) 827-2855.

Sincerely,



Tom Blaine, P.E.  
Director  
Environmental Health Division

cc: J. Lanning, KAFB  
L. Bitner, KAFB  
B. Gallegos, AEHD  
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File: KAFB 2014 Bulk Fuels Facility Spill - SWMUs ST-106 and SS-111