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RYAN FLYNN  
Cabinet Secretary  
BUTCH TONGATE  
Deputy Secretary

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

September 15, 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: INTERIM GROUNDWATER LNAPL REMEDIATION,  
BULK FUELS FACILITY SPILL  
SOLID WASTE MANAGEMENT UNITS ST-106 AND SS-111  
KIRTLAND AIR FORCE BASE  
EPA ID# NM9570024423, HWB-KAFB-14-MISC**

Dear Colonel Miller and Mr. Pike:

The New Mexico Environment Department (NMED) has evaluated your July 29, 2014 outline for a proposed air-sparge pilot test that would be installed within the area where light non-aqueous phase liquid (LNAPL) is submerged in groundwater. Your proposal is to:

- Utilize core samples from wells drilled in the upcoming soil-vapor extraction (SVE) expansion to identify areas where LNAPL is submerged in groundwater;
- Confirm the presence of LNAPL in core samples using photoionization and ultraviolet screening instruments;
- Install 3 PVC air-sparge wells, screened completely below the zone of drowned LNAPL, each designed to receive up to 25 cubic feet per minute of air, in areas with confirmed LNAPL;
- Install 4 groundwater monitoring wells around each sparge well (a total of 12 monitoring wells) each with 20 feet of well screen (approximately 12 feet above the water table, and 8 feet below the water table); and
- Install all SVE wells utilizing 6 inch PVC casing.

The existing air sparge technology that was installed to meet the June 30<sup>th</sup> deadline is providing useful information on the application of this technology in the regional aquifer, and on the effectiveness of removing the dissolved constituents emanating from the LNAPL. The proposed

strategy will allow evaluation of directly removing the submerged LNAPL from the subsurface. NMED strongly supports your efforts to develop a formal work plan for this interim measure.

Your proposed outline is hereby approved with the condition that the Permittee shall submit a formal workplan, subject to NMED approval, that includes the following provisions:

1. The work plan shall include more specific information on core sample collection and preservation, drilling method, and well completion details, field screening techniques, and specifications on the compressor, blower, piping, power source and management of investigation derived waste.
2. The work plan shall provide that all monitoring well drilling and installation shall be overseen by a person with extensive experience in supervising drilling activities, interpreting and cataloging drill cuttings and core samples, preserving intact core samples for geochemical, mineralogical, and contaminant distribution analyses, and in preparing detailed lithologic-hydrostratigraphic well logs. This person also shall record all relevant information obtained during drilling including drillers comments on the earth material encountered in the boring, description of core hammer and type of coring device used, blow counts during coring, and amount of material recovered during drilling and coring.
3. The work plan shall acknowledge that all field work shall be done in conformance with Section 6.5 of the Permit.
4. The work plan shall acknowledge that NMED staff may make unannounced site visits and inspections of field notes, drill cuttings and core samples. The work plan shall specify reasonable site health and safety requirements imposed by the Permittee or the Permittee's contractors upon NMED staff who may make site visits and inspections.

NMED reserves the right to require the installation of additional sparge and vent wells if necessary to accomplish effective LNAPL remediation.

NMED technical staff will assist you and your contractor in any way possible to achieve this interim measure.

Please submit the proposed interim LNAPL remediation work plan by October 10, 2014.

If you have any questions, please contact me at 505-827-2855.

Sincerely,



Tom Blaine, P.E.  
Director  
Environmental Health Division

Col. Miller and Mr. Pike  
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TB/DM

cc: Col. T. Haught, KAFB  
D. Wilson, KAFB  
B. Gallegos, AEHD  
F. Shean, ABCWUA  
L. King, EPA-Region 6 (6PD-N)

File: KAFB 2014 Bulk Fuels Facility Spill and Reading

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