

KAFB



DEPARTMENT OF THE AIR FORCE
377th Civil Engineer Division (AFMC)
OVERNIGHT DELIVERY



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SUBJECT: Addendum to the Stage 2 Abatement Plan Modification (ST-106), Bulk Fuels Facility, Kirtland Air Force Base (KAFB), NM

1. The Environmental Management (EM) Branch at KAFB is submitting the subject addendum, which consists of a letter workplan as proposed in the Stage 2 Abatement Plan Modification. The addendum proposes additional investigation on the East Side of the Kirtland AFB Bulk Fuels Facility.
2. If you have any questions, please do not hesitate to contact Mark Holmes at (505) 846-9005.

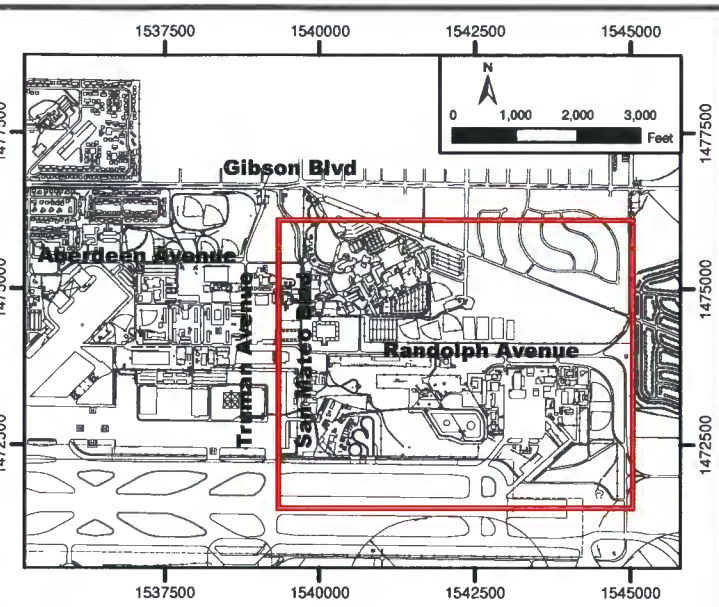
CARL J. LANZ, P.G., YF-02
Chief, Restoration Section

Attachment:




1. Addendum to the Stage 2 Abatement Plan Modification, Bulk Fuels Facility

KAFB3138

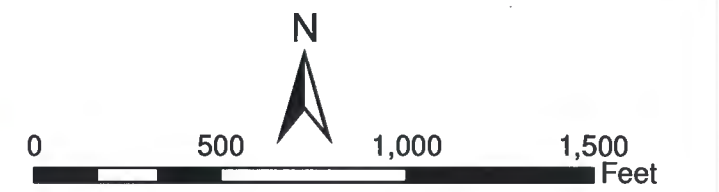




LEGEND

-  Groundwater production well
-  Groundwater monitoring well
-  Proposed groundwater monitoring well

1541850  NM Central State Plane Feet, NAD 83



Kirtland AFB Stage 2 Abatement
Plan Modification Addendum
Kirtland AFB Bulk Fuels
Storage Facility (ST-106)

Figure 1

Location of Proposed Groundwater
Monitoring Well at the Kirtland AFB
Bulk Fuels Storage Facility (ST-106)

Revision Date: 16 October 2007

ATTACHMENT

Stage 2 Abatement Plan Modification Addendum, Bulk Fuels Facility (ST-106), Kirtland Air Force Base (AFB), New Mexico

1. This Addendum summarizes the activities that will be completed in response to the recommendations presented in the *Stage 1 Abatement Plan Report, East Side of the Kirtland AFB Bulk Fuels Facility* (USAF, 2006). The activities will include additional investigation of soil, soil vapor, and groundwater beneath primary fuel-storage Tank 2422 located on the eastern side of the Bulk Fuels Facility. This document is considered an addendum to the *Stage 2 Abatement Plan Modification* dated August 1, 2007 (USAF, 2007). The *Plan Modification* briefly described these additional activities although at the time that document was published funding to support the field activities had not been secured by Kirtland AFB. As a result the *Plan Modification* indicated that a letter-type addendum would be prepared to supplement the original document and more specifically describe the proposed activities. This submittal constitutes that addendum.
2. In the fall of 2005 a direct push drilling investigation of several areas located on the east side of the Bulk Fuels Facility was conducted. The investigation included advancing boreholes adjacent to the two large aboveground storage tanks at the facility. One of the boreholes, installed adjacent to Tank 2422, displayed contamination at the maximum depth the borehole was able to be advanced prior to refusal. The detected petroleum hydrocarbon concentrations (1,800 mg/kg diesel range organics [DRO] and 1,100 J mg/kg gasoline range organics [GRO]) along with detectable concentrations of several fuel-related volatile organic compounds (VOCs) at the maximum depth of 25 to 27-ft below ground surface (bgs) indicated that vertical soil impacts were not delineated. The recommendation of the *Stage 1 Abatement Plan Report, East Side of the Kirtland AFB Bulk Fuels Facility* was further investigation of this area of the facility to assess the vertical extent of soil contamination. Since the time that recommendation was made, additional investigation at the site has revealed the presence of phase-separated hydrocarbon (PSH) on the groundwater in well KAFB-1066 as discussed in detail in the main body of the *Stage 2 Abatement Plan Modification* dated August 1, 2007. Due to the PSH discovery and remaining data gaps regarding other possible PSH sources on the east side of the Bulk Fuels Facility the recommendation for the activities at the Tank 2422 area has been modified.

It is currently recommended that the proposed borehole adjacent to Tank 2422 be advanced to the groundwater table and completed as a groundwater monitoring well. Installation of a groundwater monitoring well at this location will provide a complete assessment of possible contamination in the vadose zone as well as a valuable groundwater monitoring data point. The final decision to complete the Tank 2422 boring as a groundwater monitoring well will be dependant on the findings at one of the other proposed boring/well locations, KAFB-1066. The rationale and installation details for KAFB-1066 are discussed in detail in the main body of the *Stage 2 Abatement Plan Modification*. As the KAFB-1066 investigation activities proceed Kirtland AFB will discuss the field data and findings with New Mexico Environment Department (NMED)-Ground Water Quality Bureau (GWQB) staff and the final installation details for the Tank 2422 location will be agreed upon.

3. Figure 1 presents the proposed location for installation of the soil boring/monitoring well in the Tank 2422 area. The final groundwater monitoring well designation has not been determined and will be contingent on the progression of other monitoring wells that will be installed during the same field mobilization. Anticipated investigation activities for the area adjacent to Tank 2422 are briefly described in the following sections. Overall, sample collection and well installation techniques will utilize the same field procedures outlined in Section 3.3.1.1 of the *Plan Modification*.
- The borehole will be installed using the downhole air rotary casing hammer (ARCH) drilling technique. Soils will be geologically logged at 10-ft intervals from either split spoon samples or returned drill cuttings by the onsite hydrogeologist. During drilling operations, subsurface soils will be collected every 20-ft using a split spoon sampler for a total of roughly 24 split spoon