



SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

NEW MEXICO  
ENVIRONMENT DEPARTMENT



ENTERED



*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](http://www.nmenv.state.nm.us)

DAVE MARTIN  
Cabinet Secretary

BUTCH TONGATE  
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 1, 2012

Colonel David C. Piech  
27th Special Operations Mission Support Group  
110 E. Sextant Avenue, Building 600, Suite 1098  
Cannon Air Force Base, New Mexico 88103

**RE: APPROVAL WITH MODIFICATIONS  
FINAL, SAMPLING AND ANALYSIS PLAN  
(FIELD SAMPLING PLAN / QUALITY ASSURANCE PROJECT PLAN)  
REMEDIAL ACTION CONSTRUCTION AT SWMU 109  
CANNON AIR FORCE BASE, NEW MEXICO  
EPA ID # NM7572124454  
HWB-CAFB-11-006**

Dear Col. Piech:

The New Mexico Environment Department (NMED) has reviewed Cannon Air Force Base's (Permittee's) *Final, Sampling and Analysis Plan (Field Sampling Plan / Quality Assurance Project Plan)* dated November 2011 (Work Plan), for construction at SWMU 109. NMED hereby issues this Approval with the following modifications.

**COMMENTS:**

**Comment 1**

The Work Plan is in the form of a Quality Assurance Project Plan (QAPP). The Permittee is reminded that NMED does not review or approve QAPPs. NMED has only reviewed the technical aspects of the Work Plan. Approval of this Work Plan does not constitute approval of the entire QAPP. In future work plan submittals to NMED all relevant information contained in the QAPP must be included in the body of a work plan.

**Comment 2**

**Attachment 3 – Standard Operating Procedures;** The Permittee must remove Standard Operating Procedures (SOPs) in all future Work Plans submitted to NMED. The Permittee is reminded that NMED does not review SOPs and did not review the SOPs presented in the Work Plan. In all future work plans the Permittee must provide descriptions of proposed procedures, specific field methods and specific equipment to be used in the execution of the work plan, including copies of field forms that will be used, in the appropriate section(s) of the work plans. The Permittee must also fully describe all site specific procedures, specific field methods and specific field equipment as executed and used during field activities in the appropriate sections of the report.

**Comment 3**

In the **Executive Summary, page 3, fourth paragraph** The Permittee states “[s]oils with TPH-DRO concentrations greater than 940 milligrams per kilogram (mg/kg) will be considered for removal. The New Mexico Environment Department (NMED) has established this concentration as the clean-up criteria.” NMED updated the soil screening guidance (SSG) in February 2012. Permittee is directed to use updated soil screening levels (SSLs) provided in Table A-1 (NMED Soil Screening Levels) of the NMED *Risk Assessment Guidance for Site Investigations and Remediation* February 2012. A copy of this document can be found on NMEDs website:

<http://www.nmenv.state.nm.us/HWB/guidance.html>

Changes to the SSG include updated soil SSLs using new toxicity data and adding mutagenicity. In addition, the Total Petroleum Hydrocarbon (TPH) and the Polychlorinated Biphenyl (PCB) guidance are now combined with the SSG, which replaces the individual documents. The most recent version of the SSG must now be used in the evaluation of site data instead of the NMED 2009 version.

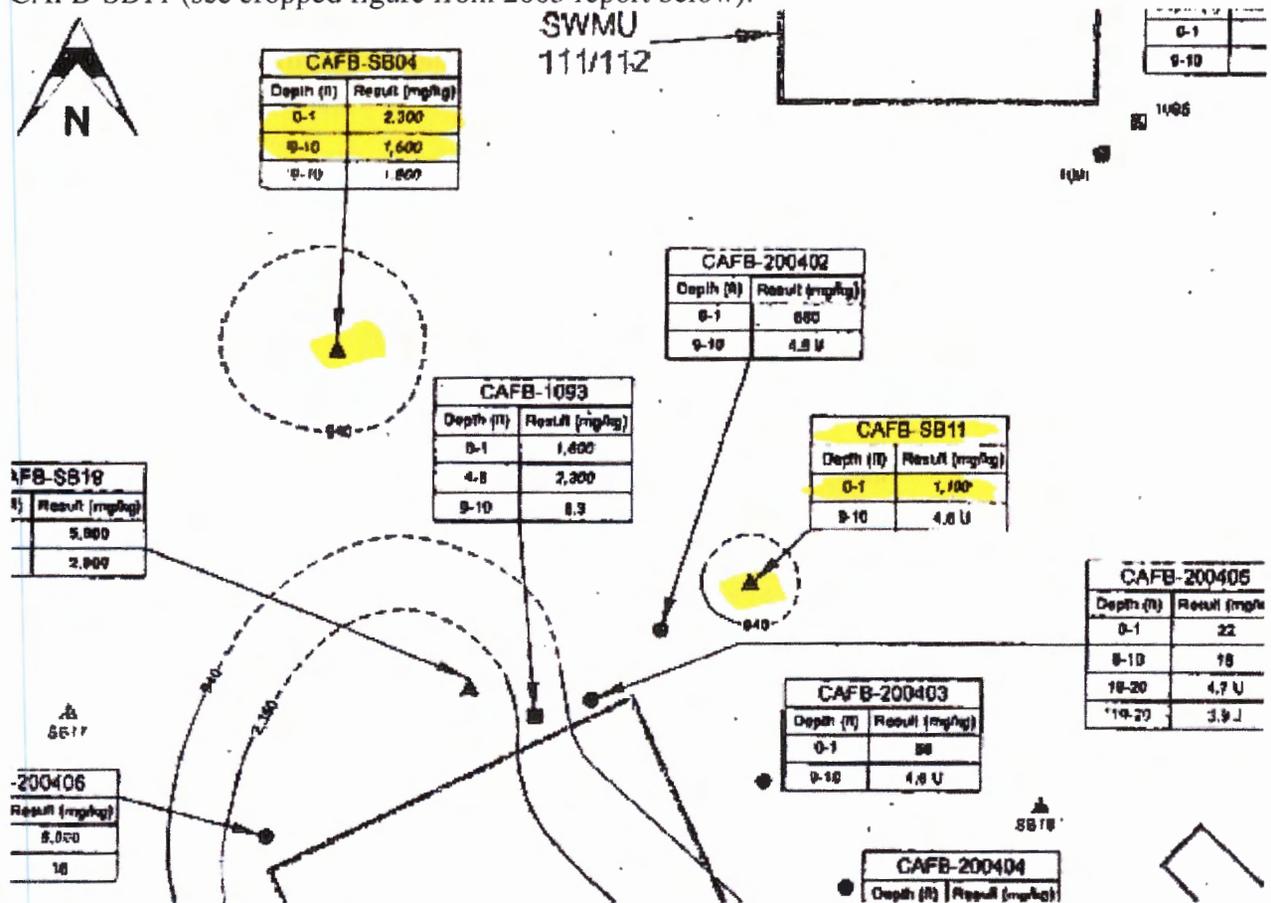
**Comment 4**

In the **Executive Summary, Project History, page 3** the Permittee states “[a]pproximately 3,000 to 4,000 gallons of fuel were released to the ground surface as a result of fire training exercises from 1974 to 1975.” This is inconsistent with the site history presented in CAFB’s 2005 “*Phase I Investigation, Soil Corrective Measures, Fire Training Area 04*” report which states in section 2.1 Site Background “SWMU-109 was used as a fuel truck cleaning area between 1961 and 1974. An estimated 3,000 to 4,000 gallons of fuel percolated into the ground as a result of these activities...[i]n 1974 the...site was activated as a fire training area. [c]omingled waste oils, solvents, and recovered [j]et [p]ropellant 4 (JP-4) were burned during fire training exercises conducted from 1974 to 1975.”

Due to the historical presence of unidentified fuels, waste oils, and solvents at the site the Permittee must analyze soil samples for the full range of TPH; gasoline range organics (GRO), diesel range organics (DRO) and residual range organics (RRO) using EPA Method 8015B and analyze five of the most contaminated soil samples, based on field screening, for volatile organic compounds using EPA Method 8260 full list.

**Comment 5**

Figure 3, Sample Locations with Results, included in Cannon Air Force Base's (CAFB) 2005 "Phase I Investigation, Soil Corrective Measures, Fire Training Area 04" report depicts soil contamination exceeding current NMSSLs (see Comment 3) at locations CAFB-SB04 and CAFB-SB11 (see cropped figure from 2005 report below).



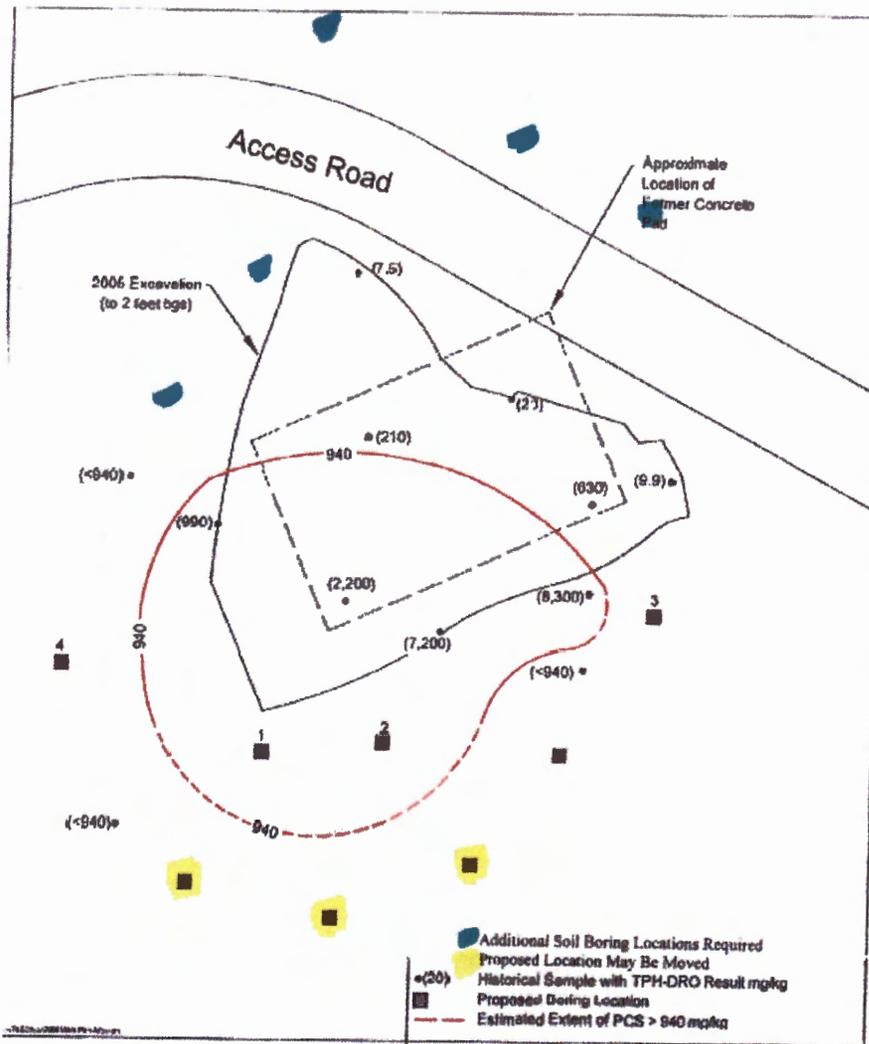
**Comment 6**

A telephone conference on May 23, 2012 between NMED the Permittee have revealed that soil investigation and excavation activities were conducted at SWMU-109 in 2009 to satisfy the requirements of the approved October 2006 *Accelerated Corrective Measures Work Plan for Removal of Contaminated Soil at SWMU 109 Fire Training Area No. 4 (FTA-4)*. A Report summarizing the results from these activities was not submitted to NMED. Based on conversations with the Permittee it appears that preliminary results from the 2009 soil investigation and excavation activities indicate that removal of additional contaminated soil is necessary. The results of the 2009 soil investigation and excavation activities must be incorporated into the report that will summarize the implementation of this Work Plan.

**Comment 7**

The results of excavation activities conducted at SWMU-109 in March 2005 are included in CAFB's 2005 "Voluntary Corrective Measures Report Fire Fighting Training Area No. 4 (FTA-04)" report. The report indicates that the soil removal action did not include the soil contamination in the vicinity of CAFB-SB04 and CAFB-SB11. **Figure 4, FT-C109 Conceptual Site Model** included in the Work Plan does not present the historical sampling locations for CAFB-SB04 and CAFB-SB11. The proposed excavation area presented in **Figure 5, Site Layout** of the Work Plan does identify soil contamination north of the previous excavation at SWMU-109 (see cropped Figure 4 from Work Plan below).

The Permittee must advance five additional soil borings to delineate soil contamination north of previous excavation boundaries. Locations for additional soil boring locations are depicted in the figure below.



**Comment 8**

**QAPP Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements, How much data should be collected, page 26, first paragraph** states "Eight soil borings are proposed to identify the TPH-DRO contamination and characterize the lateral and vertical extent of [contamination]" and **Figure 4, FT-C109 Conceptual Site Model** depicts the locations of eight soil borings to be installed. The proposed soil boring locations are in an area where according to telephone communications with the Permittee, the 2009 soil excavation activities have removed all contaminated soil as confirmed by analytical sampling activities. The Permittee may move the three proposed soil borings shown below to the area north of the previous excavation (see comment 7).

**Comment 9**

In the **Executive Summary, page 3, first paragraph** the Permittee states "[s]idewall confirmation samples will be collected at a frequency of one per 100 linear feet." The Permittee is directed to collect sidewall confirmation samples at a frequency of one per 30 linear feet or a minimum of two per excavation sidewall.

**Comment 10**

In the **Executive Summary, page 3, fourth paragraph** the Permittee states "Samples from the soil stockpile containing TPH-DRO greater than 940 mg/kg [see comment 3] will be collected and submitted to an off-site laboratory for chemical analysis." In the report the Permittee must specify which waste characterization analyses were conducted and present the results in the appropriate section of the report.

**Comment 11**

In the **Executive Summary, page 3, fourth paragraph** the Permittee states "Based on the results, AFCEE [Air Force Center for Engineering and the Environment] contractor responsible for transport and disposal will characterize the waste and select an appropriate landfill based on the waste profile." In the report the Permittee must provide details regarding waste disposition, including, but not limited to, the name of the AFCEE contractor, name of the offsite landfill, characterization sample chemical analytical results, and waste manifests.

**Comment 12**

**In QAPP Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements, page 27, first paragraph** the Permittee states "[t]he analytical results associated with the pre-excitation samples will be submitted in a Technical Memorandum to AFCEE and regulatory agencies for review prior to excavation." NMED requires a status report on soil assessment activities which must include (but is not limited to) a detailed description of field activities performed, results of field screening and chemical analyses, and figures which depict soil boring locations as well as the contaminant plume boundary. The status report must provide a discussion of proposed excavation activities to be performed as a result of the soil assessment. Written approval from NMED for the status report is required before commencement of soil

Colonel David C. Piech  
June 1, 2012  
Page 6 of 6

excavation activities to try to avoid the need for remobilization to the site to remove additional contaminated soil.

**Comment 13**

NMED understands that the Permittee may not be able to execute all of the requirements of this letter due to contractual constraints (see comment 6). If the Permittee is unable to implement the modifications to the Work Plan as outlined in this letter the Permittee must state the reasons for not doing so in the report along with proposed actions to complete the approved work.

No response to this letter is necessary. If you have questions regarding this Approval with Modifications please contact Lane Andress of my staff at (505) 476-6059.

Sincerely,



John E. Kieling  
Bureau Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
N. Dhawan, NMED HWB  
L. Andress, NMED HWB  
R. Lancaster, CAFB  
M. Higginbotham, CAFB  
A. Lafuente, CAFB  
L. King, EPA 6PD-N

File: CAFB 2012 and Reading  
CAFB-11-006