



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

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



RYAN FLYNN
Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 30, 2015

Colonel Douglas W. Gilpin
Commander, 27th Special Operations
Mission Support Group
110 E. Alison Avenue, Suite 1098
Cannon Air Force Base

**RE: APPROVAL WITH MODIFICATIONS
RCRA FACILITY INVESTIGATION
AT TWELVE SITES-REVISION 1
CANNON AIR FORCE BASE, NEW MEXICO
NM7572124454
HWB-CAFB-14-007**

Dear Colonel Gilpin:

The New Mexico Environment Department (NMED) has received Cannon Air Force Base's (Permittee) *RCRA Facility Investigation at Twelve Sites Work Plan, Revision 1* (WP), dated July 21, 2015 and received August 18, 2015. NMED has completed review and hereby approves the WP with the following modifications.

Comments:

1. Section 2, Project/Task Organization, Page 2-1

NMED Comment: Based on recent personnel changes, update all pertinent site contacts, lines of authority and key personnel information in future submittals.

2. Section 3.3, Critical Data, Page 3-5

Permittee's Statement: "Following USEPA guidelines (USEPA 2001, 2004), critical data must be from environmental media representing each major exposure pathway and must be 100-percent complete."

NMED Comment: Sample preservation and holding times must be met for all submitted samples. Any critical analytical data submitted in support of an assessment may be rejected, if the Permittee does not meet project sample quality control objectives. Upon review of all submitted data, NMED will determine if qualified data is critical in nature. Any submitted data which is not defensible will be rejected, and the Permittee will be directed to resample.

3. Section 3.6, Human Health Risk Assessment, Page 3-6

Permittee's Statement: "Potential human health impacts will be evaluated by comparing maximum chemical concentrations (above background) found at the site with NMED human health SSLs for residential exposure (NMED 2012). In addition, total petroleum hydrocarbons (TPH) data will be compared to NMED TPH screening guidelines for Potable Groundwater (GW-1) (found in Table 6-2 of the NMED risk assessment guidance) (NMED 2012)."

NMED Comment: Soils analytical data for samples collected during the implementation of the RCRA Facility Investigation (RFI) must be screened utilizing the "NMED Risk Assessment Guidance for Site Investigations and Remediation" (RA Guidance) dated July 2015 (as updated). Appropriate soil screening levels (SSLs) for residential, industrial/occupational, and construction worker receptors are listed in Table A-1 of the RA Guidance. Total Petroleum Hydrocarbons (TPH) risk assessment guidance is presented in Section 6.0, TPH, with the appropriate SSLs presented in Table 6-2.

4. Section 3.6.4, Comparison With Background, Page 3-8

Permittee's Statement: "The industrial worker and recreational user are only exposed to surface soils (0-1 feet); therefore, background comparisons for these receptors will be compared with surface background concentrations. As described previously, the residential and construction worker are exposed to soils from 0-10 feet; therefore, background levels for subsurface soils will be used for these receptors."

NMED Comment: It should be noted that NMED does not have SSLs for recreational land use. Currently SSLs are only available for residential, construction worker, and industrial/occupational exposure.

5. Section 3.6.7, Vapor Intrusion Risks, Page 3-9

Permittee's Statement: "Vapor intrusion and inhalation of indoor air have been identified as a potentially complete pathway at TU504. The concentration of each chemical detected in near-slab samples at TU504 will be compared to the target shallow soil gas concentration corresponding to target indoor air concentration, assuming a soil gas to indoor air Attenuation Factor= 0.1 (Table 2b, USPEA 2002c). If the detected concentration of any chemical exceeds the screening value from Table 2b, then potential site risks will be estimated in a streamlined risk assessment using the Johnson and Ettinger Model (JEM)."

NMED Comment: The vapor intrusion assessment outlined in the RFI must be conducted in accordance with current NMED RA Guidance Section 2.5, Vapor Intrusion Screening Levels (VISLs). The results of the subsurface vapor sampling must be screened against NMED VISLs provided in Table A-3 of the RA Guidance.

6. Section 3.7 Ecological Risk Assessment, Page 3-10

NMED Comment: Any further ecological risk assessment implemented in the RFI must be conducted utilizing Volume 2 Screening-Level Ecological Risk of the NMED RA Guidance. Ecological Screening Levels (ESLs) and Toxicity Reference Values (TRVs) have been added to the guidance document. The Permittee must review the RA Guidance and conduct the ecological screening in accordance with any pertinent revisions.

7. Section 4.2.4, Hospital Abandoned UST Site (TU504), RFA at Eight Sites (URS 2014b), Page 4-3

NMED Comment: Polynuclear Aromatic Hydrocarbons (PAHs) appear to be in exceedance of the NMED residential SSLs at soil boring location SB-08 at 0-5 feet bgs and 10-15 feet bgs. Because the reported concentration in exceedance of the residential SSL at 0-5 feet bgs falls within the zone of influence for residential and ecological receptors (0-10 feet bgs) the Permittee must carry the identified PAH concentrations forward through the assessment process by evaluating human health and ecological risk.

8. Section 7.3, Sampling Objectives (DA508), Page 7-3

Permittee's Statement: "In addition to PAH, arsenic was identified exceeding residential screening levels in the soils at DA508. However, based on the low level arsenic detections (similar to background) and low frequency of other [Chemicals of Potential Concern] COPCs that are related to suspect contamination, the presence of arsenic appeared to be related to high background concentrations and was not indicative of a release. Therefore, no further evaluation of arsenic was warranted. If determined to be necessary, arsenic concentrations at DA508 will be compared to arsenic levels established by the background study that will be completed for Cannon AFB."

NMED Comment: Arsenic has been identified as a COPC that is above the NMED SSLs indicating risk to human health and the environment for the site. If the Permittee cannot demonstrate that reported arsenic concentrations are representative of regional background concentrations, arsenic must be included in the risk evaluation.

9. Section 8.4, Sampling Locations, Frequencies and Analysis (SD022/SWMU 73), Page 8-3

NMED Comment: While the proposed sampling does appear to address the outstanding PAH concentration exceedance at sample location SB-05, additional assessment is required at SD022/SWMU 73. The NMED Approval letter for the RFA Work Plan dated November 16, 2012 specifically states that the proposed scope of work did not address the full potential extent of contamination. Sediments within the storm water ponding area were not sampled for potential COCs. Additional sampling and evaluation is required to determine the extent of contamination. Alternatively, the Permittee may amend the current proposed sampling program to include sampling of ponding area sediments, subsurface soils and surface water. Additional sampling also appears necessary along the perimeter of the ponding area.

Additionally, as arsenic is in exceedance of residential SSLs at surface soil sample locations SB-01(4.5 mg/kg) and SB-02 (4.5 mg/kg), the Permittee must demonstrate that the concentrations are within the background levels established upon completion of the background study for arsenic proposed in Section 10 of the RFI WP. If it is not demonstrated that arsenic concentrations reflect regional background concentrations, the Permittee must carry arsenic through the risk assessment process.

10. Section 9.3, Sampling Objectives (TA129), Page 9-3

Permittee's Statement: "If determined to be necessary, previously obtained arsenic concentrations at TA129 will be compared to arsenic levels established by the background study that will be completed for Cannon AFB".

NMED Comment: The residential SSL and currently established background concentration for arsenic have been exceeded at 9 out of 10 boring locations at the 0-5 foot bgs sample interval at TA129 and must be further evaluated. If the proposed background study and statistical analysis are inconclusive, arsenic must be carried through the assessment process.

11. Section 10, Outstanding Thallium Exceedances, Page 10-2 and 10-10

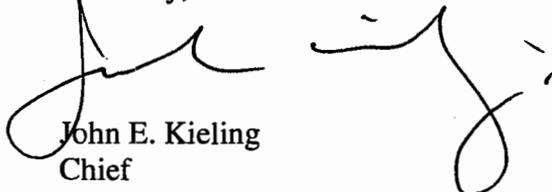
NMED Comment: In addition to arsenic, thallium was detected at concentrations greater than the residential SSL and facility specific background concentration at SWMU 6 (removed tank No. 129) and SWMU 102 (wastewater effluent discharge). Thallium must be carried through the risk assessment process.

12. Appendix A, Analytical Laboratory Information, Reference Limits and Evaluation Tables

NMED Comment: NMED SSLs and VISLs have been updated as of July 2015. The Permittee must ensure all laboratory procedures and detection limits conform to NMED and Environmental Protection Agency (EPA) guidance.

If you have any questions regarding this letter, please contact Gabriel Acevedo at (505) 476-6043.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
G. Acevedo, NMED HWB
B. Wear, NMED HWB
N. Dhawan, NMED HWB
B. Chavez, CAFB
R. Lancaster, CAFB
S. Kottkamp, CAFB

File: CAFB 2015, 12 Site Work Plan, Revision 1, Approval with Modifications