



**Certified Mail - Return Receipt Requested**

February 16, 2022

Colonel Terence G. Taylor  
Commander, 27th Special Operations Wing  
100 Air Commando Way, Suite 100  
Cannon Air Force Base  
New Mexico 88103-5214

**RE: DISAPPROVAL  
PROJECT ACTIVITIES WORK PLAN RESOURCE CONSERVATION AND RECOVERY ACT  
FACILITY INVESTIGATION AT FT008 (SOLID WASTE MANAGEMENT UNIT 107)  
CANNON AIR FORCE BASE, NEW MEXICO  
EPA ID #NM7572124454  
HWB-CAFB-20-004**

Dear Colonel Taylor:

The New Mexico Environment Department (NMED) has received the Cannon Air Force Base (Permittee) *Project Activities Work Plan Resource Conservation and Recovery Act Facility Investigation at FT008 (Solid Waste Management Unit [SWMU] 107)* (Work Plan), dated June 5, 2020. NMED has reviewed the Work Plan and hereby issues this Disapproval. The following comments must be addressed as follows.

**COMMENTS**

**1. Section 3.4, Detection Limits, Page 3-3**

**Permittee Statement:** "To select appropriate analytical methods, detection limits (DLs) have been compared to analyte-specific concentrations of concern. Screening limits and achievable laboratory limits for analytes of concern are included in Tables 3-1 and 3-2."

**NMED Comment:** Section 3.4 and Tables 3-1 and 3-2 must be revised as follows:

- a. Per the December 2018 *Cannon Air Force Base RCRA Hazardous Waste Permit* (Permit), Section 4.5, Chemical Analysis, ensure that all contaminant of concern (COC) target detection and reporting limits for each analytical method proposed for use in the Work Plan are at less than applicable background, screening, and

regulatory cleanup levels. Per Permit requirements, preferred method reporting (practical quantitation) limits are a maximum of 20 percent of the cleanup, screening, or background levels for each contaminant of concern (COC). Please review and revise the Work Plan including Tables 3-1 and 3-2 accordingly.

- b. Analyses proposed for use in the Work Plan that result in detection limits that are greater than applicable background, screening, and regulatory cleanup levels must be considered data quality exceptions, flagged as such, and the reasons for the elevated detection limits reported in the revised Work Plan. Please review and revise the Work Plan as necessary.
- c. Ensure that all soil screening levels (SSLs) listed on Tables 3-1 and 3-2 are proposed in accordance with Permit Section 3.3.2.1, Soil Cleanup Levels. Please review and revise the Work Plan accordingly.
- d. NMED's November 2021 *Risk Assessment Guidance for Site Investigations and Remediation* (RA Guidance) includes updates to COC SSLs on Table A-1, NMED Soil Screening Levels. Please revise the Work Plan to propose the use of current SSLs.

## 2. Section 3.6.1, Preliminary Site Conceptual Exposure Model, Page 3-6

**Permittee Statement:** "The 95 percent UCL HI [hazard index] for the construction worker was 0.67 and is below the threshold of 1."

**NMED Comment:** Table 4-8, 2019 Supplemental RCRA Facility Investigation Refined Screening-Level Cumulative Risks and Hazard Indices for Soil, indicates the HI for the construction worker is 0.79. Please resolve the discrepancy in the revised Work Plan.

## 3. Section 3.6.8, Evaluation of Lead, Pages 3-8 and 3-9

**Permittee Comment:** "NMED guidance does not include an SSL for lead; therefore, USEPA RSLs will be utilized."

**NMED Comment:** RA Guidance Section 5.1, Alternative Evaluation for Lead, includes NMED's guidance for evaluation of lead that specifies a 400 milligrams per kilogram (mg/kg) SSL for residential exposure. The lead SSL for industrial and construction workers is 800 mg/kg. Please revise the Work Plan to cite the applicable NMED SSLs and guidance for evaluation of lead in the revised Work Plan.

**4. Table 3-1, Reference Limits and Evaluation**

**NMED Comment:** The proposed practical quantitation limits (PQL) and detection limits for polynuclear aromatic hydrocarbons (PAHs) benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene listed on Table 3-1 do not meet the specifications of the Permit (Section 4.5) because the reporting limits for each PAH exceed their respective SSLs. To resolve this issue, specifically propose the use of a more sensitive chemical analytical method for evaluation of PAHs, such as, United States Environment Protection Agency Method 8270 with selected ion monitoring (SIM) in all applicable sections of the revised Work Plan, or as required by Comment 1b of this letter, discuss the issue with the proposed PQLs and detection limits for the PAHs as data quality exceptions and address any implications to the proposed site assessment. The Work Plan must be revised accordingly.

**5. Table 3-3, Sample Containers, Preservation, and Hold Times**

**NMED Comment:** The EMAX accreditation dates for the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) expired in April 2020. Ensure that the revised Work Plan includes proof of up-to-date laboratory accreditation (NELAP). The Work Plan must be revised accordingly.

**6. Figure 3-1, Preliminary Site Conceptual Exposure Model-FT008**

**NMED Comment:** Section 3.7, Ecological Risk Assessment indicates that the June 2019 *Supplemental RCRA Facility Investigation Report at FT008 - Revision 1* (Supplemental RFI) did not identify adverse risks for ecological receptors and that no further evaluation is required for SWMU 107. In contrast, the site conceptual exposure model depicted on Work Plan Figure 3-1 establishes complete exposure pathways in subsurface soils and biota for various ecological receptors. The Work Plan also proposes to collect additional site characterization data that may alter the conclusions of the prior ecological risk evaluation. Therefore, the Work Plan must be revised to propose reevaluation of risk for all ecological site receptors in accordance with RA Guidance, Volume II, Soil Screening Guidance for Ecological Risk Assessments. A qualitative evaluation may suffice with supporting evidence if no new COCs are detected at proposed sampling locations and if concentrations are below exposure point concentrations established in the Supplemental RFI for evaluation of ecological risk. Please revise the Work Plan accordingly.

**7. Section 4.1.8.1, Soil-to-Groundwater Pathway, Page 4-8**

**NMED Comment:** The Supplemental RFI lines of evidence listed in Section 4.1.8.1 for the soil-to-groundwater pathway must be reevaluated and verified in accordance with the requirements of the RA Guidance because the Work Plan proposes the collection of

additional data that may alter the conclusions of the prior investigation. This must be verified with collection of data that results in the vertical delineation of contamination and proof that there is a decreasing trend of concentrations with depth. The section, along with all other affected sections, must be revised to specify this requirement.

**8. Section 4.1.8.2, Risk Assessment, Page 4-8**

**NMED Comment:** The Supplemental RFI conclusions listed in Section 4.1.8.2 must be verified by reevaluation of risk for all identified site receptors (i.e., residential, construction, site worker, and ecological) in accordance with the RA Guidance because the Work Plan proposes to collect additional data that may alter the conclusions of the prior investigation. Furthermore, the risk evaluation is essential for development of the investigation conclusions and recommendations that must be documented in the subsequent site investigation report. Qualitative evaluation may be sufficient with supporting evidence if no new COCs are detected and if the measured concentrations are below the exposure point concentrations established in the Supplemental RFI. This section, along with all other affected sections, must be revised to specify this requirement.

**9. Section 4.1.9, Site Inspection Report, Pages 4-8 and 4-9**

**NMED Comment:** The August 2018 *Final Site Inspection of Aqueous Film Forming Foam (AFFF) Release Areas Environmental Programs Worldwide* (Site Inspection Report) was not a comprehensive investigation of the release of per- and polyfluorinated alkyl substances (PFAS) at SWMU 107. Soil sampling was only conducted at two boring locations outside of areas where characteristic contamination attributable to historic fire training exercises were identified during prior investigations. The Permittee's June 2021 *Draft Aqueous Film Forming Foam Release Areas Phase I Remedial Investigation Work Plan*, disapproved by NMED on December 15, 2021, also did not address this data gap. Therefore, PFAS contamination at SWMU 107 must be completely characterized and assessed in accordance with the corrective action requirements of the Permit and the RA Guidance (as updated). PFAS meet the statutory definition for hazardous waste defined in New Mexico Hazardous Waste Act Section 74-4-3.K, Section 1004(5) of the Solid Waste Disposal Act, and Section 6903(5) of the Resource Conservation and Recovery Act and are defined as such in the Permit as required by 40 Code of Federal Regulations 270.32(b)(2) for protection of human health and the environment. The Work Plan must be revised to address this issue as follows:

- a. PFAS must be considered in the conceptual site model for SWMU 107, and the Work Plan must be revised to propose additional investigation to address the site characterization data gap issue for PFAS. This additional component of investigation is required by NMED under the authority of the Permit, and therefore, must comply with the technical specifications of the Permit and the RA Guidance. The Work Plan must be revised accordingly.

- b. The Permittee's assertion that PFAS investigation at Cannon Air Force Base (CAFB) is conducted as a stand-alone issue under separate contracting does not relieve the Permittee of the requirement to comply with the corrective action requirements of the Permit. The reference to addressing PFAS as a stand-alone issue under separate contracting must be removed from the Work Plan. Failure to investigate and assess PFAS contamination at SWMU 107 and other sites at CAFB in accordance with the Permit and NMED's direction constitutes non-compliance and may result in an enforcement action per Permit Section 1.7, Enforcement. The Work Plan must be revised accordingly.
- c. Any investigation initiated by the Permittee without an NMED-approved work plan is performed at risk, and it is likely that NMED will require different and/or additional work beyond the work conducted under an unapproved work plan. In the absence of complete site assessment that includes investigation and evaluation of PFAS as required by the Permit, SWMU 107 will not be eligible for corrective action status review and will remain on Permit Table 1, List of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) Requiring Corrective Action, until the requirements of the Permit have been addressed to the satisfaction of NMED. For compliance with the Permit, the Work Plan must be revised to propose investigation of PFAS contamination at SWMU 107.

**10. Section 4.3, Sampling Locations, Frequency, and Analysis, Pages 4-9 and 4-10**

**NMED Comment:** The following issues must be addressed as follows:

- a. As required by Comment 9 of this letter, the scope of work must be revised to propose additional sampling and analysis for site characterization for PFAS at SWMU 107 at locations and depths where contamination indicative of site usage as a former fire training area was identified during prior investigations. This must include the collection of data for evaluation of PFAS contamination in surface and subsurface soils and groundwater at the site. The Work Plan must be revised accordingly.
- b. The Permittee stated that "[s]hould the delineation sampling at C107-SB35 identify contaminants at concentrations exceeding NMED SSLs, additional delineation sampling will be proposed to NMED in a tech memo." As proposed in Work Plan Section 6.3, RFI Report, the results of all investigation activities, including any necessary recommendations for additional investigation, must be included in a report formatted in accordance with the requirements of Permit Section 6.3, Investigation Report, for NMED approval. A technical memo is not appropriate for reporting the results, conclusions, and recommendations of the proposed site investigation or for proposing additional investigation. Any required additional site

investigation addressed in the recommendations included in the required RFI report must be proposed in a subsequent work plan formatted in accordance with Permit Section 6.2, Investigation Work Plan and NMED's August 2020 *General Reporting Guidelines for Corrective Action Documents*, for NMED approval. Remove the reference to the technical memo from the Work Plan and specify that all results, conclusions, and recommendations of the proposed investigation will be reported in an RFI report, and any necessary additional investigation will be proposed in a separate work plan submittal following NMED's review of the RFI report. The Work Plan must be revised accordingly.

**11. Table 4-10, Summary of Sampling Locations and Analytical Parameters, Page 1 of 1**

**NMED Comment:** The following table issues must be addressed as follows:

- a. Revise Table 4-10 to propose collection and analysis of a surface soil sample (0 to 1 feet below ground surface) during resampling at 1986 Phase II investigation boring location 8 as proposed in Section 4.3. Please revise the table accordingly.
- b. The sample location designation (C107-SB08) listed on the table for the resampling at historical boring location 8 has already been used during prior investigation at SWMU 107. The table must be revised to propose a unique sample location designation for the proposed resampling boring location. Revise the table accordingly.

**12. Section 6.3, RFI Report, Pages 6-1 and 6-2**

**NMED Comment:** The RFI Report documenting the SWMU 107 investigation must be formatted in accordance with the minimum requirements of Permit Section 6.3, Investigation Report, and NMED's August 2020 *General Reporting Guidelines for Corrective Action Documents*. Revise the Work Plan to specify and describe this requirement in the section discussion of the revised Work Plan. The Work Plan must be revised accordingly.

**13. Appendix B, Uniform Federal Policy-Quality Assurance Project Plan [QUAPP]**

**Permittee Statement:** The Appendix B cover page states "[t]his document was submitted to AFCEC [Air Force Civil Engineer Center] for review as a stand alone document. This document will be added to the PAWP [Project Activities Work Plan] Appendix upon approval by AFCEC. NMED will not review UFP-QUAPP documents. Therefore, the UFP-QUAPP is not included in this work plan provided to NMED for review, but is included in the final for AFCEC records as required by contract."

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**NMED Comment:** Remove Appendix B and any reference to the QUAPP from the revised Work Plan. All documents submitted to NMED for review must be the final version of the document for review. Alteration of a work plan following NMED approval negates NMED approval of the document. Conducting work under an unapproved work plan may result in invalidation of any investigation data, findings, and/or conclusions, and will likely result in a NMED directive to perform additional work. As required by Permit Section 6.2, the Permittee must ensure that the Work Plan proposes and describes all methods and procedures to be used for the site investigation. The Work Plan must be revised accordingly.

The Permittee must submit a revised Work Plan that addresses all comments contained in this Disapproval letter. In addition, the Permittee must include a response letter that cross-references where NMED's numbered comments were addressed. The Permittee must also submit an electronic redline-strikeout version of the revised Work Plan showing all changes made to the Work Plan. The revised Work Plan must be submitted to NMED no later than **October 31, 2022**.

If you have any questions regarding this letter, please contact Gabriel Acevedo at (505) 690-5760.

Sincerely,

**Rick Shean** Digitally signed by Rick Shean  
Date: 2022.02.16 11:31:30  
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Rick Shean  
Chief  
Hazardous Waste Bureau

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