



State of New Mexico  
ENVIRONMENT DEPARTMENT

ENTERED



**Hazardous Waste Bureau**

2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6313  
Phone (505) 476-6000 Fax (505) 476-6030  
[www.env.nm.gov](http://www.env.nm.gov)

SUSANA MARTINEZ  
Governor  
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**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

February 16, 2018

Colonel Stewart A. Hammons  
Commander, 27<sup>th</sup> Special Operations Wing  
110 E. Alison Avenue, Suite 1098  
Cannon Air Force Base  
New Mexico 88103

**RE: DISAPPROVAL  
RCRA FACILITY ASSESSMENT AT OW541 AND OW560  
CANNON AIR FORCE BASE, NEW MEXICO  
EPA ID #NM7572124454  
HWB-CAFB-17-007**

Dear Colonel Hammons:

The New Mexico Environment Department (NMED) has received the Cannon Air Force Base (Permittee) *RCRA Facility Assessment at OW541 [Oil Water Separator 541] and OW560 [Oil Water Separator 560]* (Report), dated July 10, 2017. NMED has completed review of the Report and hereby issues this Disapproval. The Permittee must address the following comments.

**COMMENTS**

**1. Section 2.2, Previous Investigations and Activities, OW541, Pg. 2-2**

**NMED Comment:** A discrepancy was noted with the sample concentration information provided in Section 2.2 for OW541 for total petroleum hydrocarbons (TPH) (1.57E+00 milligrams per kilogram (mg/kg)), which did not match information provided in the previously submitted *Final Work Plan RCRA Facility Assessment at OW541 and OW560* (Work Plan) document. Based on historical OW541 sampling results, the correct TPH concentration is 1.57E+02 mg/kg for TPH. Revise the Report to correct this discrepancy.

**2. Section 2.4.2, Exposure Pathways, Pg. 2-7**

**Permittee Statement:** "Due to the depth to groundwater at Cannon AFB [Air Force Base] (ranging from 287 to 350 ft [feet] bgs [below ground surface]), release of COPCs [constituents of potential concern] to groundwater is not a likely exposure pathway. The only surface water bodies at Cannon AFB include a small pond on the base golf course and a playa that receives sanitary treatment plant effluent, meaning direct contact is very limited. Based on review of site data, as presented in this RFA [RCRA Facility Assessment] Report, the primary exposure pathways at Sites OW541 and OW560 include direct contact and/or vapor inhalation of surface and/or shallow subsurface soil contaminants, and inhalation of dust."

**NMED Comment:** The Permittee has not completed the required site specific human health, soil-to-groundwater, and ecological risk screen evaluation as required by NMED's Risk Assessment Guidance for Site Investigations and Remediation (RA Guidance). The revised Report must include a risk screen evaluation which addresses identified exposure pathways in accordance with the RA Guidance for OW541 and OW560 as follows:

- a. An evaluation of human health exposure and risk must be conducted in accordance with RA Guidance Section 2.8, Site Assessment. Specifically, an evaluation of COPCs must be conducted in accordance with RA Guidance Sections 2.8.3, Identification of COPCs and 2.8.4, Compare COPC Maximum Concentrations with SSLs. A cumulative risk screen evaluation must be conducted in accordance with RA Guidance Section 5.0, Use of the SSLs [Soil Screening Levels] and must include all identified COPCs. A corrective action complete status determination requires the risk screen evaluation be performed for the residential, industrial/occupational, and construction worker exposure scenarios for all identified COPCs for each site in accordance with the RA Guidance. Complete the required risk screen evaluation for each site and discuss the results in the revised Report. Include all data evaluation and risk calculation tables as an additional appendix in the revised Report.
- b. Provide a site-specific evaluation and discussion of the soil-to-groundwater pathway based on the collected soil sample analysis concentration data for OW541 and OW560. Maximum soil concentrations of chemicals of concern for each site must be evaluated with respect to soil-to-groundwater protective screening levels as provided in RA Guidance, Table A-1, NMED Soil Screening Levels. Acceptable information supporting the Permittee's conclusions may also include lines of evidence such as evidence of decreasing contaminant concentrations with depth, the presence of contaminant physical or chemical properties which limit migration, information regarding removal of any contamination source, and the lack of a transport mechanism for any contamination at each site. Discuss the results of the soil-to-groundwater evaluation for each site in the revised Report and revise the provided Report data tables accordingly.

- c. RA Guidance Section 2.5.2.1, Incomplete Pathway; No Action Required only allows for an incomplete vapor intrusion exposure pathway if volatile organic compounds (VOCs) are 100% non-detect in the collected sample media for a site. Based on the results of the investigation, VOCs have been minimally detected in soil samples collected at OW541 (1,2 dichloropropane, acetone, methyl ethyl ketone, toluene, and chlordane) and OW560 (chlordane); therefore, the vapor intrusion exposure pathway is potentially complete and must be addressed in accordance with RA Guidance Section 2.5.2., Potentially Complete Pathway; Qualitative Discussion. Revise the Report to include a discussion of the vapor intrusion pathway for each site.
- d. A site-specific evaluation of ecological risk must be conducted in accordance with RA Guidance Volume II, Soil Screening Guidance for Ecological Risk Assessments for each site. Discuss the results of the ecological risk evaluation for each site in the revised Report. Include any supporting ecological site exclusion checklists, ecological risk evaluation decision trees, and ecological risk evaluation tables as a separate appendix in the revised Report.

### 3. Table 4, Analytical Results for Sampling at OW560

**NMED Comment:** A discrepancy was noted in the information listed in the Table 4 "Maximum" concentration column for TPH diesel range organics (DRO) (1.20E-02 mg/kg) and oil range organics (ORO) (2.10E-02 mg/kg). The information listed in the "Maximum" concentration column for TPH DRO and ORO does not correspond to any soil sample concentration information provided in Table 4. Reevaluate the provided TPH concentration data and revise the table accordingly.

### 4. Figure 4, OW541 Borehole Locations

**NMED Comment:** In the revised Report, adjust the sample locations for boreholes (BH) BH-1, BH-2, and BH-3 in Figure 4 to match the borehole location information documented in Report Section 3.3, Borehole Drilling and Sampling, the approved Work Plan, supporting Report Figure 6, OW541 Analytes Exceeding Standards in Soil, and drilling log information provided in Report Appendix A, Boring Logs. Any deviations from the original Work Plan as approved by NMED must be clearly documented in the revised Report. Revise all affected sections of the Report accordingly.

### 5. Figure 5, OW560 Borehole Locations

**NMED Comment:** The figure map scale appears to give the impression that boreholes BH-4 and BH-5 were not completed with enough spacing to provide representative information of site conditions across the northern conveyance piping segment between the piping elbow and sand trap 368A. In the revised Report, adjust the Figure 5 map scale to provide a more accurate representation of borehole spacing, which matches the boring locations provided in the approved Work Plan, Report Section 3.3, and the drilling log information provided in

Appendix A of the Report. Any deviations from the original sampling plan must be clearly documented in the revised Report. Revise all affected sections of the Report accordingly.

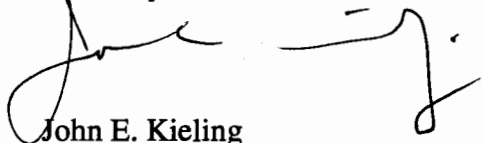
## 6. Appendix B, Photographs

**NMED Comment:** Revise each photograph included in Report Appendix B to include a corresponding number and a description of the information provided in the photograph.

The Permittee must submit a revised Report that addresses all comments contained in this Disapproval. 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 Report showing where all changes have been made to the Report. The revised Report must be submitted no later than **April 30, 2018**.

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  
B. Wear, NMED HWB  
G. Acevedo, NMED HWB  
L. King, EPA Region 6 (6MM-RC)  
A. Lafuente, CAFB  
R. Lancaster, CAFB  
S. Kottkamp, CAFB  
S. Palmer, CAFB  
D. Gentry, CAFB

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