



Certified Mail - Return Receipt Requested

January 19, 2023

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

**RE: FOURTH DISAPPROVAL
ANNUAL GROUNDWATER MONITORING REPORT 2016 - REVISION 3
MELROSE AIR FORCE RANGE
EPA ID# NM5572124456
HWB-MELR-21-002**

Dear Colonel Taylor:

The New Mexico Environment Department (NMED) has received the United States Air Force (Permittee) *Annual Groundwater Monitoring Report 2016 - Revision 3 (Report)*, submitted on behalf of Melrose Air Force Range and dated October 21, 2021. NMED hereby issues this Disapproval. The Permittee must address the following comments.

GENERAL COMMENT

1. Required Permittee Certification Statement

NMED Comment: The Permittee did not include the 40 Code of Federal Regulations (CFR) 270.11(d)(1) certification statement required by NMED's July 2, 2020 *Third Disapproval Annual Groundwater Monitoring Report 2016 - Revision 2 (Third Disapproval) Comment No. 2*. The revised Report must include the signed signature page with the following 40 CFR 270.11(d)(1) certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for

submitting false information, including the possibility of fine and imprisonment for knowing violations.”

SPECIFIC COMMENTS

2. Section 4.2, Analytical Data, Pages 13 and 14

NMED Comment: The following Section 4.2 issues must be addressed:

- a. The Permittee stated that “[m]aps featuring analytes exceeding applicable screening levels are shown in Appendix A, Figures 4-4, 4-5, 4-6, 4-7, 4-8, and 4-9.” However, Figure 4-4, Fall Ogallala Groundwater Contour Map, Figure 4-5, Spring Groundwater Elevation Map, and Figure 4-6, Fall Groundwater Elevation Map, do not depict the analytes exceeding applicable screening levels. Resolve the Permittee statement discrepancy in the revised Report.
- b. The Permittee did not address NMED’s Third Disapproval Comment 15. To reiterate the prior direction, in addition to the discussion of exceedances of screening levels for chloride, sulfate, total dissolved solids (TDS), selenium, iron, and manganese in Sections 4.2.1 through 4.2.5, the Permittee must discuss detections of the other twenty-four chemicals of concern (COCs) that are listed in Section 4.2. Discuss the location (e.g., SWMU, monitoring well) of each of the detections and any significant data trends in Sections 4.2.1 through 4.2.5. Ensure that all cyanide, explosives, hexavalent chromium, metals, nitrate, nitrite, perchlorate, VOCs, alkalinity, total dissolved solids, chloride, and sulfate data for 2016 are clearly and concisely addressed and include appropriate references to corresponding tables and figures in the Report appendices. Revise the Report accordingly.
- c. The Permittee stated that “[a]nalyte concentrations exceeding applicable screening levels but are within historical ranges are chloride, manganese (total and dissolved), sulfate, and TDS [total dissolved solids].” However, data provided on Appendix B, Table 5c, Summary of Analytes Exceeding Applicable Screening Levels in 2016, indicates that sulfate, total dissolved solids, chloride, and manganese exceeded historical ranges at various sampling locations. Resolve the discrepancy in the revised Report.
- d. For transparency, Section 4.2 must be revised to address the rationale for, and resulting limitations of, the abbreviated VOC analytical suite implemented by the Permittee without prior NMED approval. This issue was discussed in NMED’s Third Disapproval Comment No. 4. Revise the Report accordingly.

3. Sections 4.2.1 through 4.2.5, SWMU-114, SWMU-130, SWMU-131, Annual Monitoring Well Network, and Background Monitoring Well, Pages 14 through 16

NMED Comment: In addition to Comment 2b above, the untitled data tables included in Sections 4.2.1, 4.2.2, 4.2.3, and 4.2.4 text discussions are redundant as the data tables are included in the Report as Appendix B, Table 5c, for SWMU-114, SWMU-130, SWMU-131, and the Annual Monitoring Well Network. Additionally, NMED's October 2017 *Disapproval Annual Groundwater Monitoring Report 2016* Comment 1 required that all tables and figures be removed from the text narrative of the Report and included at either the end of respective report sections or in appendices to the Report. Remove the untitled data tables embedded in Sections 4.2.1, 4.2.2, 4.2.3, and 4.2.4 text discussions as previously directed by NMED and appropriately reference applicable tables and figures in the text discussions. Revise the Report accordingly.

4. Section 5.0, Summary, Page 18

Permittee Statement: The Annual Groundwater Network discussion indicates that “[t]otal and dissolved selenium exceeded the applicable screening levels at one location.”

NMED Comment: Table 5c indicates that selenium was not detected at concentrations exceeding applicable screening levels for any of the Annual Groundwater Network monitoring wells. The table indicates that the screening level exceedance was at SWMU-131. Resolve the discrepancy in the revised Report.

5. Table 1a, Well Properties, Appendix B, Page 1

NMED Comment: The Permittee did not consistently address NMED's Third Disapproval Comment 26 regarding the Appendix B, Table 1a title throughout the Report. For example, the text discussion in Section 3.3, Field Parameters and Equipment, references Table 1a, Summary of Well Construction Details, in the section discussion, but Table 1a in Appendix B is still titled “Well Properties”. This discrepancy was also noted in the Report Table of Contents. Revise the Report to resolve these discrepancies throughout the document.

6. Table 2a, MAFR Summary Depth to Groundwater Data 2003 to 2016 and Table 2b, MAFR Summary Groundwater Elevation Data 2003 to 2016, Appendix B, Pages 4 and 5

NMED Comment: NMED Third Disapproval Comment 28 lists issues that were not addressed in the third revision of the Report which must be addressed in the revision as follows:

- a. Appendix D field notes indicate that the depth to groundwater was recorded as 13.15 feet below ground surface for water level-only monitoring well MWL-5 during

the April 2016 gauging event. This data was not accurately reported on Table 2a, which states that MWL-5 was inaccessible during the spring gauging event. Revise Table 2a to correct this issue. Revise the Report accordingly.

- b. The groundwater level data entries for MWL-2 and MWL-3 for July 18, 2005, and September 26, 2011, and MWQ-19 for September 26, 2011 are still listed as “N” on Table 2a. As previously directed in the Third Disapproval, either remove the “N” entry from the table or define it in the table notes in the revised Report.
- c. Groundwater elevation data edits to Table 2b for monitoring wells MA01MW002 for October 2016, MA01MW004 for April 2016, MWQ-12 for April and October 2016, MWQ-13 for April 2016, MWQ-22 for April and October 2016, MWL-5 for April 2016, and MWL-12 for April and October 2016 were not accurately reported on Figures 4-1, 4-3, 4-5, and 4-6. Provide accurate data on the Figures, as applicable, in the revised Report.
- d. For consistency, indicate on Table 2b that well MWL-1 was removed from the groundwater level-only network (as indicated on Table 2a) in the revised Report.
- e. The Table 2b data chart does not appear to accurately report the October 2016 groundwater elevation for MA01MW002. Revise the Report to correct this error.

7. Table 4c, Historical pH, Appendix B, Page 23

NMED Comment: Table 4c notes indicate that pH is reported in micrograms per liter, which is not correct. Revise the Report to correct this error.

8. Table 4d, Historical Temperature, Appendix B, Page 28

NMED Comment: Table 4d notes indicate groundwater temperature is reported in micrograms per liter, which is not correct. Revise the Report to correct this error.

9. Table 5a and 5b, Summary of Analytical Results April and October 2016 Appendix B, Pages 40 through 53

NMED Comment: Identified issues with the table must be addressed as follows:

- a. The reported aluminum total (8,800 micrograms per liter ($\mu\text{g/L}$)) and dissolved (3,180 $\mu\text{g/L}$) concentrations for M114MW001 on Table 5b for October 2016 do not match the data reported on Table 6a, Historical Aluminum Concentrations. Review the data for accuracy and revise the tables accordingly, as necessary.

- b. April and October 2016 vinyl chloride concentrations reported for monitoring well MAO2MW001D on Tables 5a and 5b have been highlighted as exceeding the respective screening level; however, the detections do not exceed the respective screening level listed on each table. Resolve the discrepancy in the revised Report.

10. Tables 6a through 6ah, Historical COC Concentrations and Data Charts, Appendix B, Pages 55 through 202

NMED Comment: These outstanding issues must be addressed in the revised Report as follows:

- a. Table 6c total and dissolved concentrations for arsenic for groundwater monitoring well MAO1MW001 for the October 2016 sampling event does not match the respective concentration data reported on Table 5b, nor does it reflect the data correction noted in the Permittee's comment matrix response to NMED's Third Disapproval Comment No. 32b. Resolve the discrepancy in the revised Report.
- b. Table 6d total and dissolved concentrations for barium for the sample collected at groundwater monitoring well MWQ-24 for the October 2016 sampling event do not match the respective concentration data reported on Table 5b. Additionally, the screening level listed is not accurate based on Table 5b information. Resolve the discrepancies in the revised Report.
- c. The screening level listed on Table 6e for beryllium is not accurate based on Table 5, Applicable Screening Level Criteria. Resolve this discrepancy in the revised Report.
- d. The screening level listed on Table 6i for chromium is not accurate based on Table 5, Applicable Screening Level Criteria. Additionally, ensure that any screening level exceedances are accurately highlighted. Resolve these issues in the revised Report.
- e. Table 6j total hexavalent chromium concentration for the sample collected at groundwater monitoring well M114MW003 for the April 2016 sampling event is missing, and the total hexavalent chromium concentration reported for MWQ-22 for April 2016 does not match the concentration reported on Table 5a. Resolve these issues in the revised Report.
- f. The screening level listed on Table 6m for lead is not accurate based on Table 5, Applicable Screening Level Criteria. Resolve this discrepancy in the revised Report.
- g. The screening level listed on Table 6ac for cyanide is not accurate based on the Table 5, Applicable Screening Level Criteria highlight that denotes the applicable screening

level. Additionally, ensure the NMED Tap Water screening level for cyanide is accurately reported on Table 5. Resolve these discrepancies in the revised Report.

- h. The perchlorate concentration data reported on Table 5b of the *2015 Annual Groundwater Monitoring Report (2015 AGMR)* for the October 2015 sampling event are missing from Table 6af. The Permittee must include all missing perchlorate data in the revised table. Revise the Report accordingly.
- i. Table 6af perchlorate concentrations for Semiannual Network groundwater monitoring wells for January 2009 through October 2014 and for Annual Network groundwater monitoring wells for January 2004 through April 2014 appear to be anomalously high when compared to data reported for the 2015 and 2016 sampling events. The source of this issue appears to be that data reported on 2015 AGRM Table 6af was originally reported as micrograms per liter vs milligrams per liter as erroneously specified in the 2015 AGRM Table 6af notes. The data reported on December 2014 *Annual Groundwater Monitoring Report* Tables 5a and 5b appears to confirm the reporting unit discrepancy. Table 6af must be revised to accurately report all perchlorate concentration data in micrograms per liter. Also, ensure that all screening level exceedances are accurately identified. Revise the Report accordingly.
- j. Table 6ag sulfate concentration charts were not provided in the electronic or hard copy of the Report. Instead, data charts for cadmium follow Table 6ag. The revised Report must include Table 6ag and the corresponding data charts for sulfate. Revise the Report accordingly.

The Permittee must submit a revised Report that addresses all comments contained in this Disapproval (two hard copies). In addition, the Permittee must include a response letter that cross-references where NMED's numbered comments were addressed. The Permittee must also submit two sets of electronic media (DVD discs) containing the revised Report and the redline-strikeout version of Report, which must show all changes made to the Report. The revised Report must be submitted no later than **May 31, 2023**. Failure to revise the Report as required by NMED and provide the required information may result in an enforcement action.

Col. Taylor
January 19, 2023
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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: 2023.01.19
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Rick Shean
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
B. Wear, NMED HWB
G. Acevedo, NMED HWB
L. King, EPA Region 6 (6LCRRC)
C. Gierke, CAFB
C. Soto-Lorenzo, CAFB
J. Burgoon, CAFB

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