



MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

Certified Mail - Return Receipt Requested

October 25, 2023

George H. Cushman
Headquarters, Department of the Army
Office of the DCS, G-9
Army Environmental Office, Room 5C140
600 Army Pentagon
Washington, DC 20310-0600

**RE: SECOND DISAPPROVAL
FINAL GROUNDWATER BACKGROUND EVALUATION [SECOND REVISION]
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-20-001**

Dear Mr. Cushman,

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity (Permittee) *Final Groundwater Background Evaluation [Second Revision]* (Report), dated December 19, 2022. NMED has reviewed the Report and hereby issues this Second Disapproval with the following comments.

COMMENTS

1. Missing Electronic Redline Strikeout (RLSO) Version

NMED Comment: The Permittee was directed to submit an electronic RLSO version of the Report; however, it was not included in the submittal. The electronic RLSO version of the Report must be submitted no later than **November 17, 2023**.

2. Permittee's Response to NMED's Disapproval Comment 1, dated July 6, 2021

Permittee Statement: "Concur. Wells TMW02 and BGMW08 will be retained for future groundwater monitoring."

SCIENCE | INNOVATION | COLLABORATION | COMPLIANCE

Hazardous Waste Bureau - 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico 87505-6313
Telephone (505) 476-6000 - www.env.nm.gov

NMED Comment: Table 1 (Monitoring Wells Utilized for Statistical Analysis) indicates that well BGMW08 continues to be utilized for the background evaluation. Comment 2 of the NMED's September 15, 2020 *Disapproval* states, "well BGMW08 must not be used as a background well." To clarify, Comment 1 of the NMED's July 6, 2021 *Disapproval* directed the Permittee to a) continue groundwater monitoring at wells TMW02 and BGMW08, and b) propose to submit a work plan to install a new background monitoring well in the vicinity of BGMW08 that will potentially provide usable background data. The Permittee addressed item a; however, the Permittee failed to address item b. The Permittee must not utilize data collected from well BGMW08 for the background evaluation, as directed.

The groundwater elevation in well BGMW08 has not been comparable to those of other bedrock wells that were screened in the contaminated aquifer; therefore, the data collected from well BGMW08 is likely not representative of the same aquifer. Moreover, volatile organic compounds (e.g., benzene, methylene chloride) have been frequently detected in well BGMW08. It is not appropriate to utilize well BGMW08 to evaluate background groundwater conditions. Remove all data collected from well BGMW08 from the revised Report. If the background evaluation cannot be accomplished due to lack of sample size without utilizing data collected from well BGMW08, submit a separate work plan to install at least one new background monitoring well. In this case, the Permittee may request an extension for the submission date of the revised Report submission until sufficient data is collected from the new well(s).

3. Permittee's Response to NMED's Disapproval Comments 2a and 2b, dated July 6, 2021

Permittee Statements: "There is no historic evidence of contaminating operations at or near background locations BGMW01, BGMW08, BGMW09 or at BGMW10, or that historic operations influence groundwater quality at these locations (see Section 1.3, pg 3, Lines 33-36)."

and,

"Groundwater monitoring wells are at hydrogeologically upgradient locations that are not influenced by activities at FWDA (see Section 1.3, pg 2, Lines 25-28)."

NMED Comment: Comment 12 of the NMED's March 27, 2023 *Third Disapproval Final Northern Area Groundwater RCRA Facility Investigation Report [Revision 2]* states, "[t]he site history is not complete, nor definitive, regarding the location and timing of all contaminant releases." Therefore, the statements are insufficient to demonstrate that the concentrations of metals and anions in the samples collected from the background wells have not been affected by previous site activities. State that the site history is not complete, nor definitive, regarding the location and timing of all contaminant releases in the revised Report.

4. Permittee's Response to NMED's Disapproval Comment 2, dated July 6, 2021

Permittee Statement: "To determine whether BGMW01, BGMW09 and BGMW10 should be excluded as background monitoring wells due to the presence anthropogenic constituents, a review of groundwater analytical results for anthropogenic compounds (explosives, volatile organic compounds, semi-volatile compounds, polychlorinated biphenyls, herbicides and pesticides) was performed. From this review the following was determined:

- There were no detections of anthropogenic compounds in samples collected from BGMW01 and BGMW09.
- A single detection of one constituent (methyl acetate) was reported from BGMW10. However, subsequent sampling and analysis of this well to date has not reported additional detections of methyl acetate."

USEPA guidance (USEPA 2018) as referenced in the report (see Section 1.3, pg 4, Lines 28-35) clarifies that the presence of anthropogenic compounds is not necessarily sufficient to exclude monitoring points for background monitoring. Based on the discussion above, the Army requests that the discussion presented in the Groundwater Background Evaluation report be accepted."

NMED Comment: Comment 2 of NMED's July 6, 2021 *Disapproval* states, "the absence/presence of anthropogenic compounds is unknown. Resolve this recurring issue where LODs exceed the screening levels prior to completion of the Groundwater Background Evaluation."

NMED's October 2022 *Risk Assessment Guidance for Investigations and Remediation* (RAG) describes that defensible background data set should be;

- collected from areas where there is no potential for site contamination based on site history;
- collected from areas not impacted by neighboring areas of contamination (off-site migration);
- collected from areas that are upwind of contaminated soil;
- collected from areas that are upgradient of site contamination.

The background data utilized for this evaluation is inherently indefensible because the site history is not complete, nor definitive, regarding the location and timing of all contaminant releases; therefore, it is essential to collect background evaluation data from the wells where anthropogenic compounds are not present.

According to the groundwater periodic monitoring reports, there are a total of 42 data quality exception compounds where the LOD, LOQ, or both, exceed the screening level. Therefore, the data are not sufficient to conclude that these anthropogenic compounds are not present. Accordingly, the LOD exceedances preclude adequate demonstration of data defensibility. Resolve the issue where analytical LODs exceed the screening levels to provide adequate and defensible data for completion of the Groundwater Background Evaluation.

5. Permittee's Response to NMED's Disapproval Comment 3, dated July 6, 2021

Permittee Statements: "As part of the continuing interim groundwater monitoring program, the Army is reviewing the sampling techniques and monitoring well conditions to achieve turbidity of 100 NTU or less during groundwater monitoring events."

NMED Comment: The Permittee's response does not address Comment 3 of NMED's July 6, 2021 *Disapproval* which states, "[i]f sampling techniques are not the cause for the turbidity issues, the condition of the wells may require evaluation. Clogged well screens and other issues can lead to higher turbidity in groundwater, requiring well re-development. If the wells continue to have turbidity issues, propose to evaluate current sampling techniques, potential alternative sampling techniques, and the conditions of the wells in the revised Report."

Provide a detailed description of the sampling techniques used to achieve turbidity values of 100 NTU or less during groundwater monitoring events. It appears that turbidity readings in the background wells fluctuate and often exceed 100 NTU during groundwater monitoring events according to the groundwater periodic monitoring reports; therefore, the turbidity issues remain. Section 4 (Findings), page 17, states, "[w]ell turbidity can introduce excess naturally occurring trace elements into the samples and result in elevated, inconsistent, and incomparable metals results within and between wells." Considering these facts, provide justification for the acceptability of data collected from the wells where turbidity readings exceed 100 NTU for background evaluation in the revised Report.

Comment 1 above requires the Permittee to submit the electronic RLSO version of the Report no later than **November 17, 2023**. **Comment 2** above requires the Permittee to submit a work plan to install a new background monitoring well(s) and collect sufficient data for the Groundwater Background Evaluation, as applicable. **Comment 4** above requires the Permittee to resolve the issue associated with LOD for completion of the Groundwater Background Evaluation. Furthermore, 35 new wells were installed in 2019 and 2020 at the facility; additional data collected from these new wells may be useful for developing a defensible Groundwater Background Evaluation.

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The Permittee is still required to address all comments in this letter and submit a revised Report, a response letter that indicates where all comments were addressed in the revised Report, a redline strikeout electronic version of the revised Report indicating where all changes were made, and a revised electronic copy of the Report no later than **June 1, 2025**. By establishing this submittal date, NMED has provided additional time for the Permittee to collect samples and conduct the appropriate analyses required to provide defensible data for the evaluation.

Should you have any questions, please contact Michiya Suzuki of my staff at (505) 690-6930.

Sincerely,

Ricardo Maestas

Digitally signed by Ricardo

Maestas

Date: 2023.10.25 12:02:07 -06'00'

Ricardo Maestas
Acting Chief
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB
B. Wear, NMED HWB
M. Suzuki, NMED HWB
L. McKinney, EPA Region 6 (6LCRRC)
L. Rodgers, Navajo Nation
S. Begay-Platero, Navajo Nation
K. Noble, Pueblo of Zuni
V. Neha, Southwest Region BIA
G. Padilla, Navajo BIA
J. Wilson, BIA
B. Howerton, BIA
R. White, BIA
C. Esler, Sundance Consulting, Inc.
A. Soicher, USACE

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