



DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF, G-9
600 ARMY PENTAGON
WASHINGTON, DC 20310-0600

December 27, 2022

Base Realignment and Closure Operations Branch

Mr. Rick Shean
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RE: Final Groundwater Background Evaluation, Army's Response to the New Mexico Environment Department Letter of Disapproval dated July 6, 2021. Fort Wingate Depot Activity, McKinley County, New Mexico. EPA# NM6213820974, HWB-FWDA-20-001

Dear Mr. Shean:

This letter is in reply to the New Mexico Environment Department (NMED) Letter of Disapproval dated July 6, 2021, reference number HWB-FWDA-20-001, Final Groundwater Background Evaluation. The following are Army's response to NMED comments, detailing where each comment was addressed and cross referencing the numbered NMED comments.

Comments:

SPECIFIC COMMENTS

1. Permittee's Response to NMED's Disapproval Comment 2, dated September 15, 2020

Permittee Statement: "Pursuant to the Army's response to the NMED comment #4 from the Groundwater Periodic Monitoring Report July through December 2018; it is not BGMW08 that is providing erroneous geochemical data, but TMW02. As presented in the Army's response (cited above), bedrock groundwater at TMW02 is likely mixing with alluvial groundwater creating erroneous observations. Therefore, the Army has proposed the retention of BGMW08 concurrent with decommissioning TMW02. No changes were made to the revised report."

NMED Comment: The Permittee's statement is outdated and no longer relevant. Comment 3 of the NMED's November 5, 2020 *Approval with Modifications* states, "it is more appropriate to retain well TMW02 as an alluvial groundwater monitoring well and continue to monitor groundwater quality." The Permittee must not abandon well TMW02, as directed.

In addition, Comment 5 of the *NMED's Approval with Modifications Second Response to the Approval with Modifications, Response to Approval with Modifications, Final Revision 1 Groundwater Periodic Monitoring Report, July Through December 2018*, dated March 29, 2021, states, "[t]he Permittee may propose to submit a work plan to install a new background monitoring well in the vicinity of BGMW08. However, the Permittee must not abandon well BGMW08 at this time. Retain well BGMW08 as a bedrock groundwater monitoring well and continue to monitor groundwater quality, as previously directed." The Permittee must comply with the NMED's directions. Include the most updated information in the revised Report.

Army Response

Concur. Wells TMW02 and BGMW08 will be retained for future groundwater monitoring.

2. Permittee's Response to NMED's Disapproval Comment 3, dated September 15, 2020

Permittee Statements: "It was determined that there were no detections of anthropogenic compounds in samples collected from BGMW01 and BGMW09. A single detection of one constituent (methyl acetate) out of all of the compounds in these analysis suites was reported from BGMW10." and "[D]etections of anthropogenic compounds, if any, do not preclude the use of these wells as background monitoring points, as these detections are representative of local or regional conditions."

NMED Comment: According to the *Final Groundwater Periodic Monitoring Report July through December 2019*, dated December 2020, the limits of detection (LODs) for multiple contaminants (e.g., 1,2-diphenylhydrazine, nitrobenzene, nitroglycerin) were reported higher than their respective screening levels in groundwater samples collected from wells BGMW01, BGMW09, and BGMW10. Therefore, 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. The February 1, 2021 email from Mr. Wear of NMED to Mr. Cushman of FWDA provides a clarification and direction regarding the analytes where the LODs exceed the applicable screening levels.

In addition, the detection of anthropogenic compounds (e.g., VOCs, explosive compounds) may indicate that the concentrations of the naturally occurring metals and anions have potentially been affected by previous site activities. Unless the LOD issue is resolved and the absence of anthropogenic compounds is demonstrated, the use of wells BGMW01, BGMW09, and BGMW10 for the background evaluation is not appropriate.

Army Response

Comment noted. With respect to the LOD issue, the Army is working to address the LOD issue with NMED under separate cover, and requests to resolve the issue in that forum and apply the results accordingly.

In the interim, with respect to whether concentrations of naturally occurring metals and anions have potentially been affected by previous site activities, the Army has determined they have not for the following reasons:

- a. 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).
- b. 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).

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.

3. Permittee's Response to NMED's Disapproval Comment 10, dated September 15, 2020

Permittee's Statement: "The Groundwater Periodic Monitoring Reports from Spring 2009 to Spring 2012 show a collection of 449 samples, with 27% of samples having turbidity greater than 100 NTU. In Fall 2019, 69% of samples had turbidity greater than 100 NTU."

NMED Comment: If 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.

Army Response

Comment noted. 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.

If you have questions or require further information, please contact me at George.h.cushman.civ@mail.mil, 703-455-3234 (Temporary Home Office, preferred) or 703-608-2245 (Mobile).

Sincerely,

George H. Cushman IV

George H. Cushman IV
BRAC Environmental Coordinator
Fort Wingate Depot Activity
BRAC Operations Branch
Environmental Division

Enclosures
CF:

Dave Cobrain, NMED, HWB
Ben Wear NMED, HWB
Michiya Suzuki, NMED, HWB
Lucas McKinney, U.S. EPA Region 6
Ian Thomas, BRACD
George H. Cushman, BRAC OPS
Alan Soicher, USACE
Saqib Khan, USACE
Admin Record, NM

Admin Record, Ohio