



Certified Mail - Return Receipt Requested

August 3, 2021

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: FINAL 2022 INTERIM NORTHERN AREA GROUNDWATER MONITORING PLAN
REVISION 2, ARMY'S RESPONSE TO THE APPROVAL WITH MODIFICATIONS
DATED MARCH 8, 2021
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-20-004**

Dear Mr. Cushman,

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity (Permittee) *Final 2022 Interim Northern Area Groundwater Monitoring Plan Revision 2, Army's Responses to the Approval with Modifications dated March 8, 2021* (Response), dated May 19, 2021. NMED has reviewed the Response, and hereby issues the following comments.

COMMENTS

1. Permittee's Response to NMED's Approval with Modifications Comment 1, dated March 8, 2021

Permittee Statement: "Please note that the Army has no knowledge of the firefighting chemicals used at the facility as part of the installation activities. Our search of historic documentation did not reveal any information regarding fire suppressants, or the type of fuels used at the facility fire training grounds."

NMED Comment: Since it is not known whether firefighting chemicals were used at the facility, it is possible that aqueous film foaming foam (AFFF) was used during firefighting

training. AFFF is known to yield per- and polyfluoroalkyl substances (PFAS). PFAS compounds are known to cause adverse human health effects and EPA considers PFAS to be an emerging contaminant. Requirements for the evaluation of PFAS are included in NMED's *Risk Assessment Guidance for Site Investigation and Remediation (2019)*. The groundwater in the vicinity of the training area (SWMU 7, Parcel 21) may be affected by PFAS. There are several alluvial and bedrock wells already located in the vicinity of the training area that can be evaluated for the presence of PFAS in the groundwater. Propose to conduct PFAS analysis for the groundwater samples collected from the pertinent wells in the next groundwater monitoring plan update.

2. Permittee's Response to NMED's Approval with Modifications Comment 2, dated March 8, 2021

Permittee Statement: "Please see the clarification below:

- a) In year 2019, as part of the RFI work, 32 new groundwater monitoring wells were installed at the installation.
- b) In year 2020, all wells at FWDA were sampled for the required analysis as listed in Table 5.2, Northern Area Groundwater Sampling Matrix GWMP Version 10.
- c) In year 2020, all wells at FWDA (including the new 32 wells) were also sampled for 1,4-dioxane for two (2) consecutive events (April and October 2020).
- d) During this period, one (1) well (MW-27) had trace levels of 1,4-dioxane and will be sampled again for two consecutive events (April and October 2021).
- e) In year 2020, three (3) additional wells (MW37, MW38, and MW39) were installed as part of the RFI work.
- f) A total of four (4) wells (MW-27, MW37, MW-38, and MW39) will be sampled for 1,4-dioxane during year 2021 for two (2) consecutive events.
- g) In addition to the four (4) wells being sampled for 1,4-dioxane, all 35 newly installed wells from 2019 and 2020 will begin to be sampled for the full suite of analytical for four (4) consecutive events (April and October 2021 and 2022).
- h) To clarify that 1,4-dioxane was sampled for all wells in 2020 the following paragraph was added to Section 5.2, Page 60, Lines 16-21 (RLSO PDF: Page 62, Lines 19-24):

"In NMED's Response to April 16, 2019 Approval with Modification Letter Final Revision 1 Groundwater Periodic Monitoring Report July through December 2017, dated August 15, 2019, NMED requested that all wells with a detection of a chlorinated solvent in the last ten years be sampled for 1,4-Dioxane using EPA Method 8270 Selective Ion Monitoring (SIM). In 2020 all existing wells were sampled for 1,4-Dioxane for two consecutive events (April 2020 and October 2020)."

NMED Comment: Comment 2 requests the Permittee to provide a clarification for whether only 1,4-dioxane was analyzed for during the April 2020 sampling event. Although a detailed explanation is provided, it is still not clear whether only 1,4-dioxane analysis was conducted

during the April 2020 sampling event. The Permittee states that all wells were sampled for the required analysis as listed in Table 5.2, *Northern Area Groundwater Sampling Matrix GWMP Version 10*; however, the document was submitted in 2017, which was approximately two years prior to the time when the 32 groundwater monitoring wells were installed. The statement is unclear. Provide more clear and concise explanation that directly addresses the NMED's comments in future correspondence.

In addition, Comment 2 states, "[i]n this case, the Permittee must conduct 1,4-dioxane analysis in addition to the analyses required for each well during the April 2021 sampling event." NMED presumes that the 32 new wells were only sampled for 1,4-dioxane analysis in April 2020 based on the statement. The wells should have been sampled for the full analytical suite in 2020. If chlorinated solvents are detected in 2021 and 2022, the Permittee must conduct 1,4-dioxane analysis again in 2023, even if 1,4-dioxane was already analyzed and not detected in 2020. The 1,4-dioxane data collected in 2020 for the 32 wells are not usable for any decision-making purpose.

Furthermore, the *Final Groundwater Periodic Monitoring Report January through June 2020*, dated March 2021, indicates that the screening level of 1,4-dioxane is slightly lower than its Limit of Detection (LOD). Unless this issue is resolved, the presence/absence of 1,4-dioxane remains unknown. NMED may require additional 1,4-dioxane analysis in the future unless this issue is resolved. No response required.

3. Permittee's Response to NMED's Approval with Modifications Comment 7, dated March 8, 2021

Permittee Statement: "[t]he field staff have received additional training on how to avoid air bubbles while collecting water quality parameters.

NMED Comment: The *[Response to] Approval with Modifications, Final Revision 1 Groundwater Periodic Monitoring Report, January through June 2018*, dated April 19, 2021, states that downhole probes/sondes are available to measure DO and many other in situ water quality parameters and in situ measurement is a much more effective alternative to displacing air from multiple wells." NMED agrees that in-situ DO measurement using downhole probes is more effective and accurate. Propose to use downhole probes for water quality measurements, where applicable, in future groundwater monitoring plan update. No response required.

4. Permittee's Response to NMED's Approval with Modifications Comment 8, dated March 8, 2021

NMED Comment: The Permittee provided the same response for Comment 2. However, the response is not relevant to Comment 8. The Permittee does not appear to be reading the comment thoroughly. Comment 8 states, "[p]revious groundwater monitoring reports

indicate that chlorinated compounds were detected from groundwater samples collected from wells MW01, MW18D, MW20, MW22D, MW23, TMW11, TMW33, TMW35, TMW40S, TMW47, TMW17, TMW31D and TMW48 at a minimum. Clarify whether 1,4-dioxane analysis was previously conducted for two consecutive events for the above listed wells and analysis was discontinued because 1,4-dioxane was not detected. Otherwise, evaluate the past ten years of VOCs and SVOCs analytical data and propose to analyze 1,4-dioxane using EPA Method 8270 SIM from all monitoring wells where chlorinated solvents have previously been detected." Since this comment was not addressed in the Response, the Permittee must propose to analyze for 1,4-dioxane using EPA Method 8270 SIM in samples collected from all monitoring wells where chlorinated solvents have been detected past ten years in the next groundwater monitoring plan update. Failure to follow NMED direction constitutes noncompliance and may result in an enforcement action.

5. Permittee's Response to NMED's Approval with Modifications Comment 9, dated March 8, 2021

Permittee Statements: "The perceived discrepancy in the plume configuration verses the flow direction is due to the 10-foot contour interval used for the groundwater contour map. While the overall flow direction between the 6,650 and 6,640 contours is towards the west, the gradient direction between wells TMW03, TMW44, TMW22, and TMW45 is towards the north (a total of 3 feet of drop to the north over these 4 well locations)." and, "The additional wells to the monitoring network effectively reduce the distance between data points and increases the percentage of the area covered for collecting data for both groundwater elevation and for groundwater analytical data."

NMED Comment: In order to resolve the discrepancy between the groundwater flow direction and the plume as mapped, the groundwater elevation maps must be revised with an appropriate contour interval in future groundwater monitoring reports. Address this comment in future groundwater periodic monitoring reports.

6. Permittee's Responses to NMED's Approval with Modifications Comments 9 and 10, dated March 8, 2021

Permittee Statement: "The new monitoring wells are presented in Figure 2-4 with a different symbol compared to existing wells, in order to demonstrate where the additional coverage of these wells is and how these areas will contribute to better resolution of plume delineation."

NMED Comment: Comments 9 and 10 request the Permittee to explain how the new wells better delineate the extent of the plumes. Although Figure 2-4 depicts the location of new monitoring wells, it does not explain how these wells better delineate the extent of the plumes. Figures that show both new monitoring wells and the extent of the plumes should have been prepared to explain how the new wells better delineate the extent of the

plumes. Address this comment in future groundwater periodic monitoring reports. Failure to follow NMED direction constitutes noncompliance and may result in an enforcement action.

7. Permittee's Response to NMED's Approval with Modifications Comment 12, dated March 8, 2021

Permittee Statement: "The Army and its subcontractor have been evaluating the LOD and LOQ screening level detection limit issue and Mr. Wear's request. Mr. Wear's request is being processed and is awaiting BRAC headquarters approval and guidance."

NMED Comment: Comment 12 requests the Permittee to provide an anticipated date when the requested information will be submitted to NMED. The response does not provide the information NMED requested. Provide a more clear and concise explanation that directly addresses the NMED's comments in future correspondence.

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

Sincerely,



Ricardo Maestas, Acting Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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File: FWDA 2021 and Reading