



**DEPARTMENT OF THE ARMY**  
**OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT**  
**600 ARMY PENTAGON**  
**WASHINGTON, DC 20310-0600**

October 22, 2019

Base Realignment and Closure Division

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

RE: Final Groundwater Periodic Monitoring Report, January through June 2018, Response to June 14, 2019 Disapproval Letter, Fort Wingate Depot Activity, McKinley County, New Mexico, EPA ID#NM6213820974, HWB-FWDA-19-001

Dear Mr. Kieling:

This letter presents the Army's responses to the New Mexico Environment Department (NMED) Disapproval letter dated June 14, 2019, regarding the Final Groundwater Periodic Monitoring Report, January through June 2018 for the Fort Wingate Depot Activity (FWDA) under RCRA Permit USEPA ID No. NM6213820974. The following are the Army's responses to comments detailing where each comment was addressed and cross-referencing the numbered NMED comments. This letter also transmits the revised report and a red-line strike-out electronic copy of the edits.

## Comments

### 1) Laboratory Analytical Reports

**NMED Comment:** The Permittee provided large quantities of data with no indication where to locate a specific sample within a specific analytical laboratory report. NMED's November 7, 2018 *Disapproval Final Permittee-Initiated Interim Measures Report Parcel 6, Revision 1* states:

For every document that includes analytical data, provide a link for each specific sample to a specific lab report filename (if multiple files are provided) or to a page number in the appendix where the specific lab report can be found (if multiple lab reports are combined into one large file). For Appendices C and F, the lab reports are indexed by lab report number. The Permittee must provide a link to the lab report number for each analyte. For Appendix J, no indexing is provided and multiple laboratory reports are combined. The Permittee must either provide indexing for each report and indicate which particular report contains a particular sample, or provide specific page numbers for each sample ID that indicates where the sample can be found in the lab reports. This information can be provided either in a new table or in the analytical data electronic database.

In addition, these laboratory reports are level IV reports. The Permittee has previously been directed to not submit level IV analytical laboratory reports. NMED's November 7, 2018 also states:

The Report includes Level IV reports from the analytical laboratories. This has resulted in over 18,000 pages of laboratory reports for this Report. These reports are unneeded and cumbersome. NMED requests that only Level II analytical laboratory reports be included in all submittals. Revise the Report by removing Level IV analytical reports and including Level II analytical reports.

Failure to follow NMED direction constitutes noncompliance and may result in an enforcement action. Remove Level IV analytical reports from the revised Report and replace them with Level II analytical reports.

**Army Response:** Comment noted. The Army has previously provided electronic data in Access or Excel format for groundwater related reports (periodic monitoring reports) and included PDF analytical reports which are bookmarked and keyword searchable with any commercially available PDF reader software. This revised report will contain bookmarked pdfs of the analytical reports and an access database of the data.

Per email correspondence with Mr. Wear on 01 August 2019, the Army proposes for future reports to present a searchable access or excel file that will provide for each analytical record the sample ID, results, flags and the applicable laboratory report number. Also, the Army will present pdf level II analytical reports. Each laboratory report will have the report number be the electronic file name, for easy reference to the report number provided for each analyte in the access or excel file.

## 2) Inaccuracies/Discrepancies

**NMED Comment:** The report contains multiple inaccuracies and discrepancies. Some of them are listed as follows:

- a. **Section 4.1.1, Northern Area Alluvial Groundwater System, lines 38-40, page 4-1:** The Permittee states, "this mound may be the result of leakage from the inactive artesian water supply Well 69. Well 69 is currently used as a minor non-potable water supply at FWDA." The statement indicates that Well 69 is inactive but used as a non-potable water supply well. This statement is contradictory. Resolve the discrepancy in the revised Report.

**Army Response, Section 4.1.1, Northern Area Alluvial Groundwater System, page 4-1 lines 38-43, and page 4-2 lines 1-4:** Concur. The statement has been revised to say: "Groundwater supply Well 69 is screened in the deep, confined conditions in the Glorieta sandstone aquifer resulting in artesian conditions. Continuous upward flow of uncontaminated groundwater through the borehole conduit of Well 69 and out into the alluvial aquifer, sustains the persistent 1- to 2-foot high groundwater mound seen in both the January 2018 and April 2018 monitoring events. Water levels from the January event contoured at a 1-foot interval shows the mound can influence water levels, and thus flow directions, up to several hundred feet outward from Well 69. This mound significantly influences groundwater flow and quality in the alluvial aquifer of the Administration Area as reflected by the flat area of the 5-foot potentiometric contours of Figure 4-1 and Figure 4-2. Well 69 is currently used as a minor non-potable water supply at FWDA."

- b. **Section 5.2.5, Other Organic Compounds, line 24, page 5-5:** The Permittee states, "2- chloronaphthalene (0.70 J ug/L at alluvial monitoring well TMW47) [is the highest chloromethane detection]." The compound is also detected in bedrock

monitoring well TMW31D according to Table 5-6. Since the highest detections in both alluvial and bedrock wells are listed throughout the Report, the detection in bedrock well TMW31D must also be included in the statement for consistency. Correct the statement in the revised Report.

**Army Response, Section 5.2.5 lines 26-31:** Concur. The highest concentrations detected from alluvial and bedrock wells were added to Section 5.2.5.

- c. **Figure 4-4, Northern Area Bedrock Groundwater Elevation Map April 2018:** Background well BGMW10 in Figure 4-4 is designated as BMW10 in Table 4-2, Northern Area Groundwater Elevations (Wells Screened in Bedrock). Resolve the discrepancy in the revised Report.

**Army Response, Table 4-2:** Table 4-2 was corrected to list well name BGMW10.

- d. **Figure 5-7, Northern Area VOC Concentrations vs Alluvial Groundwater, April 2018:** The acetone concentration in the groundwater sample collected from well TMW41 is recorded as 1.6 ug/L in Figure 5-7. However, according to *Table 5-5, Summary of Volatile Organic Compound Analytical Results (ug/L)*, the acetone concentration is recorded as 1.6 UJ ug/L, indicating not detected. Resolve the discrepancy in the revised Report

**Army Response, Figure 5-7:** Figure 5-7 was corrected to show ND (not detected) for acetone at well TMW41.

- e. **Figure 5-7, Northern Area VOC Concentrations in Alluvial Groundwater, April 2018:** The methyl acetate concentration in the groundwater sample collected from well TMW46 is recorded as 1.5 ug/L in Figure 5-7. However, according to Table 5-5, the methyl acetate concentration is recorded as 1.5 UJ ug/L, indicating not detected estimated. Resolve the discrepancy in the revised Report.

**Army Response, Figure 5-7:** Figure 5-7 was corrected to show ND (not detected) for methyl acetate at well TMW46.

- f. **Figure 5-8, Northern Area VOC Concentrations in Bedrock Groundwater, April 2018:** The carbon disulfide concentration in the groundwater sample collected from well TMW31D is recorded as 0.37 ug/L in Figure 5-8. However, according to Table 5-5, the carbon disulfide concentration is recorded as 0.37 J ug/L. Resolve the discrepancy in the revised Report.

**Army Response, Figure 5-8:** Figure 5-8 was corrected to show 0.37 J ug/L for carbon disulfide at well TMW31D.

- g. **Figure 5-9, Northern Area SVOC and TPH Concentrations in Alluvial Groundwater, April 2018:** The concentration unit for TPH-DRO is shown as milligrams per liter (mg/L) in Figure 5-9. However, according to Table 5-6, Summary of Semi-volatile Organic Compound and Total Petroleum Hydrocarbons Analytical Results (ug/L) and the text of Section 5.2.5, the unit is shown as micrograms per liter (ug/L). Resolve the discrepancy in the revised Report.

**Army Response, Figure 5-9; Table 5-6; and Section 5.2.5, Page 5-6, Lines 7-25:** Comment noted. Figure 5-9 has been edited to include NMEDs screening values for

DRO and GRO. Section 5.2.5 has been corrected, and conversions between µg/L and mg/L have been provided to enhance clarity. Additional language in Section 5.2.5 has been added stating: "For consistency in this report, the NMED screening value for diesel #2/crankcase oil is converted to mg/L as DRO analytical results are presented from the laboratory as mg/L." Table 5-6 previously had a footnote indicating the units for DRO were mg/L. The table has been edited to make these units more prominent.

- h. Figure 5-9, Northern Area SVOC and TPH Concentrations in Alluvial Groundwater, April 2018:** The TPH-DRO concentration in the groundwater sample collected from well TMW34 is recorded as 0.6 J mg/L in Figure 5-9. However, according to Table 5-6, the TPH- DRO concentration is recorded as 0.06 J ug/L. Resolve the discrepancy in the revised Report.

**Army Response, Figure 5-9:** Figure 5-9 was corrected to show 0.06 J mg/L for TPH-DRO at well TMW34. Table 5-6 previously had a footnote indicating DRO results were in mg/L. Table 5-6 has been revised to make the DRO units more apparent to the reader. See response to comment "g".

- i. Figure 5-9, Northern Area SVOC and TPH-Concentrations in Alluvial Groundwater, April 2018:** The phenanthrene concentration in the groundwater sample collected from well TMW43 is recorded as 0.295 ug/L in Figure 5-9. However, according to Table 5-6, the phenanthrene concentration is recorded as 0.29 J ug/L. In addition, Table 5-6 indicates that acetophenone is positively detected at 0.33 Jug/Lin well TMW43; however, the detection of acetophenone is not recorded in Figure 5-9. Resolve the discrepancies in the revised Report.

**Army Response, Figure 5-9:** Figure 5-9 was corrected to show 0.33 J µg/L for acetophenone and 0.29 J µg/L for phenanthrene at well TMW43.

- j. Figure 5-10, Northern Area SVOC and TPH Concentrations in Bedrock Groundwater, April 2018:** Table 5-6 indicates that 2-chloronaphthalene is positively detected at 0.31 J ug/L in well TMW31D; however, the detection of 2-chloronaphthalene is not recorded in Figure 5-10. Resolve the discrepancy in the revised Report.

**Army Response, Figure 5-10:** Figure 5-10 was corrected to show 0.31 J µg/L for 2-chloronaphthalene at well TMW31D.

**3) Executive Summary, Lines 37-38 ES-1**

**Permittee Statement:** "Army will resume groundwater monitoring activities within Parcel 3 once hazardous operations are completed."

**NMED Comment:** The Final Revision 1 Parcel 3 Groundwater RCRA Facility investigation Report, dated March 31, 2019 states, "The Army will prepare a separate simplified groundwater monitoring work plan for Parcel 3 groundwater monitoring for 8 quarterly events, upon approval of requested funding." The statement is contradictory. Correct the statement in the revised Report, as necessary. As a reminder, it is incumbent upon the Permittee to provide appropriate funding to meet the requirements of the FWDA RCRA Permit.

**Army Response, Executive Summary, page ES-1, Lines 37-39:** Concur. The statement has been edited to say: "The Army will resume groundwater monitoring activities within Parcel 3 once replacement wells and additional Parcel 3 background wells have been installed following the completion of Parcel 3 hazardous operations."

The Army is in agreement that it will prepare the subject document. However, the Army needs to install replacement wells that have been abandoned as a result of Interim soil removal within and around HWMU area in Parcel 3. The Army proposes to prepare a Background/Replacement Wells Work Plan and submit it for NMED review by December 31, 2019. Pending NMED approval of the Work Plan the Army will install and develop the wells after the fieldwork for the HWMU removal project is completed. This is due to operational safety distances, well proximity to HWMU excavations, and heavy ground disturbances by equipment in the HWMU which could affect groundwater concentrations. An abbreviated groundwater monitoring plan will be prepared after the installation and development of the background/replacement wells.

- 4) **Executive Summary, lines 42-43, page ES-1, and Section 4.1.1, Northern Area Alluvial Groundwater System, line 42, page 4-1 and line 1, page 4-2**  
**Permittee Statements:** "Hydraulic gradients in alluvium ranged from 0.002 foot per foot (ft/ft) to 0.03 ft/ft."

**NMED Comment:** Although the reference points for groundwater hydraulic gradients in the bedrock unit are discussed in Section 4.1.2, Northern Area Bedrock Groundwater System, the reference points for the alluvial unit is not discussed in the Report. Provide the reference points used to calculate the alluvial groundwater gradients in the revised Report.

**Army Response, Section 4.1.1 Northern Area Alluvial Groundwater System, page 4.2 lines 5-8:** Concur. Section 4.1.2 has been edited to list the reference points used to calculate the alluvial groundwater gradients.

- 5) **Executive Summary, lines 3-5, page ES-2, and Section 4.1.2, Northern Area Bedrock Groundwater System, lines 16-18, page 4-2**  
**Permittee Statements:** "Groundwater elevation in the bedrock groundwater unit is slightly higher than in the alluvial groundwater unit and exists under hydraulically confined conditions in most of the northern area."

**NMED Comment:** According to Table 4-1, Northern Area Groundwater Elevations (Wells Screened in Alluvial Sediments), the groundwater elevations in alluvial wells TMW31S and TMW39S are recorded as 6,669.69 feet and 6,671.09 feet, respectively in April 2018.

According to Table 4-2, Northern Area Groundwater Elevations (Wells Screened in Bedrock), the groundwater elevations in bedrock wells TMW31D and TMW39D are recorded as 6,669.66 feet and 6,670.59 feet, respectively in April 2018. Groundwater elevation in the alluvial groundwater unit is slightly higher than in the bedrock groundwater unit at these locations. Evaluate the accuracy of the statements and correct the statements in the revised Report, as necessary.

**Army Response:** Comment noted. The Army's original statement says in MOST of the northern area elevation in the bedrock groundwater unit is slightly higher than in the

alluvial groundwater unit. The statement does not say in ALL of the northern area. The instance that NMED has drawn attention to is the one location where the alluvial groundwater is higher than the bedrock groundwater level. Outside of this location, bedrock groundwater is higher than alluvial groundwater, making MOST of the northern area bedrock groundwater levels, not ALL, higher than the alluvial groundwater levels. The statement is correct and accurate as written.

**6) Executive Summary, lines 21-23, page ES-2**

**Permittee Statement:** "The nitrate plume in the alluvial groundwater unit appears to originate from the trinitrotoluene (TNT) Leaching Beds (solid waste management unit [SWMU] 1) and extends downgradient to the Administration Area."

**NMED Comment:** According to Figure 5-1, Northern Area Nitrate and Nitrite Concentrations in Alluvial Groundwater, April 2018, the nitrate concentrations in the vicinity of the TNT Leaching Beds are the highest; the nitrate concentrations in groundwater samples collected from alluvial wells TMW03 and TMW40S are recorded as 120 mg/L and 140 mg/L, respectively. It is apparent that one of the nitrate sources is the TNT Leaching Beds.

However, the elevated nitrate level in the vicinity of the TNT Leaching Beds does not appear to be continuous toward the Administration Area. The nitrate concentrations in groundwater samples collected from alluvial wells TMW34 and TMW46 are recorded as 77 mg/L and 78 mg/L, respectively. These wells are located within and downgradient of the Administration Area. The nitrate levels directly downgradient of the TNT Leaching Beds and upgradient of the Administration Area (area located between the TNT Leaching Beds and Administration Area) are lower than those recorded in wells TMW34 and TMW46. A separate source of the nitrate plume that extends west/northwest from the Administration Area may be present. To better understand the characteristics of the nitrate plume(s) in alluvial groundwater, include additional concentration contour lines (e.g., 5, 10, 20, 50, 100 mg/L) in Figure 5-1. In addition, discuss whether or not there is a potential for a more recent release from the Administration Area that affects nitrate level in groundwater (e.g., sewer line leaks) in the revised Report.

**Army Response:** Comment noted. The well network to monitor the alluvial nitrate plume currently is not dense enough to provide additional contour lines within the nitrate plume boundary. Additional contour lines would largely be estimated, especially within the administration area around the gas station. The estimated contours would not provide a sound representation of the plume's characteristics beyond what is currently presented. The Supplemental Northern Area Groundwater RFI is currently installing additional data points that will provide a network to accurately define the plume and allow for generation of contours from data and not from interpretation.

In response to NMED direction to conduct a separate investigation, please note that the Army will address the outstanding requirements for the subject task separately to ensure all NMED requirements for follow on work are budgeted in the Army Funding Program and captured in the scope of work for a new contract.

**7) Executive Summary, lines 10-13, page ES-3, and Section 5.2.6, Metal, lines 2-6, page 5-7**

**Permittee Statements:** "Background groundwater concentrations of dissolved or total metals have not been accepted by NMED for FWDA, so it cannot clearly be

demonstrated whether the detected concentrations are a result of natural background conditions or anthropogenic sources of contamination."

and,

"It cannot clearly be demonstrated whether the detected concentrations are a result of natural conditions or anthropogenic sources of contamination because background metal groundwater concentrations have not yet been accepted by the regulators for FWDA. Therefore, no contaminant plume maps were created for the total or dissolved metals data, and results are not discussed in this GPMR."

**NMED Comment:** The Permittee was directed to submit a background groundwater monitoring well completion report following installation as directed by the NMED's Approval letter, dated February 16, 2018. Since background groundwater monitoring wells BGMW07, BGMW08, BGMW09, and BMW10 (sic) were installed at this time, submit the well completion report for the well installations no later than October 25, 2019. In addition, evaluate background metal concentrations in the northern groundwater area in a separate submittal. Revise the Report to incorporate the provision

**Army Response:** Concur. The Background monitoring wells installation report was submitted to NMED on June 14, 2019.

Please note that the Background Metals Concentration Report in the northern groundwater area is contracted to a new Contractor. The new Contractor is currently reviewing all current data and collecting new data. The Background Metals Concentration report is scheduled to be submitted to NMED in early 2020.

**8) Executive Summary, lines 21-22 and 26-28, page ES-2**

**Permittee Statements:** "The nitrate plume in the alluvial groundwater unit appears to originate from the trinitrotoluene (TNT) Leaching Beds (solid waste management unit [SWMU] 1)"

and,

"The collocated perchlorate and nitrate plumes appear to have a common source at the Building 528 Complex (SWMU 27)."

**NMED Comment:** The statements indicate that the nitrate plume in the alluvial groundwater originates from the TNT Leaching Beds while the nitrate plume in the bedrock groundwater originates from the Building 528. Since the alluvial nitrate plume overlies the bedrock nitrate plume in the vicinity of bedrock well TMW02, the source of nitrate in the bedrock aquifer may also originate from alluvial groundwater that contains concentrations of nitrate. Evaluate whether alluvial groundwater migrates into the bedrock aquifers and is a source of the nitrate contamination in the revised Report.

**Army Response, Executive Summary, page ES-2 lines 37-41 and page ES-3 lines 1-2:** Concur: A paragraph has been added in the Executive Summary Section which references the nitrate plume investigation in the Supplemental GW RFI. The paragraph states: "The alluvial nitrate plume overlies the bedrock nitrate plume in the vicinity of bedrock well TMW02. TMW02 has detections of contaminants consistent with adjacent alluvial wells, and the potentiometric surface elevation is consistent with adjacent alluvial wells. The Final Groundwater A Supplemental RCRA Facility Investigation (RFI) Work Plan, Revision 4, Fort Wingate Depot Activity, McKinley County, New Mexico (Sundance, 2018a), proposes to investigate contaminant migration from the alluvium to the bedrock groundwater zone in this area."

- 9) **Section 4.1.1, Northern Area Alluvial Groundwater System, lines 36-39, page 4-1**  
**Permittee Statement:** "The cistern is no longer in service, and the groundwater mound was expected to attenuate over time. However, the groundwater mound is still observed in the water-level data for monitoring well MW02. This mound may be the result of leakage from the inactive artesian water supply Well 69."

**NMED Comment:** Despite the overall decreasing trend in groundwater elevations at the facility, the groundwater elevation in well MW02 has increased in recent years according to Table 4-1. Since well MW02 is located close to Well 69, the increase in groundwater elevation may be the result of the leakage. Comment 7 in the NMED's Disapproval Final Groundwater Periodic Monitoring Report, July through December 2017, dated September 4, 2018, directed the Permittee to submit a work plan to investigate whether Well 69 is leaking. The Permittee's response states, "[t]he Army is currently contracting an investigation by visual inspection (lowering a video camera) and to be followed up with abandonment of Well 69. The Video report including results of that investigation will be provided to NMED." The Video report was received on May 29, 2019 and provided no useful information. The Permittee has been directed to re-conduct the video log.

**Army Response:** Concur. The Army submitted the new Video Log on July 30, 2019.

- 10) **Section 5.1, Water-Quality Parameters, line 33, page 5-1**

**Permittee Statement:** "DO values ranged from 0.0 to 15.96 mg/L... "

**NMED Comment:** The solubility limit of oxygen in fresh water at a temperature of 25 degree C under atmospheric pressure is approximately 8 mg/L. The field instrument must be calibrated daily (according to manufacturer specifications) prior to conducting the measurements in all future sampling events. The required calibration procedure for the instrument must be described in the appropriate section of the revised Report. In addition, field technicians must be trained to identify "out of spec" conditions so that remedies can be implemented in the field. If the issue cannot be resolved, investigate alternate instruments for measuring DO concentrations.

**Army Response, Section 2.3, pages 2-2 and 2-3; Section 5.4, Page 5-8, lines 14-29; and Appendix C:** Concur. A reference to Appendix C, which now contains calibration logs, has been added to Section 2.3, page 2-3, line 36. Subsequent appendices have been reorganized and re-lettered. The calibration procedure from the manufacturer's manual has been added to Section 2.3, pages 2-2 and 2-3. Additional detail regarding a calibration field variance was added to Section 5.4, page 5-8, lines 14-29.

Please note that at wells sampled by disposable bailer the dissolved oxygen probe likely was not being completely submerged within the sample, as the readings were likely collected from a partial volume of water from the bailer as the wells' yield and recharge is low. Also, collecting measurements from a disposable bailer and from Bennett pump sampling ports introduces the groundwater to ambient air. This automatically biases the DO reading high and does not provide a representative value at wells measured with a bailer or a Bennett pump. As stated in the Parcel 3 Groundwater RFI response, the Army considered a different manufacturer of a comparable instrument and changed to a YSI ProDSS water quality meter for the October 2018 sampling event to address this issue.



**11) Section 5.2.2, Explosive Compounds, lines 17-18, page 5-3**

**Permittee Statement:** "Hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine (RDX) (1,000 µg/L at alluvial monitoring well TMW40S) [was the highest RDX detection]."

**NMED Comment:** Comment 10 in the NMED's September 4, 2018 Disapproval directs the Permittee to propose to conduct explosive compound analysis for the groundwater samples collected from well TMW13 located near TMW40S where the highest RDX detection was recorded. Update the upcoming Interim Facility-Wide Groundwater Monitoring Plan (IFGMP) accordingly.

**Army Response:** Comment noted. In response to NMED's original direction from Comment 10 in the NMED's September 4, 2018 Disapproval, the Army preemptively sampled TMW13 for explosives during the October 2018 monitoring event. The Army also sampled TMW13 for explosives in April 2019 following receipt of the April 16, 2019 Approval, Comment 6, which NMED stated "The Permittee must complete minimum of two rounds of explosives analysis. The results must be evaluated to determine if there are detections of explosive compounds that warrant the inclusion of explosive compound analysis in the IFGMP updates. In the applicable monitoring reports, discuss the results of the analysis for groundwater samples collected from well TMW13."

The Army will report the findings at TMW13 in the July to December 2018 GPMR and the January to June 2019 GPMR. If both rounds of samples are non-detect for explosives, the Army will propose not to include explosives analysis at TMW13 in the next IFGMP update.

Please note the explosives results for TWM13 in October 2018 and April 2019 were non-detect. Historically, TMW13 was sampled for explosives in October 1998, February 1999, October 2002, March 2003, May and October 2008, and April 2009, with all explosives results non-detect.

**12) Section 5.2.3, Perchlorate, lines 18-20, page 5-4**

**Permittee Statement:** "This Supplemental RFI Work Plan proposes locations for additional groundwater monitoring wells necessary to further delineate the alluvial and bedrock groundwater perchlorate contaminant plumes."

**NMED Comment:** The supplemental RFI Work Plan proposes alluvial wells TMW54 and TMW56 and bedrock wells TMW50, TMW58 and TMW63 that may further delineate the perchlorate plumes. Additionally, the *Letter Work Plan Downgradient Alluvial Aquifer Investigation & Installation of One Additional Well*, dated October 11, 2018, proposes the additional bedrock well TMW64 which should aid in delineation of the eastern extent of the bedrock groundwater perchlorate plume. This reference must also be included in the statement. Revise the Report accordingly.

**Army Response, Section 5.2.3, page 5-4 lines 21-24:** Concur. The requested reference to the letter work plan and proposed well TMW64 has been added to Section 5.2.3, page 5-4 lines 21-24, and in Section 7.0 References.

**13) Section 5.2.4, Volatile Organic Compounds, line 3, page 5-5, and Section 5.6, New Findings, lines 9-11, page 5-8**

**Permittee Statements:** "Methyl tert-butyl ether [MTBE] (0.59 J µg/L at bedrock monitoring well TMW49) [was the highest MTBE detection]."

and,

"No new findings were identified from monitoring data collected during the monitoring event described in this GPMR. Monitoring data are generally consistent with historical data except as discussed below."

**NMED Comments:** The second statement is not accurate. MTBE was not previously detected at the facility. Discuss the potential source of MTBE in the revised Report. Include discussion of the MTBE detection in Section 5.6 of the revised Report.

**Army Response:** Comment noted. MTBE has been previously detected at FWDA nine times from 2003 through 2016. All detections were at concentrations less than 1 mg/L and were estimated "J-flagged". The screening value for MTBE is 100mg/L. Based upon the low frequency and low level of detections, the Army does not believe these results constitute new findings and proposes that monitoring for MTBE in the VOCs analyses be continued.

**14) Section 5.2.5, Other Organic Compounds, lines 32-33, page 5-5**

**Permittee Statement:** "No regulatory groundwater screening values were identified for [total petroleum hydrocarbons diesel range organics (TPH-DRO)] and [total petroleum hydrocarbons gasoline range organics (TPH-GRO)]."

**NMED Comment:** Comment 13 in the September 4, 2018 NMED's Disapproval directs the Permittee to evaluate the detections relative to the screening levels listed in the Risk Assessment Guidance for Site Investigations and Remediation Volume I Soil Screening Guidance for Human Health Risk Assessments (Guidance), dated March 2017. The updated February 2019 Guidance is available at this time and lists the screening levels for TPH-DRO and TPH-GRO as 16.7 ug/L (Diesel #2/Crankcase Oil) and 10.1 ug/L (Gasoline), respectively. Include the screening levels in the revised Report.

**Army Response, Section 5.2.5, page 5-6 lines 10-19; Figure 5-9; Table 5-6:** Concur. Screening levels from the NMED RAG have been added to Section 5.2.5, page 5-6 lines 10-19, and are also indicated on Figure 5-9 under "notes" and Table 5-6 footnotes. Please see response to Comment 2 letter "g".

**15) Section 5.3, Open Burn/Open Detonation Area Analytical Results, lines 14-17, page 5-7**

**Permittee Statement:** "No historical analytical results are available for monitoring events after April 2013. Access to the OB/OD Area has not been permitted for periodic monitoring since April 2013 due to explosive hazards associated with excavation and removal of UXO and MEC."

**NMED Comment:** The May 2017 groundwater monitoring event conducted in Parcel 3 is part of the periodic monitoring event. Accordingly, the statement is not accurate. Revise the Report for accuracy. Also, refer to Comment 3.

**Army Response, Section 5.3 Open Burn/Open Detonation Area Analytical Results, page 5-7:** Comment noted. The statement in Section 5.3 was edited to read as follows: "No historical analytical results are available for monitoring events after April 2013. A Groundwater RFI was conducted in 2017 that generated groundwater analytical results and was reported under a separate cover. Access to the OB/OD Area has not been permitted for periodic monitoring since April 2013 due to explosive hazards associated

with excavation and removal of UXO and MEC. Periodic monitoring will resume at the completion of MEC operations.”

Please note that May 2017 data were submitted as part of the original Parcel 3 RFI Report submission. Per NMED's direction (Comment 1, NMED NOD letter dated October 17, 2019) the data were removed from the report as it was not within the RFI scope, thus the data were not collected in accordance with an approved Plan and not usable for decision making purposes. Please see response to Comment 3.

If you have questions or require further information, please call me at (505) 721-9770.

Sincerely,

Mark Patterson  
BRAC Environmental Coordinator

Enclosures

CF:

Dave Cobrain, NMED HWB  
Ben Wear, NMED HWB  
Michiya Suzuki, NMED  
Ian Thomas, BRACD  
Mark Patterson, FWDA BEC  
Steve Smith, USACE  
Saqib Khan, USACE SWT  
Sharlene Begay-Platero, Navajo Nation  
Mark Harrington, Pueblo of Zuni  
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George Padilla, Navajo BIA  
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Admin Record, OH/NM