



**DEPARTMENT OF THE ARMY**  
FORT WINGATE DEPOT ACTIVITY  
P.O. BOX 268  
FORT WINGATE, NM 87316

November 27, 2017

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: Army's Response to Comments, New Mexico Environmental Department Approval with Modifications Letter dated 31 October 2017, Parcel 21/SWMU 1, Interim Measures Work Plan

Dear Mr. Kieling:

This letter is in response to the New Mexico Environmental Department (NMED) Approval with Modifications letter dated October 31, 2017, reference number HWB-FWDA-16-007 regarding Parcel 21/SWMU 1, Interim Measure Work Plan (IMWP). The following are the Army's responses to NMED comments, detailing where each comment was addressed and cross-referencing the numbered NMED comments. This letter also transmits binders and replacement pages for those changes within the IMWP and a red-line strike-out electronic copy of the edits.

## **GENERAL COMMENTS**

### **1. Binder Size**

**NMED Comment:** The Permittee provided a binder that is too small for the size of the Plan. The small size of the binder rings results in ripped pages when pages are turned. For all future reports and work plans, provide adequately sized binders. Provide appropriately sized binders for the two copies of the Plan.

**RESPONSE:** Concur. Two appropriately-sized binders have been included with the replacement pages.

### **2. Revisions**

**NMED Comment:** The Permittee did not provide any indication in the title of the document that this document is a revision. To facilitate document tracking, the Permittee must provide a revision number in the title and on the cover of all revised documents submitted to NMED for review. Provide replacement title and cover pages for the Plan. Include these with the replacement binders from Comment 1.

**RESPONSE:** Concur. This re-submittal is designated Rev. 2 (following Rev. 0 and Rev. 1 submitted 18 July 2016 and 29 September 2017, respectively. Revised title and cover pages have been included in this re-submittal.

### 3. Tables

**NMED Comment:** The Permittee has provided a document that is difficult to review. The organization of the document is inconsistent. For example, Table 2-1 is embedded in the text of Section 2, while Tables 2-2 through 2-6 are located at the end of Section 2. For all tables, locate the tables in a "Tables" section at the end of the report, but before the appendices. In addition, all tables that run across multiple pages must include the table number and title at the top of each page.

Also, in Section 4 of the Plan, the Permittee has included multiple tables across multiple pages seemingly under one table number and title. For instance, Table 4-2, Laboratory Quality Control Limits – Solid Matrix, appears to be six or seven different tables across five pages, but the table number and title are only provided on page 4-17. Each table must be numbered and titled within the work plan, and those table numbers and titles must be included on every page of the table. Provide replacement pages with corrected tables address the issues above.

**RESPONSE:** Concur. The IMWP has been revised to remove tables from within chapters and present them in a "Tables" section following the References section and prior to appendices. Additionally, table numbers and titles have been added to each page for those tables that span multiple pages.

### 4. Unreviewed/Unapproved Appendices

**Permittee Statement:** From the Permittee's Response to Comment 12, "[t]he Army has included the following appendices containing specifications, detailed approaches, and standard operating procedures as supplemental information. These are not full documents or reports included as appendices that require NMED review/approval. Appendix A – Backfill Soil Analytical Data is included electronically as reference for soil that will be used as backfill in the leaching beds."

**NMED Comment:** Comment #12 of NMED's November 1, 2016 Disapproval letter directed that the Permittee not include the Asphalt Road Construction Specifications in the Appendices. The comment, as well as previous comments, requested that the Permittee refrain from submitting full reports as appendices. The statement above did not list the Asphalt Road Construction Specifications as included in the Plan. But, in Appendix D, Asphalt Road Construction Specifications, a 2008 report from the NM Department of Transportation title Pavement Type Selection and Design Guideline that is not site specific was nevertheless included in the revised Plan. The Appendix title is also misleading in that the appendix provides no actual construction specifications for the site. Appendix D was not reviewed by NMED, and approval of Plan does not constitute approval of Appendix D. The Permittee must not include these types of appendices in any future documents.

**RESPONSE:** Concur. The Asphalt Road Construction Specifications (Appendix D) has been removed from the IMWP. Appendix D now contains Responses to NMED Comments (formerly Appendix E).

### 5. Figures

**NMED Comment:** Figures 2-4 and 3-4 through 3-8 contain scale discrepancies. The "graphic" scales and the "engineering" scales are not in agreement. In some cases, the text

included with the graphic scale is not in agreement with the graphic scale. In addition, Figures 3-4 through 3-7 contain conflicting figure numbers in the figure titles. Ensure that all information on figures is accurate. Provide replacement figures to correct these issues.

**RESPONSE:** Concur. Figure scales and numbers have been corrected. Please note that engineering scale is accurate on a map size of 11x17.

## 6. Geologic Structure

**NMED Comment:** According to the TNT Leaching Bed Soil Boring Test Results and Development of Site-Specific Dilution Attenuation Factors, a Geoprobe™ investigation was conducted from March 24 through April 5, 2014 and thirty-four borings were advanced to approximately 35 feet (ft.) below ground surface (bgs). During the investigation, drilling refusal was encountered within 20 ft. bgs while advancing borings SB04, SB09, SB 14 and SB 18. The location of these soil borings appears to be aligned with the apparent geologic structural feature identified in Figure 4-3 and Figure 4-4 of the Permittee's October 2016 Groundwater Periodic Monitoring Report, January through June 2016. During excavation of the TNT Leaching Beds, the Permittee must visually inspect the cause of the refusal in the vicinity of borings SB04, SB09, SB14, and SB18 and report all findings in the Interim Measures Report. See Comment 5 in NMED's August 7, 2017 Disapproval for Groundwater Periodic Monitoring Report, January through June 2016. Provide replacement pages that propose visual inspection of and reporting on the apparent geologic structure.

**RESPONSE:** Text has been added to Section 3.6.1 stating that during excavation of the post-1962 leaching beds, the geologic structure in the vicinity of SB04, where refusal was encountered at 11 ft bgs, will be visually inspected, and observations discussed in the IM Report. Please note that the planned excavation extent in the post-1962 leaching beds does not encompass those areas where SB09, SB14, and SB18 were installed. However, in the event that any is anomaly discovered/observed, it will be presented in the IM Report.

## 7. Residual contaminated soils and groundwater

**NMED's Comment:** Explosives were previously detected at a depth of 45 ft bgs in the TNT Leaching Beds. Residual soil contamination will likely remain below the total depth of the excavation (35 ft. bgs), and the Permittee will need to address the effect on groundwater. Once the excavation is backfilled, it will be difficult to access the excavation floors and to prevent residual contamination from migrating to groundwater; therefore, a contingency measure addressing residual soil contamination should be developed before the excavation is backfilled. For example, chemical reductants or biological amendments may be placed on the excavation floors where residual soil contamination is detected. Through infiltration and percolation, the chemical reductants or biological amendments may migrate from the soil to the groundwater along with the contaminants and could aid in degrading or immobilizing contaminants. Alternatively, sheet(s) of impermeable liner (e.g., high density polyethylene (HDPE)) may be placed above the excavation floor to minimize the effect of infiltration and percolation, thereby eliminating contaminant migration from soil to groundwater. This is not a requirement, but NMED recommends assessing the value of these types of measures prior to backfilling the excavation. Whether or not the Permittee implements such a measure, an in-depth discussion of how residual soil contamination is likely to affect the groundwater is required in the Interim Measures Report.

**RESPONSE:** Concur. The Army will evaluate contingency measures to address the potential of migration of residual contaminants to groundwater left in the soil upon completion of the excavation. This evaluation will be based upon confirmation sample data prior to backfilling. Use of chemical reductants, biological amendments, liners, or other contingency measures will be evaluated as appropriate. The Army will coordinate the activities with the NMED. The Army will seek the NMED's approval should a contingency measure be selected. A discussion of these efforts and whether residual soil contamination may impact groundwater will be included in the IM Report.

### **SPECIFIC COMMENTS**

#### **8. Section 3.11, Soil Staging Area Samples, p. 3-14**

**Permittee Statement:** "Safety-Kleen/Clean Harbors will sample and analyze the waste for:

- RCRA 8 metals (must be below RCRA TCLP criteria)
- pH (must be between 4 to 10.5 pH)
- Flashpoint (less than 200 °F)
- VOCs including halogenated compound content and perchloroethylene (total organic halogens must be less than 1,000 mg/L)
- Water content (if material is a sludge or solid)"

**NMED Comment:** It appears relevant compounds at the site (e.g., explosives) are not included in the analytical suites. Explosive compounds are expected to be detected at the site and they are included as target analytes in soil characterization. Revise the Work Plan to include relevant compounds for aqueous waste characterization. NMED must approve of the proposed analytical suite prior to the start of field work.

**RESPONSE:** Concur. Section 3.11, Aqueous IDW/Excavation Stormwater Disposal has been revised to specify that characterization samples for stormwater and decontamination fluids will include explosives.

#### **9. Section 4.1.1, Soil Staging Area Samples, p 4-1**

**Permittee Statement:** "Baseline and post-stockpile soil sampling will be conducted throughout the temporary soil stockpile staging area footprints. Both baseline and closure (after the stockpiles are removed) sampling for the two staging areas will be conducted by dividing each into six equal-sized zones. One composite sample comprised of nine randomly placed aliquots will be collected from each zone and analyzed for constituents presented in Table 4-1."

**NMED Comment:** The surface sampling method proposed above for the stockpile staging areas is not appropriate. The Permittee must follow the multi-incremental sampling method outlined in EPA Method 8330B Appendix A. For the multi-incremental sampling, the Permittee may utilize either one acre decision units with a minimum of 60 incremental subsamples or ¼ acre decision units with a minimum of 30 incremental subsamples. Provide replacement pages that propose to use the multi-incremental sampling method prior to starting field work. NMED must approve of the sampling protocol prior to the start of fieldwork.

**RESPONSE:** Concur. Multi-incremental samples will be used for baseline and closure characterization of the temporary soil stockpile staging footprints. Based on the size of the stockpile areas (Area 1 is approximately 2.3 acres and Area 2 is approximately 1.2 acres), we have scoped the following:

- Area 1 – two 1-acre decision units and one ¼-acre decision unit
- Area 2 – one 1-acre decision unit and one ¼-acre decision unit

As specified in the comment, 60 incremental subsamples will be collected from the 1-acre decision units and 30 subsamples from the ¼-acre decision units. Multi-incremental samples will be collected in triplicate. Section 4.1.1 and Table 4-1 have been revised to reflect this change.

#### 10. Section 4.1.3.2, Excavation Floor Sampling, p 4-2

**Permittee Statement:** "However, once the excavation reaches a depth greater than 10 ft bgs (maximum of 35 ft. bgs), confirmation samples will be analyzed for RDX, TNT, and nitrate only to characterize the remaining soil."

**NMED Comment:** According to the analytical results for explosive compounds in the Permittee's October 2014 TNT Leaching Bed Soil Boring Test Results and Development of Site-Specific Dilution Attenuation Factors, other explosive compounds such as 1,3,5-trinitrobenzene were detected at depths greater than 10 ft bgs. The Permittee must include full analytical suites for explosive compounds and TAL metals for 10% of the soil samples collected at depths greater than 10 ft bgs. This 10% should be biased towards confirmation samples from the base of the excavation in order to provide accurate characterization of the soils from the limits of the excavation. Revise Table 4-1, Summary of Analytical Methods, Containers, Preservation, and Holding Times, accordingly, and provide replacement pages for the Plan.

**RESPONSE:** Concur. Section 4.1.3.2 and Table 4-1 have been revised to specify that 10% of confirmation samples collected from 10-35 ft bgs will be analyzed for full suites of explosives (8330B) and metals (6020B).

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

Sincerely,

PATTERSON.MAR  
K.C.1229214493

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PATTERSON.MAR.C.1229214493  
DN: cn=US, o=U.S. Government, ou=DoD,  
ou=PKI, ou=USA,  
cn=PATTERSON.MAR.C.1229214493  
Date: 2017.11.27 15:58:52 -05'00'

Mark Patterson  
BRAC Environmental Coordinator

CF:  
D Cobrain, NMED HWB  
B Wear, NMED HWB  
M Suzuki, NMED HWB  
M Patterson, FWDA BEC  
S Khan, USACE SWT