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**Hazardous Waste Bureau**



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**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

October 31, 2018

Mark Patterson  
 BRAC Environmental Coordinator  
 Fort Wingate Depot Activity  
 13497 Elton Road  
 North Lima, OH 44452

Steve Smith  
 USACE  
 CESWF-PER-DD  
 819 Taylor Street, Room 3B06  
 Fort Worth, TX 76102

**RE: DISAPPROVAL  
 FINAL RCRA FACILITY INVESTIGATION PHASE 2 WORK PLAN  
 PARCEL 23  
 FORT WINGATE DEPOT ACTIVITY  
 MCKINLEY COUNTY, NEW MEXICO  
 EPA ID# NM6213820974  
 HWB-FWDA-18-004**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity (Permittee) *Final RCRA Facility Investigation Phase 2 Work Plan Parcel 23* (Work Plan), dated July 24, 2018. NMED has reviewed the Work Plan and hereby issues this Disapproval. The Permittee must address the following comments.

**1. Section 1.2, Background Information, lines 7-9, page 1-2**

**Permittee Statement:** “The [Approval with Modifications] AwM (Comment 6) also requires that Army address all comments within the NOD, specifically those comments referencing future actions through the development of a RFI Phase 2 Work Plan.”

**NMED Comment:** Although the Permittee’s statement is true, the referenced correspondence (Approval with Modifications) does not contain Comment 6. Correct the typographical error in the revised Work Plan.

**RECEIVED**  
 10/30/18

**2. Section 1.2, Background Information, lines 9-12, page 1-2**

**Permittee Statement:** "For reference, the following documents are included in Appendix A:

- NOD Letter - August 19, 2014
- Response to NOD - February 28, 2015
- AwM - August 12, 2015."

**NMED Comment:** Appendix A also contains email correspondence between the Permittee and NMED regarding the proposed locations of monitoring wells and a figure showing the locations. Provide a more accurate description. In addition, include all extension request approval letters for this document in Appendix A.

**3. Section 1.2, Background Information, Comment 9, lines 34-36, page 1-2**

**Permittee Statement:** "The revised RFI Report suggests that observed impacts may be the result of runoff from the adjacent coal burning boiler plant (Building 535)."

**NMED Comment:** A figure showing the location of Building 536 was included in the Work Plan; however, the locations of Building 535 and the borrow pit that supplied the fill material are not indicated in any figure in the Work Plan. Include a figure depicting these locations in the revised Work Plan.

**4. Section 1.3, Cultural Resources, lines 36-37, page 1-3 and line 1, page 1-4**

**Permittee Statement:** "No archaeological site is within the horizontal footprint of SWMU21; however, several archaeological sites are within close proximity to these locations (LA101952 and LA101743)."

**NMED Comment:** The locations of archaeological sites are designated as LA101952 and LA101743; however, they are not shown in any figure. The designation is meaningless unless referenced in a figure. Include a figure showing these locations in the revised Work Plan or remove the reference to the archeological sites from the statement.

**5. Section 2.2.2, Groundwater Sampling, lines 24-26, page 2-2**

**Permittee Statement:** "The general approach to evaluating whether or not groundwater is impacted will be to collect groundwater samples from the first water-bearing zone by means of a temporary well."

**NMED Comment:** The Parcel 3 groundwater investigation indicates that some wells close to arroyos initially retained groundwater; however, the wells went dry during the subsequent monitoring event. The groundwater conditions in Parcel 23 may be similar to Parcel 3, especially along the arroyos. Since the presence of groundwater may be ephemeral, similar to the arroyos, propose to install and monitor the temporary well for a minimum of two years,



even if groundwater is not present at the time of installation. Revise the Work Plan accordingly.

**6. Section 2.3.1.1, Quality Control Analyses/Parameters Originated by the Laboratory, Method Blank, lines 14-19, page 2-3**

**Permittee Statement:** "If a target constituent is found at a concentration that exceeds one-half the limit of quantitation (LOQ) in the method blank, the laboratory must perform corrective action in an attempt to identify and, if possible, eliminate the contamination source. If sufficient sample volume remains in the sample container, samples associated with the blank contamination should be re-prepared and re-analyzed after the contamination source has been eliminated."

**NMED Comment:** Several contaminants were eliminated from risk assessment in the *Final RCRA Facility Investigation Report Parcel 7 Revision 1*, dated June 27, 2018 because these contaminants were detected in blanks. However, the rationale for the elimination must be validated. Regardless of the detection level, if contaminants are detected in both blanks and samples and unless re-analysis after eliminating the source of contamination is performed, provide a table that lists detected contaminant concentrations in both blanks and samples. These concentrations must be compared and evaluated to determine whether elimination is appropriate. Include the protocol in the revised Work Plan.

**7. Section 3.1, Borings in Areas of Previous Exceedances, lines 11-14, page 3-1**

**Permittee Statement:** "Previous sample locations and analytes which exceed the lowest 2017 NMED SSLs for a residential receptor (which is either the direct contact SSL or the groundwater protection SSL, except for arsenic where the site-specific background level is used instead of an SSL) are summarized in Tables 3-1 through 3-3 and illustrated in Figure 3-1."

**NMED Comment:** The site-specific background level of 5.6 mg/kg was used to screen arsenic as a potential COPC and for assessing site risk. The agreement with NMED to use 5.6 mg/kg for screening purposes was based on the fact that at the time of this agreement, the SSL for arsenic was below the background level. However, the 2017 direct contact SSL for arsenic is 7.07 mg/kg (residential). The current SSL for arsenic must be used for estimating risk to avoid an overly conservative evaluation for arsenic in future investigations at the site.

**8. Section 3.1, Borings in Areas of Previous Exceedances, lines 16-18, page 3-1**

**Permittee Statement:** "All samples will be analyzed for SVOCs, VOCs, extended diesel-range organics (DRO), target analyte list (TAL) metals, and explosives."

**NMED Comment:** Perchlorate may also be a chemical of potential concern due to the past activities at the site. Perchlorate was detected in groundwater samples collected from wells in Parcel 3. The arroyo may be a conduit for contaminants; therefore, perchlorate may be

present in groundwater. Include perchlorate analysis for groundwater samples collected at the site. Revise the Work Plan accordingly.

**9. Section 3.1, Boring in Areas of Previous Exceedances, lines 23-25, page 3-1, and Section 3.2, Borings to Characterize the Backfill Material, lines 36-37**

**Permittee Statements:** “[Native soil] [s]amples will be collected from the depth intervals corresponding to 0-1 foot, 1-2 feet, 3-4 feet, 5-6 feet, 7-8 feet, 8-9 feet, and 9-10 feet below the depth of backfill.”

and,

“[Backfill] [s]amples will be collected from the 0-1 foot, 1-2 feet, 3-4 feet, 5-6 feet, 7-8 feet, 8-9 feet, and 9-10 feet bgs depth intervals.”

**NMED Comment:** It is not clear how the Permittee determines the interface between backfill and native soils. Describe the method for identifying the interface in the revised Work Plan. Residual contaminants likely accumulate close to the fill-native soil interface. Revise the Work Plan to propose to collect all soil samples from immediately above and below the fill-native soil interface. Furthermore, provide information regarding (1) the lateral extent of backfill placement and (2) the thickness of backfill. The thickness of backfill appears to exceed 10 feet at the site. Revise the Work Plan to include this information or provide references to the reports that include the information.

**10. Section 3.3, Borings to Assess Arroyo, lines 2-5, page 3-2**

**Permittee Statement:** “Two shallow soil borings (10 feet total depth) will be conducted in the arroyo, one 25 feet northwest and one 50 feet northwest of the northern border of the former landfill (soil boring ID numbers 2321CLAND-SB11 and 2321CLAND-SB12). [Arroyo sediment] [s]amples will be collected from the 0-1 foot, 1-2 feet, 3-4 feet, 5-6 feet, 7-8 feet, 8-9 feet, and 9-10 feet bgs depth intervals.”

**NMED Comment:** The location of the backfill was unidentified. The depth to the interface between backfill and native soils, if present, must be identified. Soil samples must be collected from the depths where residual contaminants are most likely to accumulate (see Comment 9). In this case, contaminants associated with surface water runoff from the landfill are likely detected at (1) six inches below the apparent ground surface and (2) six inches below and above the interface where native soils are encountered. Revise the Work Plan accordingly.

**11. Section 4.0, Groundwater Investigation at SWMU 21 – Central Landfill, lines 7-8, page 4-1**

**Permittee Statement:** “The investigation will include the collection a groundwater sample via a temporary well placed in a downgradient direction from the former landfill (2321CLAND-MW-1).”



**NMED Comment:** The wells are designated as P23-TMW01A and P23-TMW01B in a figure included in Appendix A. Provide an explanation for the variance in nomenclature; otherwise, revise the Work Plan to correct the discrepancy.

**12. Section 4.0, Groundwater Investigation at SWMU 21 – Central Landfill, lines 15-16, page 4-1, and Section 5.1.4.5, Domestic Tap Water Use, lines 14-15, page 5-4**

**Permittee Statements:** “The borings will be advanced to the first water bearing zone or a maximum depth of 100 feet if groundwater is not encountered.”

and,

“The scope of the Phase 2 RFI includes collection and testing of groundwater, if encountered within 100 feet bgs.”

**NMED Comment:** The floor of arroyo may be more than 20 feet below the elevation where temporary wells are to be installed. A maximum boring depth of 100 feet below the floor of arroyo must be proposed if groundwater is not encountered. In addition, since the presence of groundwater may be ephemeral, similar to the arroyos, propose to preserve and monitor the temporary well for a period of two years, even if groundwater is not present at the time of installation. Revise the Work Plan accordingly. See Comment 5.

**13. Section 4.0, Groundwater Investigation at SWMU 21 – Central Landfill, lines 20-22, page 4-1**

**Permittee Statement:** “Sample collection will be conducted in general accordance with the procedures detailed in the Final 2015 Interim Measures Facility-Wide Groundwater Monitoring Plan (Innovar and CB&I, 2015).”

**NMED Comment:** The referenced submittal is not an approved plan. Sample collection must be conducted in accordance with an approved groundwater monitoring plan. Revise the Work Plan accordingly.

**14. Section 5.1.2, Selection of Screening Levels, lines 26-29, page 5-1**

**Permittee Statement:** “Screening levels published by NMED in Appendix A of the NMED risk guidance (NMED, 2017a) for direct contact and groundwater protection. The exception to this is for evaluation of arsenic in soil, where NMED is allowing use of the site-specific background level of 5.6 milligrams per kilogram (mg/kg) in lieu of the NMED screening level.”

**NMED Comment:** The site-specific background level of 5.6 mg/kg was used to evaluate arsenic as a potential COPC and for assessing site risk. The agreement with NMED to use 5.6 mg/kg for screening purposes was based on the fact that at the time of this agreement, the SSL for arsenic was below the background level. However, the 2017 SSL for arsenic is 7.07 mg/kg (residential). The current SSL for arsenic must be used for estimating risk for future investigations at the site (see Comment 7).

**15. Section 5.1.2, Selection of Screening Levels, line 37, page 5-1 and lines 1-2, page 5-2**

**Permittee Statement:** "USEPA risk-based SSLs for the protection of groundwater will be adjusted to a dilution attenuation factor (DAF) of 20 for consistency with the NMED presumption that this DAF is reasonably protective."

**NMED Comment:** The contaminant distribution shown in Figure 3-1, *Previous Sample Locations with Analytes Exceeding 2017 NMED SSLs*, suggests that the source area of potential groundwater contamination easily exceeds 0.5 acre. Since the DAF of 20 is protective of groundwater for a 0.5-acre source but not for a larger source area, the DAF values must be revised if groundwater is found to be affected. Discuss whether a DAF of 20 is appropriate for the site in the revised Work Plan.

**16. Section 5.1.3, Identification of COPCs, lines 10-12, page 5-3**

**Permittee Statement:** "Analytes that are not detected in any sample will not be retained at [sic] COPCs. Analytical testing will be performed for VOCs, SVOCs, total petroleum hydrocarbons (TPH)-DRO, TAL metals, mercury, and explosives."

**NMED Comment:** Perchlorate analysis must also be performed for all groundwater and soil samples collected at the site. Revise the Work Plan accordingly. Refer to Comment 8.

**17. Section 5.1.4.2, Beef Ingestion, lines 28-30, page 5-3, and Section 5.1.5, Conceptual Site Model, lines 32-33, page 5-4**

**Permittee Statement:** "The total acreage of SWMU 21 is 2.2 acres, but the beef ingestion pathway is not considered to be complete because SWMU 21 is comprised of two non-contiguous areas, each of which are less than 2 acres in size."

**NMED Comment:** In Figure 3-1, a distribution of SVOC exceedances was observed in the area between the two boundaries as well as in the areas within the boundaries. Therefore, these two areas must be considered to be contiguous and must not be evaluated separately. In addition, the lateral extent of SVOC exceedances is not defined to the north and south along the arroyo. The extent of contamination has not been defined. The beef ingestion pathway must be evaluated in the Phase 2 Investigation Report. Revise the Work Plan accordingly.

**18. Section 5.1.6.3.2, Step 2 – Refined Cumulative Risk Evaluation, lines 14-15, page 5-10**

**Permittee Statement:** "SWMU 21 consists of two separate, noncontiguous areas that may be evaluated separately."

**NMED Comment:** SWMU 21 is contiguous due to the distribution of SVOCs along the arroyo. Refer to Comment 17. The Permittee must evaluate risks associated with SWMU 21 as a continuous area. Revise the Work Plan accordingly.




Messrs. Patterson and Smith  
October 31, 2018  
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The Permittee must submit a revised Work Plan that addresses all comments contained in this Disapproval. In addition, the Permittee must include a response letter that cross-references where NMED's numbered comments were addressed. The Permittee must also submit an electronic redline-strikeout version of the revised Work Plan showing all changes that have been made. The revised Work Plan must be submitted no later than **April 30, 2019**.

Should you have any questions, please contact Michiya Suzuki of my staff at (505) 476-6059.

Sincerely,

A handwritten signature in blue ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and "K".

John E. Kieling  
Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
B. Wear, NMED HWB  
M. Suzuki, NMED HWB  
C. Hendrickson, U.S. EPA Region 6  
L. Rodgers, Navajo Nation  
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File: FWDA 2018 and Reading, Parcel 23, FWDA-18-004