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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 7, 2017

Mark Patterson
FWDA, BRAC Coordinator
P.O. Box 93
Ravenna, OH 44266

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

**RE: DISAPPROVAL
FINAL RCRA FACILITY INVESTIGATION REPORT
PARCEL 7
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-17-003**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity's (Permittee) *Final RCRA Facility Investigation Report, Parcel 7* (Report), dated March 30, 2017. NMED has reviewed and hereby issues this Disapproval. The Permittee must address the following comments.

1. Table 2-1, Parcel 7 Field Investigations Summary

NMED Comment: VOCs, SVOCs, DRO, PCBs, TAL metals, dioxins/furans, explosives, perchlorate, nitrate, and cyanide are listed as target constituents for AOC 43 (Railroad Classification Yard) in Table 2-1. NMED's Comment 6 in the *Approval with Modifications* letter, dated January 31, 2014, directed the Permittee to include white phosphorus as an analyte for the AOC 43 soil evaluation. The Permittee did not analyze soil samples for white phosphorous. Collect samples at the same sampling locations to be analyzed for white

phosphorus. Provide the results in the revised Report.

2. Figure 2-8, Stratigraphic Column

NMED Comment: The figure is not legible. Provide an electronic image with higher resolution and submit the figure on 11x17 paper. Revise the Report accordingly.

3. Section 2.6, Human Health Risk Evaluation, lines 32-33, page 2-7

Permittee Statement: “A human health risk evaluation was conducted for each AOC or SWMU investigated as part of this RFI.”

NMED Comment: Although the Permittee conducted the human health risk evaluation, ecological risks were not evaluated either qualitatively or quantitatively. The evaluation is a requirement of Section 7.5 of the Permit Attachment 7. The Permittee must use the most updated version of the NMED *Risk Assessment Guidance for Site Investigations and Remediation* (guidance) to evaluate ecological risk. Provide documentation that the pathways are incomplete or include evaluation of ecological risks in the revised Report. In addition, the soil-to-groundwater pathway was not evaluated. The evaluation is also required by the guidance. Provide documentation that the pathway is incomplete or include evaluation of the soil-to-groundwater pathway in the revised Report.

4. Section 2.6.1, Regulatory History, lines 4-7, page 2-8

Permittee Statement: “Therefore, the risk evaluation for Parcel 7 was prepared using NMED’s guidance document titled *Risk Assessment Guidance for Site Investigations and Remediation*, dated June 2012, because the work plan was approved and field activities were completed before NMED issued updated risk guidance in December 2014.”

NMED Comment: If the risk assessment is already in progress (e.g., started or being revised through comments), NMED allows the older version of the guidance to be followed. However, when the risk assessment has not begun, the use of the most current guidance at the time the work is conducted is appropriate. As such, the risk assessments should have been conducted following the 2017 guidance. While most of the components of the 2017 guidance are addressed in the Parcel 7 risk assessment, use of the 2017 guidance, and specifically the current soil screening levels (SSLs), would have resulted in fewer contaminants driving risk. It should be noted that use of a refined exposure point concentration alleviated the excess risk addressed in this Report. No response to this comment is required.

5. Section 3.1.1, Location, Description and Operational History, lines 8-10, page 3-1

Permittee Statement: “The area was utilized for the disposal of waste oils and possibly solvents until approximately 1975 when the area was covered with clean soils and usage as a disposal area was discontinued.”

NMED Comment: In NMED's Comment 1 in the *Approval with Modifications*, dated January 31, 2014, the Permittee was directed to provide information regarding the amount of clean fill utilized to cover the area and to explain how the base grade was determined and how sampling of native soils was conducted. The Permittee did not include the response in the Report. Revise the Report to include the requested information.

6. Section 3.2.2, Sampling Data, lines 14-15, page 3-2

Permittee Statement: "Groundwater sampling was not conducted as monitoring well FW-26 was dry at the time of field activities."

NMED Comment: Wells FW-26 and TMW-25 are screened from 11 to 31 and 42.5 to 52.5 feet below ground surface (bgs), respectively, according to the *Facility Wide Monitoring Wells, Boring Logs & Well Construction Diagrams*, dated May 17, 2007. The depth to groundwater in well TMW-25, located approximately 350 feet southwest of well FW-26, was recorded as 38.93 feet bgs during March 2015 gauging event according to the *Groundwater Periodic Monitoring Report, January through June 2015*, dated October 2015. Therefore, the screened interval of well FW-26 may be too shallow to collect groundwater samples. A groundwater sample must be collected from the POL Waste Discharge Area. The Permittee must propose installation of a new well to replace well FW-26. Once the new well is installed, collect groundwater samples for VOCs, SVOCs, DRO, GRO, and TAL metals analyses. Recommend installation and sampling of a replacement monitoring well to evaluate for groundwater contamination for the POL Waste Discharge Area in the revised Report.

7. Section 3.4.2, Visual Delineation of Impacted Soil at POL Area, lines 31-35, page 3-2 and lines 1-2, page 3-3, and Section 3.7, SWMU 9 Conclusion and Recommendations, lines 26-28, page 3-13

Permittee Statements: "On August 22, 2014, several test pits were excavated using a backhoe and hand auger in an attempt to determine the lateral and vertical limits of the petroleum impacted area."

and,

"The Army recommends removal of the impacted soil from the POL disposal area, including confirmation sampling, to be completed in the future under a Permittee-Initiated Interim Measure. Based upon visual observation, the estimated volume of contaminated soil is approximately 1,500 cubic yards."

NMED Comment: Visual observation (e.g., odor and tar staining) is useful for initial assessment; however, it is not sufficient to define the extent of contamination. The Permittee must conduct a quantitative investigation (e.g., measurable characterization) to determine the lateral extent of contamination. Use field screening to select locations to collect soil samples for SVOCs, VOCs, TPH DRO and GRO, and TAL metals analyses to define the limits of contamination depicted in Figure 3-4. Revise the contamination boundary in Figure 3-4, if the soil analytical results contradict visual observation. In addition, the Permittee must determine the vertical extent of the contamination. A slight petroleum odor was detected at a

depth of 5.25 feet bgs during the 2014 investigation. The odor indicates that the soil contamination may be present in deeper soils. Soil borings must be advanced at the locations where elevated DRO concentrations were detected (e.g., 0709POLSS008, 0709POLSS009, and 0709POLSS010). As described above, use field screening to select locations to collect soil samples to define the vertical extent of contamination. Revise the Report to propose submittal of a work plan to determine the volume of contaminated soil to be excavated, if necessary.

8. **Section 3.6.1, Data Used in the Evaluation & Identification of COPCs, lines 32-33, page 3-5, and Section 5.6.1, Data Used in the Evaluation & Identification of COPCs, lines 5-6, page 5-4:**

Permittee Statements: "Total chromium – Chromium III was selected because hexavalent chromium is not known to be present at SWMU 9."

and,

"Total chromium – Chromium III was selected because hexavalent chromium is not known to be present at AOC 43."

NMED Comment: While it is agreed that metal containers and metal strapping typically do not contain hexavalent chromium, the presence of elevated levels of copper adds uncertainty as to whether wood that had been treated with a chromated copper arsenate solution was burned at this site. The wood solution could result in hexavalent chromium being present. Additional lines of evidence (LOE) are needed to support the assumption that all the detected chromium is in the trivalent form. These types of LOE are provided to support the assertion that chemicals such as benzidine, n-nitrosodimethylamine, and n-nitroso-di-n-propylamine, among others, are not associated with these sites. Revise Sections 3.6.1 and 5.6.1 to include information that supports the assertion that hexavalent chromium is not present at SWMU 9 and AOC 43. Further, unless speciated data are available and/or sufficient LOE are provided to support an assumption of 100% trivalent chromium, the soil screening levels for total chromium should be applied in the risk assessments.

9. **Section 3.6.1, Data Used in the Evaluation & Identification of COPCs, lines 21-22, page 3-5, and Section 5.6.1, Data Used in the Evaluation & Identification of COPCs, lines 31-32, page 5-3:**

Permittee Statements: "Metals, PAHs, VOCs, GRO, and DRO were detected in one or more samples and are considered COPCs. No explosives or PCBs were detected."

and,

"Metals, petroleum hydrocarbons, perchlorate, nitrate-N, dioxin/furans, SVOCs, and VOCs were detected and are considered COPCs."

NMED Comment: VOCs were detected in SWMU 9 and AOC 43. As such, the vapor intrusion pathway should have been evaluated. The 2012 NMED guidance allows that if vapor intrusion is a concern, the pathway should be addressed following EPA guidance. The 2017 guidance allows a tiered approach for evaluating this pathway. In looking at the data for

each site, VOCs are detected at low levels, are not risk drivers, and therefore do not appear to be sources for additional contamination of VOCs. At a minimum, provide a qualitative discussion in the revised Report allowing that while the vapor intrusion pathway is potentially complete, it would not contribute to significant risk.

10. Section 3.6.6.2, Refined Cumulative Risk Evaluation (Step 2), lines 20-22, page 3-10

Permittee Statement: “For lead, the refined exposure concentration is 244 mg/kg, which is less than the NMED Residential SSL of 400 mg/kg, demonstrating that no adverse health effects are predicted for residential receptors exposed to lead in soil.”

NMED Comment: The site consists of two distinct areas; the area within the SWMU boundary and the area to the SE where stained soils were observed. Utilizing data from the area within the SWMU boundary to define an exposure concentration for the stained area effectively serves to dilute the contaminant concentrations. Two of the four samples associated with the stained area exceed the NMED SSL for lead, indicating a hotspot. The Permittee must define the extent of contamination in the stained area where elevated lead concentrations were observed and propose to remove soils containing contaminant concentrations that exceed the cumulative risk during the proposed Permittee Initiated Interim Measure for the POL area. See Comment 7. Revise the Report to propose definition of the extent of contamination at the lead hotspot and removal of the contaminated soils.

11. Section 4.5, Current Investigation Analytical Results (2014), lines 13-14, page 4-4

Permittee Statement: “Due to the size of Table 4-2, it has been omitted from the hard copy of this report and is included on the electronic version only.”

NMED Comment: Table 4-2 was not included with the electronic version of the Report. Include Table 4-2 (electronic version) in the revised Report. Since Table 4-2 is a critical component for review of this section of the Report, the section was not reviewed. The review of Section 4.0 will resume when Table 4-2 is submitted in the revised Report.

12. Section 5.4, Current Investigation (2014), lines 18-19, page 5-2

Permittee Statement: “Based on comments from NMED, analysis was expanded to include TAL metals, explosive compounds, perchlorate, SVOCs, VOCs, DRO, nitrate-N, cyanide, PCBs, and dioxins/furans.”

NMED Comment: According to the NMED’s Comment 6 in the *Approval with Modifications*, dated January 31, 2014, white phosphorus should have been included as an analyte. See Comment 1.

13. Section 5.6.6.2, Refined Cumulative Risk Evaluation (Step 2), lines 24-26, page 5-9, and 5.6.8, Uncertainty Discussion, lines 17-18, page 5-12

Permittee Statements: “Samples 0743RCYSS008DSO-0.0-0.5DSO and 0743RCYSS016DSO-0.0-0.5DSO are adjacent to each other near the south end of the railyard, and have [manganese] concentrations of 1,100 mg/kg and 1,190 mg/kg, respectively.”

and,

“The relative percent difference between the reported result for the primary and field duplicate samples was greater than 50%.”

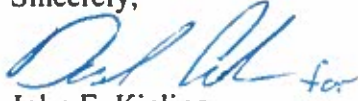
NMED Comment: The manganese concentration detected in the sample collected at 0743RCYSS008DSO-0.0-0.5DSO is recorded as 535 mg/kg according to Table 5-1. Clarify the cause of discrepancy in the revised Report. If the discrepancy is caused by an error, the risk must be reevaluated based on the actual concentration. Revise the Report as necessary. If the discrepancy is caused by using the concentration of field duplicates, revise Table 5-1 to include all detections in field duplicates. If this is the case, no revision to the risk evaluation is necessary.

The Permittee must submit a revised RCRA Facility Investigation Report 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 Report showing all changes that have been made to the Report. The revised Report must be submitted no later than **November 30, 2017**.

Messrs. Patterson and Smith
August 7, 2017
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Should you have any questions, please contact Ben Wear of my staff at (505) 476-6041.

Sincerely,

A handwritten signature in blue ink, appearing to read "John E. Kieling" with a small "for" written at the end.

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
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File: FWDA 2017 and Reading, Groundwater, FWDA-17-003

