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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

November 19, 2018

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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 PERMITTEE-INITIATED INTERIM MEASURES REPORT
PARCEL 24 – IGLOO BLOCK A
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-18-007**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity (Permittee) *Final Permittee-Initiated Interim Measures Report Parcel 24 – Igloo Block A* (Report), dated August 27, 2018 and received September 7, 2018. NMED has reviewed the Work Plan and hereby issues this Disapproval. The Permittee must address the following comments.

1. Initial Evaluation of Multi-Incremental (MI) Sample Data

NMED Comment: Comment 16 of NMED’s March 8, 2018 *Disapproval Final RCRA Facility Investigation Work Plan Parcel 9 Revision 1*, the same document that required the submittal of this Report, states, “[t]he reported constituent concentrations for incremental samples must be multiplied by the number of subsamples in each decision unit for comparison to screening levels. If any exceedances are found during the screening process, the Permittee is also required to conduct additional soil sampling by further dividing the sampling grid in the decision unit to identify whether there is a local area of contamination.

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This comment applies to all AOCs and SWMUs where a multi-incremental soil sampling approach is utilized.” The Permittee has not followed this directive. The Permittee must revise the Report to evaluate the composite and multi-incremental sampling results appropriately. Non-compliance with NMED direction may result in enforcement action or delays in achieving corrective action complete status for sites listed on the Permit.

2. Laboratory Report Data Link

NMED Comment: The Report contains multiple analytical data reports, which is typical of most investigation reports. For this and all future documents, the Permittee must provide a method for cross-referencing data reports and specific samples. This could be accomplished through an additional table, an additional column in an existing table, or a column in the database (if included for the project). Include a method for linking a specific sample with the associated analytical laboratory data report in the revised Report.

3. Inappropriate usage of data

NMED Comment: Work was performed at the Parcel 24 igloos in the absence of NMED-approved work plans. Review of work performed on the Parcel 24 igloos suggests that there are problems with the method in which composite and multi-incremental (MI) samples were evaluated. For example, it appears that direct comparison of composite and MI sample concentrations to soil screening limits (SSLs) was conducted instead of multiplying concentration results by number of subsamples. Also, invalid x-ray diffraction (XRF) data was used to make decisions (e.g., no correlation between XRF results and lab confirmation results) and inappropriate SSLs were used for contaminant concentration comparison (e.g., chromium III vs total chromium).

Work has continued at the Parcel 24 igloos without approved work plans. Work conducted without a NMED-approved work plan is performed at the Permittee’s own risk. Review of work performed indicates that inappropriate decisions have been made based on data that is not appropriate for use in decision-making. As stated in multiple comments spanning more than a decade, MI samples in this application are only appropriate for screening-level decisions, e.g, is the contaminant present or not. In addition, NMED has made clear that data collected by field instruments is only appropriate for screening-level decisions unless a clear and accurate correlation between the field instrument data and duplicate analytical laboratory data is established. Since this was not accomplished at Parcel 24, the XRF data is invalid and must not be used for any decision making.

4. Transmittal Letter

Permittee Statement: “The U.S. Army Corps of Engineers (USACE) completed a Release Assessment Report (RAR) at Parcel 24, dated January 31, 2014. The RAR concluded that based on data collected from x-ray fluorescence (XRF) and analytical data from 2008 and 2010, lead, arsenic, and mercury exceeded New Mexico Environment Department (NMED)

soil screening levels (SSLs) (or the site-specific background concentration protocol established for arsenic) in soils below certain igloo drain outfalls in Parcel 24.”

NMED Comment: The transmittal letter presents information that is not included in the Report. All information related to the purpose of the submittal should be included in the submittal, not in the transmittal letter. Revise the Report to include the details provided above and remove technical information from the transmittal letter.

5. Transmittal Letter

Permittee Statement: “The Army submitted a Notification of Permittee-Initiated Interim Measures (PIIM) to NMED for Parcel 24 dated October 22, 2014. It was approved by Vicki Baca of your office by email on May 19, 2015 (Attachment 1).”

NMED Comment: This statement is not accurate. The email from Vicki Baca concurred with the work proposed, but specifically stated that the notification was “not an official work plan”. Therefore, there was no official approval. In addition, there is no Attachment 1 included with the Report. Avoid inaccurate, unsupported, or misleading statements in future submittals. Remove the statement from the revised Report.

6. Section 1.0, Introduction, page 1-1

Permittee Statement: “ZAPATA executed the approved PIIM letter work plan scope; however, it should be noted that New Mexico Environment Department (NMED) Soil Screening Levels (SSLs) outlined in the 2017 guidance (NMED, 2017) were implemented at the time of field sampling, as opposed to the 2015 levels approved in the letter.”

NMED Comment: This statement is not accurate. A letter work plan was never formally submitted to NMED. Therefore, there is no NMED-approved PIIM letter work plan. While a notification that the Permittee intended to perform work was submitted, NMED’s concurrence specifically stated that the notification was “not an official work plan”. Remove the statement from the revised Report.

7. Section 2.3, Confirmation Sampling, page 2-1

NMED Comment: Soil sampling procedures were not described in the Report. All methods used in the field must be described in the Report. Provide details of the soil sampling procedures, including duplicate sample collection, in the revised Report.

8. Section 3.0, Summary and Conclusions, page 3-1

Permittee Statement: “The interim measures for Parcel 24 Igloo Block A have been completed and No Further Action (NFA) is recommended.”

NMED Comment: NMED does not agree with the recommendation above. The Permittee has not investigated many locations where the data indicates that contamination is likely to be present. The table below indicates locations that remain to be further characterized and will likely require remediation.

Table 1: Locations Requiring Further Investigation and/or Remediation

Igloo	Exceedance Sample Type	Notes
A-901	MI	Exceeded background for lead in MI sample. Further characterization is warranted at the decision unit.
A-902	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-904	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain locations may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-906	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-907	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The right side was addressed in PIIM. Further characterization and potential excavation is warranted for the left drain location.
A-908	Comp/MI	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations. Also exceeded background for lead in MI sample. Further characterization is warranted at the decision unit.
A-910	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-912	Comp	Both drains were excavated and sampled during the PIIM. The location had previously exceeded the standard for total chromium in an XRF sample from the right drain. Chromium was not analyzed during the PIIM. A confirmation sample must be collected and analyzed for total chromium from the right drain location.
A-914	Comp	Both drains were excavated and sampled during the PIIM. The location had previously exceeded the standard for total chromium in an XRF sample from the left drain. Chromium was not analyzed during the PIIM. A confirmation sample must be collected and analyzed for total chromium from the left drain location.

A-919	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-924	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The right side was addressed in PIIM. Further characterization and potential excavation is warranted for the left drain location.
A-927	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The left side was addressed in PIIM. Further characterization and potential excavation is warranted for the right drain location.
A-928	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-930	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-932	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-934	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The left side was addressed in PIIM. Further characterization and potential excavation is warranted for the right drain location.
A-937	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-938	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The right side was addressed in PIIM. Further characterization and potential excavation is warranted for the left drain location.
A-941	MI	Exceeded background for lead in the MI sample. Further characterization is warranted at the decision unit.
A-945	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The left side was addressed in PIIM. Further characterization and potential excavation is warranted for the right drain location.
A-947	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The right side was addressed in PIIM. Further characterization and potential excavation is warranted for the left drain location.

A-949	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-954	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-956	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-957	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-958	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-959	MI	Exceeded background for lead in the MI sample. Further characterization is warranted at the decision unit.
A-963	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The left side was addressed in PIIM. Further characterization and potential excavation is warranted for the right drain location.
A-965	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The left side was addressed in PIIM. Further characterization and potential excavation is warranted for the right drain location.
A-967	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-968	Comp/MI	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations. Also exceeded background for lead in the MI sample. Further characterization is warranted at decision unit.
A-973	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.
A-974	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. Further characterization and potential excavation is warranted at both drain locations.

A-975	Comp	Exceeded half the standard for lead in composite sample, indicating that one or the other drain location may require remediation. The right side was addressed in PIIM. Further characterization and potential excavation is warranted for the left drain location.
Y-A962	MI	Exceeded background for lead in the MI sample. Further characterization is warranted at the decision unit.

The Permittee must submit a workplan for review and approval by NMED that proposes the characterization and remediation activities for the sites listed above no later than June 27, 2019.

9. Appendix C, Confirmation Sample Data, p 1 and 5

Permittee Statements: “The analytical data were validated in accordance with specifications given in the Interim Measures Work Plan Parcel 21 – Solid Waste Management Unit 1 – TNT Leaching Beds, Final, July 14, 2016 (Work Plan), and in U.S. Army Corps of Engineers (USACE) documents Guidance for Evaluating Performance-Based Chemical Data, EM 200-1-10, June 30, 2005, and Chemical Data Quality Management for Environmental Restoration Activities, ER 200-1-7, November 28, 2014.”, and
“Four field duplicates were collected in association with the soil sampling at Parcel 24.”

NMED Comment: Out of a total of 104 samples, the Permittee collected only four duplicates for quality assurance. In addition, all four duplicates were collected on the final day of initial sampling, almost a month after the previous 65 samples had been collected over three days when duplicates were not collected, suggesting that the collected duplicate samples were an afterthought. The Work Plan referenced in the Permittee Statement above specifically states, “[f]ield duplicate samples will be collected and analyzed at a frequency of 10% (one duplicate for every ten field samples collected).” The Permittee collected less than 4% duplicates. Performance of work without an approved work plan has resulted in data collected without meeting the designated quality assurance requirements. Failure to collect appropriate quality assurance samples can result in rejection of data. Provide an explanation in the revised Report text as to why 10% field duplicates were not collected, as well as a justification (other than professional judgement) as to why the data are acceptable for use.

The Work Plan also specifically states,

“The identity of field duplicate samples will not be provided to the analysts or laboratory personnel. A log will be kept identifying each field duplicate sample to its parent sample. This procedure ensures that the laboratory will not know which duplicate sample matches the field sample. A table will be provided in the IM report that designates the field duplicate sample to the associated field sample.”

This procedure was also not followed, as the four duplicate samples were all submitted with “DUP” in the sample identifier. Provide an explanation as to why the cited work plan was not followed.

In addition, one of the four field duplicates resulted in concentrations of lead and mercury that were 3 to 5 times the concentrations found in the original sample. According to the Work Plan referenced in Appendix C, the RPD goal for duplicate samples is $\leq 20\%$. Half of the duplicate samples exceeded the 20% goal, yet no samples were qualified. The cited work plan specifically states,

“Field duplicates will be evaluated by %RPD or, at low levels (i.e., when one or both results are less than 5 x Limits of Quantitation [LOQ]), the absolute difference in results (/S-D/). The specific numeric criteria for field duplicates for this project are as follows:

- When one or both results are less than 5 x LOQ, the extent of variability will be considered acceptable if, for soil samples, /S-D/ is less than the magnitude of LOQ x 2 and, for water samples, /S-D/ is less than the magnitude of the LOQ.
- When both results are greater than 5 x LOQ, the extent of variability will be considered acceptable if, for soil samples, %RPD is less than 50% and, for water samples, %RPD is less than 35%.”

General QA/QC standards would require all data above the target 20% RPD to be qualified with a J flag for estimated value and all data that exceeds 50% RPD to be rejected and qualified with a R flag. The Permittee provides no discussion of this issue in the Report text. The Permittee must provide a discussion of the issue and justification (other than professional judgement) for not qualifying and/or rejecting all data based on the duplicate sample results with half of the duplicates exceeding the RPD range for acceptability.

10. Appendix C, Confirmation Sample Data, p 11

Permittee Statement: “However, as noted in Section 2.4.2, the results for lead and mercury for the primary sample-field duplicate pair collected at location 24A903-EFR-D-SO yielded data for cumulative precision that exceeded project objectives given in the Work Plan.”

NMED Comment: The statement is not accurate. The work plan referenced in Appendix C states that project objectives for RPD% is $\leq 20\%$. In addition to sample 24A903-EFR-D-SO, samples 24A917-EFR-D-SO and 24A917-EFL-D-SO exceeded project objectives given in the Work Plan. Three of the four duplicate samples exceeded project objectives, yet no sample results were qualified and the issue was not discussed in the Report text. Correct the statement above, provide a discussion of the issue with the duplicates, and provide justification (other than professional judgement) for not qualifying and/or rejecting any data based on these results in the revised Report.

The Permittee must submit a revised Report that addresses all comments contained in this Disapproval. For each submittal, the Permittee must include a response letter that cross-references where NMED’s associated 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 plan, as well as a revised electronic version of the Report. The revised Report must be submitted no later than **May 31, 2019**. In addition, the Permittee must submit an work plan that proposes further characterization and remediation of soil at the locations provided in Comment 7 to NMED no later than **June 28, 2019**.

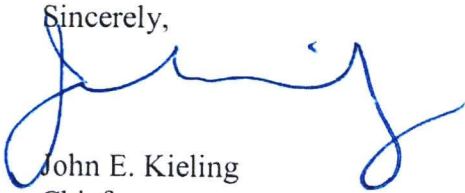
Messrs. Patterson and Smith

November 19, 2018

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Should you have any questions, please contact Ben Wear of my staff at (505) 476-6041.

Sincerely,



John E. Kieling
Chief

Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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File: FWDA 2018 and Reading, Igloos - Parcel 24, FWDA-18-007