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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 10, 2018

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Steve Smith
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**RE: DISAPPROVAL
FINAL RCRA FACILITY INVESTIGATION REPORT PARCEL 22
REVISION 2.0
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-11-011**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) has reviewed the Fort Wingate Depot Activity (Permittee) *Final RCRA Facility Investigation Report, Parcel 22, Revision 2.0* (Report), dated May 31, 2015. NMED has reviewed the Report and hereby issues this Disapproval. The Permittee must address the following comments.

1. Appendices

NMED's Comment: NMED did not review and does not provide approval for:

- Appendix C, Cultural Resources Programmatic Agreement
- Appendix M, SWMU27 Building 551 Post-Demolition Sampling Report
- Appendix N, USACE Sampling and Analysis Plans for AOC 30
- Appendix O, Aquifer Test Package

NMED has previously directed the Permittee to not include full documents or reports as appendices. Full documents or reports must be submitted to NMED separately as supporting documents that can then be referenced in investigation work plans and reports.

In addition, NMED has repeatedly provided comments regarding the disorganized nature of the Permittee's document appendices and the problems inherent in providing appendices within appendices. For example, Comment 11 from NMED's November 1, 2016 *Disapproval Final Interim Measures Work Plan Parcel 21 – Solid Waste Management Unit 1 – TNT Leaching Beds* states,

The labeling of appendices within the appendices is confusing for a reviewer. For example, Appendix A contains an Appendix A. Provide a logical nomenclature for appendices within another appendix. For example, Appendix A-1, A-2, etc.

In addition, the page numbering of Appendix A is repetitive and confusing. For example, there are five pages numbered 1 (one) in the Appendix and several pages with no numbers at all. All Appendices must be presented with properly numbered pages.

Remove all extraneous appendices from the Work Plan. Label sub-appendices within appendices appropriately. Ensure all appendices contain sequentially numbered pages for review. Revise the Work Plan to correct these issues. These recurring issues have repeatedly been brought to the Permittee's attention and must be addressed in all future document submittals. If corrections are not made in future submittals, the submittals may be rejected.

2. Section 3.4.1.4, Building 535, page 3-10

NMED Comment: The Permittee failed to collect a sample at the water table beneath the concrete sump at Building 535 as directed in Comment 10 of the NMED *Disapproval for RCRA Facility Investigation Work Plan for Parcel 22* (2009 Disapproval), dated June 22, 2009. The same direction was emphasized in Comment 4 of the NMED *Approval with Modification for RCRA Facility Investigation Work Plan for Parcel 22* (2010 AWM), dated January 28, 2010. The comment states that the Permittee proposed to collect a sample at five feet beneath the concrete sump but did not propose to collect a sample at the water table, and must adhere to all of the requirements in Comment 10 of the 2009 Disapproval by collecting a soil sample at the water table. During this soil investigation, the Permittee collected a sample at a depth of five feet beneath the concrete sump as proposed; however, the Permittee failed to collect a sample at the water table. Propose to collect a soil sample beneath the sump pit at the water table in a Phase 2 RFI Work Plan. Failure to address NMED comments by the Permittee is a recurring issue. As a cost-saving measure, the Permittee must resolve the issue (e.g., more thorough communication with contractors).

3. Section 3.6.2, Soil Characterization, page 3-13

Permittee Statement: “The Army recommends removing and properly disposing the sediment from manholes F-1 and F-2 and to collapse and fill both manholes.”

NMED Comment: NMED concurs with the Army’s recommendations; however, a discrete soil sample must be collected and analyzed from the native soil directly beneath the bottom of each manhole before filling. The soil sample must be analyzed for SVOCs, explosives, VOCs, nitrate, perchlorate, TAL metals, and PCBs. If the contaminant concentrations exceed the screening criteria, the Permittee must remove additional soil until the residual contaminant concentrations are below the screening criteria. Once all concentrations are below the screening criteria, the manholes can then be backfilled. Include a detailed description of the procedure in the Phase 2 RFI Work Plan.

4. Section 4.4.2, Soil Investigation, page 4-13

Permittee Statement: “Samples were collected from the surface (nominally 0 to 3 inch depth interval, sample suffix: AM-SO) with a decontaminated stainless steel spoon or disposable plastic trowel) and 1 ft depth (nominally 10 to 14 inch depth interval, sample suffix: BM-SO) with a decontaminated stainless steel hand auger or GeoProbe™.”

NMED Comment: According to Comment 23 of the 2009 Disapproval, the subsamples should have been collected from two to six inches bgs rather than zero to three inches bgs. The Permittee must collect shallow multi-incremental (MI) subsamples from two to six inches for future MI sampling events if approved by NMED. In addition, photograph 5-43 shows drilling equipment used for the MI sampling. The equipment is not a GeoProbe™ unit. The equipment appears to be a hollow stem auger. Clarify whether hollow stem auger was used for the sampling; if so, the samples could have been contaminated with drill cuttings from other depths. If hollow stem auger was used, propose to collect the MI samples with appropriate equipment in a Phase 2 Work Plan or provide an explanation for the variance in the revised Report.

5. Section 4.4.2, Soil Investigation, page 4-13

Permittee Statement: “PIKA personnel conducted additional sampling of the post-demolition fill under the concrete pad in building 551. A detailed report including, demolition history, and sampling methodology and results was compiled by PIKA and is included in Appendix M.”

NMED Comment: The Permittee has submitted a full report as an appendix. This report has not been submitted to NMED for review and, apparently, the work was not performed under an NMED-approved work plan. Inclusion of this report as an appendix is not appropriate. If the Permittee wishes to rely on the data from this report for decision making, the report must

be formally submitted to NMED as a stand-alone document for review. In addition, Appendix M contains Appendices A, B, C, and D (See Comment 1). Also, Appendix A of Appendix M contains Chain of Custody forms that contain no signatures, rendering them invalid. Remove this report from the Report appendices and submit it as a stand-alone document with corrections to the other noted issues.

6. Section 4.4.2, Soil Investigation, page 4-13

Permittee Statement: “In addition to fixed laboratory-based analysis of soil samples, a supplemental soil analysis for lead was conducted in the field by USACE with the use of portable xray fluorescence (XRF) equipment (see Figure 4-9). A total of 9 XRF readings for soils were recorded (2227B527-1XRF-SO, 2227B527-2XRF-SO, 2227B528-1XRF to 4XRF-SO, and 2227B529-1XRF to 1 3XRF-SO). These samples were analyzed for lead.”

NMED Comment: The Permittee has generated unreliable data using XRF field instruments on other sites at FWDA. Unless the Permittee can provide a precise correlation between the XRF field instrument and analytical laboratory results, XRF data is considered invalid and must not be presented in the Report. Unsupported field measurements from any field instrument that cannot be verified by analytical laboratory data must not be used for decision making. Provide a precise correlation for the XRF unit including instrument calibration data or remove all references to XRF data from the Report. If data correlation is not possible, propose to conduct discrete sampling at all locations where XRF samples were collected.

7. Section 4.4.3.2, Bedrock Monitoring Wells, page 4-15

Permittee Statement: “The bedrock monitoring wells were completed using methods as described in Section 10 of the approved Work Plan (TPMC, 2009).”

NMED Comment: This statement is not supported by the Geologic Boring/Well Log records located in Appendix K. Section 10 of the approved Work Plan states that filter and seal materials will be installed using a tremie pipe under pressure. The boring logs indicated these materials were installed using a “slow pour” method. The “slow pour” method significantly increases the potential for bridging of materials in the well, especially in wells exceeding 100-ft of depth, and introduces the potential that the wells are not providing valid representative data. In the revised Report, provide an explanation for why the wells were not installed as described in the NMED-approved Work Plan and a justification for the validity of the data collected from these wells. In addition, provide a complete detailed narrative description of the field methods that were actually utilized in the field for all relevant sections of the revised Report. References to work plans or standard operating procedures is not sufficient.

8. Section 4.5.1, Soil Investigation, page 4-17

Permittee Statement: “As summarized in Table 4-8 and shown in Figure 4-8 one SVOC (EPA method 8270C), benzo(a)pyrene was detected at a concentration exceeding the screening criteria in one sample (2227BLD528COMP-SS104D-SO). Benzo(a)pyrene was detected at a concentration of 840 µg/kg, exceeding the screening criteria of 621 µg/kg.”

NMED Comment: The benzo(a)pyrene concentration in the sample collected from SB38-00D exceeded the screening criterion (621 µg/kg) and was recorded as 840 µg/kg according to Table 4-8, *Method 8270C Semi-Volatile Organic Compounds Soil Investigation Detected Constituents*. The same value (840 µg/kg) was recorded in Figure 4-8, *Semi-Volatile Organic Carbons Screening Criteria Exceedances*; however, the sample designation was SS104D. Correct the discrepancy in the revised Report.

9. Section 4.4.2, Soil Investigation, page 9-11, and Section 4.5.1, Soil Investigation, page 4-17

Permittee Statements: “To address NMED HWB Comment 5 in the AM (Appendix A), 50 to 60 sub-samples were to be collected using stratified-random sampling design and biased toward topographic low areas.”

“As summarized in Table 4-9 and shown in Figure 4-7, two RCRA metals (EPA method 6010B/7471A), arsenic and lead were detected at concentrations exceeding the screening criteria in one sample (2227MANHOLE1-SD01-00D-SO).”

NMED Comment: Since MI sampling is viewed as a screening tool for the initial stage of site characterization, the reported concentrations of constituents must be multiplied by the number of subsamples for the initial comparison to screening levels. If any exceedances are found during the screening process, the Permittee may be required to conduct additional soil sampling by further dividing each sampling grid where the exceedances are found to determine the location of contamination. Although the Permittee only addresses the exceedances of arsenic and lead concentrations in the discrete soil sample collected from SD01-00D, many metal concentrations exceed the screening criteria in MI samples for SWMU 27. The Report must be revised to address all exceedances in MI samples. In addition, the Permittee must discuss whether additional soil sampling is required through evaluating the background screening values for each metal that exceeds the screening level. Discuss whether these metals are naturally occurring. For example, the aluminum concentration in the MI soil sample collected from SS001AM was reported as 18,000 mg/kg according to Table 4-9. While multiplying 18,000 mg/kg by 50 (the number of subsamples in SS001AM), the concentration is calculated as 900,000 mg/kg, exceeding the screening criterion of 78,100 mg/kg. However, the (discrete sample) background screening value for aluminum is reported as 23,340 mg/kg in *Soil Background Study and data Evaluation Report, Version 2* dated October 2010. The reported aluminum concentration (18,000 mg/kg)

is comparable to the background screening value (23,340 mg/kg); thus, the exceedance of aluminum concentration (900,000 mg/kg) does not suggest additional sampling is necessary in the decision unit. All metal detections that exceed screening levels must be evaluated for whether the metals concentrations are naturally occurring in the revised Report. Propose to conduct additional soil sampling to define areas of metal contamination in the Phase 2 RFI Work Plan unless the background comparison suggests otherwise.

10. Section 4.6.2, Soil Characterization, page 4-20

Permittee Statement: “The Army proposes removing and properly disposing the sediment from the manhole [I-3] shown in Figure 4-7 where arsenic and lead exceeded the SSLs and to collapse and fill the manhole.”

NMED Comment: Since the arsenic and lead concentrations exceeded the screening criteria in the sample collected at the manhole I-3, excavate the area as necessary to remove contaminated soils and collect a discrete soil sample from the bottom of the excavation. The soil sample must be analyzed for SVOCs, explosives, VOCs, nitrate, perchlorate, TAL metals, and PCBs prior to backfilling. If the contaminant concentrations exceed the screening criteria, the Permittee must remove additional soil until the detected contaminant concentrations are below the screening criteria. Once the concentrations are below the screening criteria, the excavation and manhole may be backfilled. Include a detailed description of the soil sampling procedure in the Phase 2 RFI Work Plan.

In addition, sampling location (I-3) was selected as a substitute for the upgradient manholes I-1 and I-2; similar contamination may be present along the sewer line. The extent of contamination must be characterized along the sewer line. The MI decision units (SS039AM/BM and SS043AM/BM) define the extent of soil contamination along the sewer line between the manholes I-1 and I-2; however, none of decision units address potential contamination between the manholes I-2 and I-3. Propose to conduct discrete sampling below the sewer line between manholes I-2 and I-3 to investigate potential soil contamination in the Phase 2 RFI Work Plan.

11. Section 4.6.3, Groundwater Characterization, page 4-20

Permittee Statement: “Bis(2-ethylhexyl)phthalate (BEHP) was found in sample results from TMW31S, however this compound is a common sampling/laboratory contaminant from items made of PVC. It was detected in method blanks associated with other samples. The Army recommends no further action to address BEHP.”

NMED Comment: The Permittee’s statement is insufficient to justify the presence of the contaminant since groundwater samples collected from other wells (TMW30, TMW32, TMW36 and TMW37) did not contain the contaminant even though the wells were also constructed with PVC. Examine each step of the sampling procedure to verify if any

variation exists. Some wells may be equipped with dedicated pumps and others may be sampled by non-dedicated submersible pumps or disposable bailers. Explain the variation in sampling technique and equipment for each well and provide a table that describes the sampling technique and equipment (e.g. pumps, disposable or dedicated tubing) used to sample each well in the revised Report.

12. Figure 4-7, TAL Metals Screening Criteria Exceedance, and Figure 4-8, Semi-Volatile Organic Carbons Screening Criteria Exceedances, SWMU 27 Building 528 Complex

NMED Comment: The metal concentrations (iron and vanadium) in the samples collected from FAMSO04 and FAMSO05 exceeded the applicable screening criteria during the December 1992 investigation. The extent of contamination associated with FAMSO04 was investigated by the MI decision unit (SS035AM); however, the extent of contamination associated with FAMSO05 was not addressed by any MI decision unit; thus, it is not characterized. The extent of contamination associated with FAMSO05 must be investigated. The same MI sampling procedures must be used as directed by Comment 5 of NMED's 2010 *Approval with Modification* letter; a decision unit (less than quarter acre in size) centering on FAMSO05 with a subsample size of fifty (25 from two to six inches below ground surface (bgs) and 25 from one foot bgs) must be established for the investigation. The samples must be analyzed for explosives, nitrocellulose, nitrate, perchlorate, and TAL metals. Propose to investigate the extent of contamination in the vicinity of FAMSO05 in the Phase 2 RFI Work Plan.

In addition, the SVOC concentrations in the samples collected from FAMSO02, FAMSO03, FAMSO04, and FAMSO05 exceeded the screening criteria during the 1992 investigation. Discrete soil samples were collected for VOC and SVOC analysis during the 2010 soil investigation; however, these sampling locations (shown in Figure 4-8) appear to be too far from the 1992 sampling locations to aid in defining the extent of the contamination. Therefore, the extent of SVOC contamination in the vicinity of FAMSO02, FAMSO03, FAMSO04 and FAMSO05 must be further investigated. Utilize the same investigative procedures proposed to define benzo(a)pyrene contamination around SS104D. Propose to collect five additional soil samples to define the extent of contamination; one sample must be collected at 1-1.5 feet bgs below the original location and one sample each at a distance ten feet north, south, east, and west of the original location at a depth of 6 to 9 inches bgs. The samples must be analyzed for VOCs and SVOCs. Propose to investigate the extent of SVOC contamination in the vicinity of FAMSO02, FAMSO03, FAMSO04, and FAMSO05 in the Phase 2 RFI Work Plan.

13. Figure 4-11, Well and Boring Locations, and Figure 4-12, Groundwater Exceedances

NMED Comment: Both figures have the same page numbers (4-176). Revise the Report to correct the page number on Figure 4-12 and adjust the subsequent page numbers in the Photographs Section.

14. Section 5.4.2, Soil Investigation, page 5-6

Permittee Statement: “The MI sampling process is not applicable to VOCs; therefore two discrete samples were collected near the former fuel tank from the 6 to 9 inch depth interval using an EnCore, or similar closed vessel samplers (Figure 5-2).”

NMED Comment: Thirty MI decision units were established in SWMU 70 according to Figure 5-3, *Soil Sampling Locations – Multi Incremental SWMU 70*; however, only two discrete samples were collected near the former fuel tank. The Permittee must collect discrete soil samples representing each decision unit. In addition, in Section 5.2.3, *Site Reconnaissance*, the Permittee states, “[t]wo equipment “footprints” were observed at SWMU 70. One footprint, suspected to be that of a tank, was located north of Structure 518 (Photo 5-39). The second footprint was located south of Structure 521 (Photo 5-40).” Collect samples from the two footprint locations. Propose to collect discrete soil samples from each MI decision unit and the two footprint locations to investigate VOC and SVOC contamination in the Phase 2 RFI Work Plan.

15. Section 5.4.2, Soil Investigation, page 5-6, and Section 5.5.1, Soil Investigation, page 5-7

Permittee Statements: “To address NMED HWB Comment 5 in the AM (Appendix A), 50 sub-samples were to be collected using stratified-random sampling design.”
“As summarized in Table 5-2 to 5-7 SVOCs (EPA method 8270C), explosives (EPA method 8330B), RCRA metals (EPA method 6010B/7471A), nitrocellulose (by method WS-WC-0050) nitrate (EPA method 9056A) and perchlorate (EPA method 6860) were detected at concentrations below the screening criteria.”

NMED Comment: The 2,4-dinitrotoluene concentration in the MI soil sample collected from SS016AM was reported as 2.9 mg/kg according to Table 5-4. When multiplying 2.9 mg/kg by 50 (the number of subsamples in SS016AM), the concentration is calculated as 145 mg/kg, exceeding the screening criterion of 15.7 mg/kg. Refer to Comment 5 for the interpretation of MI sampling result. The Permittee must propose to conduct additional soil sampling to further characterize the area of 2,4-dinitrotoluene contamination in the Phase 2 RFI Work Plan. In addition, many metal concentrations exceed the screening criteria in every MI sample in SWMU 70 according to Table 5-3. The Report must be revised to address all exceedances in MI samples. All metal detections having regulatory exceedances must be evaluated in comparison to naturally occurring metals concentrations in the revised Report. Propose to conduct additional soil sampling to define the areas of potential metals

contamination in the Phase 2 RFI Work Plan unless the background evaluation suggests otherwise.

16. Section 6.2.3, Site Reconnaissance, page 6-4

Permittee Statements: “Because the igloo doors were secured with non-removable security seals (cable locks), the interiors of the igloos were not observed.”

NMED Comment: The response to Comment 24 of the 2009 Disapproval states, “[t]he Army proposes that sampling of the interior of the igloos be done as part of the risk assessment by [Army Center for Health Promotion and Preventive Medicine] USACHPPM and [Agency for Toxic Substances and Disease Registry], ATSDR.” Provide a timeline for when the proposed investigation work plan will be submitted to NMED in the revised Report. Ensure that the sampling requirements specified in Comment 24 of the 2009 Disapproval are addressed. Comment 6 in the 2010 AWM states the basis for the requirement of investigation in the igloo interiors; the Permittee must comply with NMED regarding the interiors of the igloos. The Permittee states that the igloo doors were secured with cable locks; thus, the interiors were not observed. However, any cable lock can be unlocked or the cable can be cut to open each igloo and conduct the inspection. The Permittee must propose a work plan to investigate the interiors of the igloos as required by Comment 24 of the 2009 Disapproval.

17. Section 6.4.1, Igloo Blocks, page 6-7

Permittee Statement: “Additional sampling of drain outlets with lead concentrations exceeding one-half the NMED SSL of 400 mg/kg was conducted under the Sampling and Analysis Plan for Igloo blocks A, C, and D (Appendix N).”

NMED Comment: The Permittee has submitted a work plan as an appendix (See Comment 1). In addition, the Work Plan does not appear to have been approved by NMED prior to conducting the work. In the revised Report, the Permittee must provide detailed descriptions of the work that was actually conducted. In addition, the Permittee must highlight data that was collected without an NMED-approved work plan in the data tables. Revise the Report accordingly.

18. Section 6.5.1, Igloo Blocks, page 6-8

Permittee Statement: “As summarized in Table 6-2, and 6-3 VOCs (EPA method 8260) and DROs (EPA method 8015) were not detected in concentrations exceeding the screening criteria in the composite or Multi-Incremental® soil samples.”

NMED Comment: The Permittee stated that the MI sampling was not applicable to VOCs (in Sections 4.4.2 and 5.4.2) in the Report. The Permittee must collect a discrete soil sample for every MI decision unit since DRO and VOCs were detected in the samples in the area. The samples must be analyzed for SVOCs in lieu of DRO. Propose to collect a discrete soil sample for VOC and SVOC analyses from every decision unit in AOC 30 in the Phase 2 RFI Work Plan.

19. Section 6.5.1, Igloo Blocks, page 6-9

Permittee Statement: “The 2010 XRF analysis found additional SSL exceedances for lead, arsenic, and mercury as shown in Table 6-10 and Figure 6-4. Laboratory confirmation samples were taken on 10 of the in-situ XRF sites where the XRF found lead exceeding 400 mg/kg. Soil was collected at each XRF location and sent to the lab for analysis however the lab results do not correlate well with the XRF results.”

NMED Comment: The Permittee states that the XRF data does not correlate with the analytical laboratory results. Unless the Permittee can provide a precise correlation between the XRF field instrument and analytical laboratory results, XRF data is invalid and must not be presented in the Report. Unsupported field measurements from any field instrument that cannot be correlated to analytical laboratory data must not be used for decision making. Since there is no correlation with analytical laboratory results, remove all references to XRF data from the Report. In addition, propose to resample the locations where XRF was used in the Phase 2 Work Plan.

20. Figures 6-2 through 6-4

NMED Comment: The scale provided in each of the figures is incorrect. Correct the scales in the revised Report.

21. Table Numbers and Titles

NMED Comment: The Report contains many tables that do not include titles. For example, Tables 6-2 through 6-7 contain no titles. The tables in Section 6 following Table 6-8 contain titles, but no table numbers. Ensure that all tables contain table numbers and titles and that all table numbers and titles are repeated for each page of the table. The format for table numbers and titles must be consistent throughout the document. Also, ensure that table titles are

accurate in their descriptions. For instance, Table 3-3 is titled *Summary of Detected Constituents in Soil*. This title is misleading, as only metals detections are summarized in Table 3-3. In addition, Table 3-2, *Summary of Detected SVOC Constituents in Soil SWMU-12*, and Table 3-5, *Parcel 22 SWMU-12: Method 8270 Semi-Volatile Organic Compounds Soil Investigation Detected Constituents*, appear by title to present the same data, but contain different information. While Table 3-2 appears to present historical data, this is not indicated in the table title. Again, ensure that table titles accurately describe the table contents. Revise the Report accordingly.

22. Section 6.5.1, Igloo Blocks, page 6-10, and Section 6.6, Conclusions and Recommendations, page 6-10

Permittee Statements: “There were some cases when the XRF sample exceeds the SSL but the related lab sample doesn’t and vice-versa. This discrepancy may be due to the XRF sample depth range of a few millimeters compared to a few inches for the lab sample and the inherent variability in soil concentrations from sample to sample.”

“The Army proposes preparing corrective measures work plans in a future RCRA phase for the removal of approximately ¼ cubic yard of soil from under the drain outfalls exceeding the SSLs. The Army may also remove the drainpipes from all igloos in the Parcel 22 portion of D-Block and seal up the holes.”

NMED Comment: Again, XRF results do not correlate with laboratory results, are therefore invalid, and cannot be used to make decisions. The Permittee must propose to collect discrete samples at all locations where XRF analysis was conducted without laboratory sample confirmation. In lieu of resampling each of these drain outlets, NMED recommends the Permittee propose to remove soils under all drain outfalls where discrete samples were not collected and submitted for laboratory analyses, and then collect discrete confirmation samples from the bottom of each excavation in the Phase 2 RFI Work Plan.

23. Section 6.6, Conclusions and Recommendations, page 6-10

Permittee Statement: “No Multi-Increment® sample results from the igloos exceeded the SSLs. The only samples exceeding the SSLs come from the drain outfalls.”

NMED Comment: The lead concentration exceeds the screening criterion since the drainpipes were coated with lead-based paint, and lead may be concentrated in the soils around the drain outfalls. The concentrations of arsenic, mercury, and 2,4-dinitrotoluene also exceed the screening criteria; however, it is not clear whether these contaminants come from the drainpipes. Explain whether the extent of arsenic, mercury, and 2,4-dinitrotoluene is limited to the soils around the drain outfalls in the revised Report. In addition, refer to Comment 5 for the interpretation of MI sampling results. The Permittee must reexamine each

MI sampling result and revise the Report accordingly. Propose to conduct additional soil sampling to define the area of contamination in the Phase 2 RFI Work Plan. All metals detections that exceed screening levels must be evaluated for whether the metals are naturally occurring in the revised Report. Propose to conduct additional soil sampling to define the areas of potential metals contamination in the Phase 2 RFI Work Plan unless the background evaluation suggests otherwise.

24. Section 6.6, Conclusions and Recommendations, page 6-10

Permittee Statement: “The Army will use both the 2009 exceedances shown on Figure 6-3 and the 2010 XRF exceedances shown on Figure 6-4 as the data of record determining exceedances of the cleanup levels. The 10 XRF confirmation samples will not be used.”

NMED Comment: The Permittee has proposed to utilize data that has been shown to be invalid based on comparisons to analytical laboratory data and not rely on data that is valid analytical laboratory data. This is not acceptable. XRF data that shows no correlation to analytical laboratory data is not valid and cannot be used to make decisions. Remove all reference to XRF data from the Report (unless the reference is to state that the data proved to be invalid). Propose to collect discrete samples from each location where XRF analysis was performed without collecting a laboratory confirmation sample and submit the samples for analysis at an analytical laboratory in the Phase 2 Work Plan.

25. Section 7.5, Evaluation of Current Investigation, page 7-5

Permittee Statement: “No soil samples collected in AOC 69 had detectable concentrations of PCBs (EPA method 8082) or Asbestos (EPA method 600).”

NMED Comment: Photos 7-6 and 7-7 exhibit potential asbestos containing materials on the ground. Even though the sample analysis indicated no detectable concentration of asbestos in AOC 69, the photo evidence suggests that the corrective measures must be implemented. A thorough visual inspection for the presence of friable asbestos containing materials in the vicinity of all buildings in AOC 69 must be conducted. The Permittee must address the visual indication of asbestos and propose removal in the Phase 2 RFI Work Plan.

26. Figure 7-4, Diesel Range Organics Screening Criteria Exceedances, and Table 7-4, Method 8015M Diesel Range Organics Soil Investigation Detected Constituents

NMED Comment: The screening criterion of Diesel Range Organics (DRO) is indicated as 620 mg/kg in Figure 7-4 while it is indicated as 520 µg/kg in Table 7-4. In Section 7.5, *Evaluation of Current Investigation (2009-2010)*, the screening criterion is reported as 520 mg/kg. The 2017 NMED *Risk Assessment Guidance* shows that the screening level of diesel

#2 crankcase oil is 1,000 mg/kg. The Permittee must use a consistent value for the DRO screening criterion. In addition, both Table 7-4 and Figure 7-4 show the DRO concentrations in a unit of micrograms per kilogram ($\mu\text{g}/\text{kg}$). Ensure that the units are accurate. This issue must be corrected in the revised Report.

27. Section 7.6.2, AOC 69 Conclusions and Recommendations, page 7-7

Permittee Statement: “An arsenic value of 4.1 mg/kg was the only constituent exceeding the cleanup levels at Building 302. Based on the discussion in section 2.5 and 7.6.1, and the fact that arsenic is the only exceedance at Building 302, the Army proposes no further action at the building.”

NMED Comment: Comment 3 of the 2009 Disapproval states, “[t]he Permittee must remove the coal ash or remnants of the coal ash and collect a representative number of discrete soil samples from depths of 6 to 12 inches bgs [at south of Building 302].” The Permittee’s response in Appendix A states, “[t]he Army proposes doing so in the corrective measures implementation phase where multiple response actions can be performed under a single contract.” The Permittee must address the removal of coal ash and propose to collect soil samples from the limits of the excavations in the Phase 2 RFI Work Plan.

28. Section 7.6.2, AOC 69 Conclusions and Recommendations, page 7-7

Permittee Statement: “The removal area will extend to midway between the sample point exceeding the SSL and the adjacent ‘clean’ sample point.”

NMED Comment: Although soil removal is proposed from midway between the sampling locations SS013/SS014 and sampling location SS020, there is no ‘clean’ sample point east of and adjacent to SS020 along the rail track. The Permittee must collect a soil sample approximately 25 feet east of SS020 along the rail track. If the contaminant concentrations exceed the screening criteria, extend soil sampling along the rail track to define the extent of contamination. The sampling procedures and analytical parameters must be consistent with other rail track samples. Propose to collect soil sample(s) at a location 25 feet east (and further as necessary) of SS020 in the Phase 2 RFI Work Plan.

29. Section 7.6.2, AOC 69 Conclusions and Recommendations

NMED Comment: The conclusions and recommendations regarding Building 316 are not included in the Report. Six samples (SS049D through SS054D) were collected around Building 316 and analyzed for asbestos, explosives, and lead. Asbestos and explosives were not detected and the lead concentrations were detected below the screening level according to Table 7-5, *Method 6010B/7471A Metals Soil Investigation Detected Constituents*. Since the roofing material of Building 316 was found on the ground near the building, the Permittee

must test the material for the presence of asbestos. The material must be collected for asbestos analysis. In addition, the Permittee must visually inspect the presence of any suspected asbestos containing materials in the vicinity of Building 316. Propose to conduct the investigation in the Phase 2 RFI Work Plan.

30. Section 9.1.1, Location, Description, and Operational History, page 9-1

Permittee Statement: “For simplicity, the former X-sites will be called AOC 88A (the eastern location and AOC 88B (the western location), and the ACM debris area will be called AOC 88C.”

NMED Comment: The figures of AOC 88 (Figure 9-1, *Soil sampling Locations – Multi Incremental and Discrete*, and Figure 9-2, *Geophysical Survey*) show the locations of AOC 88A and 88B; however, the location of AOC 88C is not shown. Include the location of AOC 88C in the associated figures in the revised Report.

31. Section 9.2.2, Historical Records Review, page 9-3, and Section 9.3, Evaluation of Data from Previous Investigations, page 9-3

Permittee Statements: “Asbestos was not detected in five confirmatory soil samples following removal.”

“Samples were not collected to evaluate this AOC.”

NMED Comment: The latter statement should be revised to note that five confirmatory soil samples were collected. Revise the statement in the revised Report.

32. Section 9.2.3, Site Reconnaissance, page 9-3

Permittee Statement: “A single piece of suspect ACM was observed near the south end of the arroyo channel (Photo 9-6) in [AOC 88C].”

NMED Comment: Asbestos containing materials were removed from AOC 88C in 2001 and the subsequent confirmatory sampling did not detect asbestos in the soil. However, a piece of suspect asbestos containing material was observed during this phase of the investigation. Since the area occupying AOC 88C is small and manageable for more thorough visual inspection, the Permittee must re-inspect for the presence of friable asbestos containing materials in AOC 88C. Propose to conduct the inspection in the Phase 2 RFI Work Plan.

33. Geophysical Investigation

NMED Comment: Digital geophysical mapping (DGM) identified subsurface anomalies during the site reconnaissance in SWMUs 12, 27, 70, and AOC 88. The areas where subsurface anomalies were identified during the reconnaissance appear to be too large to excavate to inspect each anomaly. Provide an explanation of how subsurface anomalies identified by DGM will be inspected in the Phase 2 RFI Work Plan.

The Permittee must submit a revised 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 12, 2018**. Also, the Permittee must submit a Phase 2 RFI Work Plan on or before **February 15, 2019**.

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

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

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