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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

February 6, 2018

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**RE: DISAPPROVAL
FINAL RCRA FACILITY INVESTIGATION WORK PLAN PARCEL 2
REVISION 1
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-15-009**

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 Work Plan, Parcel 2, Revision 1* (Work Plan), dated August 31, 2017. NMED has reviewed the Work Plan and hereby issues this Disapproval. The Permittee must address the following comments.

1. Table ES-1, Parcel 2 – Summary of Discrete-Depth and Incremental Sampling Methodology Soil Samples

NMED Comment: The analyses of lead and TAL metals are proposed for discrete and incremental soil samples collected from AOC 77, respectively, according to Table ES-1 and Table 9-1, *Proposed Sampling and Analyses for AOC 77*. Discrete soil samples must be analyzed for TAL metals to investigate potential metal contamination other than lead. Revise the Work Plan accordingly. In addition, NMED Comment 7 in the August 24, 2015 *Disapproval Final RCRA Facility Investigation Work Plan* states, “[t]he Phase II Plan will

need to propose collecting discrete samples at the impact berm and firing line [in SWMU 17] and analyze them for RCRA 8 metals by EPA Method 6020, explosives by EPA Method 8330B and semi-volatile organic compounds (SVOCs) by EPA Method 8270C. Samples will need to be collected at the base, center and at the top of the impacted berm or the Permittee may follow guidance provided in *Characterization and Remediation of Soils at Closed Small Arms Firing Ranges*, Interstate Technology and Regulatory Council, January 2003. This comment is also applicable to Section 9 of this Plan [AOC 77].” The Permittee proposes to analyze the incremental samples for explosives and TAL metals; however, the analyses of explosive compounds and SVOCs are not proposed for discrete samples. The discrete samples must be analyzed for explosive compounds and SVOCs in addition to TAL metals. All tables (e.g., Table ES-1, Table 9-1) and applicable sections in the Work Plan must be revised to address the changes.

2. Section ES-3.1, SWMU 17 Western Rifle Range and AOC 77 Combat Pistol Range, lines 11-12, page ES-2, Section 5.1.3, Constituents of Potential Concern, line 23, page 5-1, and Section 5.5.3, Discrete-Depth Soil Sampling, lines 35-36, page 5-3

Permittee Statements: “Based on the past use of these sites as small-arms ranges, the COPC is lead.”

“Because of the past use of SWMU 17 as a small-arms range, the COPC is lead.”

“Personnel will collect five samples from 0 to 6 inches bgs, and the samples will be analyzed for lead.”

NMED Comment: The proposed analysis for discrete soil samples at these small-arms ranges is only for lead; however, soil samples also must be analyzed for explosive compounds, SVOCs and TAL metals. Refer to Comment 1. In Section 5.1, *Background and Description*, the Permittee states, “[t]he location of the firing point cannot be determined from site visits and examination of aerial photographs of the range area.” Although the firing point is not known, sampling should be conducted in front of the most likely firing lines. Revise the applicable tables (e.g., Table ES-1, Table 4-1, and Table 5-2) to address the changes, and revise the proposed discrete soil sampling locations in Figure 5-2, *SWMU 17 Survey Transects and Proposed Discrete Soil Sample Location Map*, and Figure 9-4, *AOC 77 Combat Pistol Range Survey Transects and Proposed Discrete Soil Sample Locations*.

3. Section 4.3.3, Incremental Soil Sampling, lines 11-14, page 4-6

Permittee Statement: “ISM will be used to collect soil samples to delineate the nature and extent of COPCs at AOC 35 and AOC 36 and at former building sites AOC 76 and AOC 77 in Parcel 2. ISs will be collected in accordance with procedures outlined in the Interstate Technology & Regulatory Council (ITRC) document, *Incremental Sampling Methodology* (ITRC, 2012).”

NMED Comment: NMED views incremental sampling proposed in this Work Plan as a screening tool only in this application. If contamination is identified in soils using ISM procedures, the Permittee may be required to conduct additional sampling. Refer to NMED

Comment 15 in the September 5, 2007 *Notice of Disapproval Parcel 21 RCRA Facility Investigation Work Plan and Release Assessment Report for Parcel 21*. No revisions to this Work Plan are necessary.

4. Section 4.3.3, Incremental Soil Sampling, lines 21-23, page 4-6

Permittee Statement: “Personnel will establish increment locations in a systematic manner when sampling at igloos and former building sites.”

NMED Comment: The incremental sampling locations in decision unit 1 shown in Figure 4-1, *Discrete and Incremental Sample Locations for Igloos and Drain Outlets*, must be biased toward the drainage swales and nearby loading pad areas. In Section 6.3, *Nature and Extent of Contamination*, the Permittee also states, “[t]his moisture potentially flowed in the swales adjacent to the paved apron and remained there or flowed on the surface, away from the igloos, across the paved access road and into the drainage area opposite of the igloos.” The incremental sampling locations in decision unit 2 shown in Figure 4-1 must be biased toward the areas where contamination is likely to have accumulated (e.g., a ditch between the paved access road and drainage area). Similarly, the sampling locations for former building sites shown in Figure 4-2, *Incremental Subsample Locations for Former Building Sites* must be relocated to focus more toward topographic low areas and any area where there is evidence of potential contamination. Incremental sampling locations should not be established in a systematic manner; rather, they must be biased toward the areas of potential contaminant accumulation at the igloos and former building sites. Revise the Work Plan accordingly.

5. Section 4.3.4, Soil Boring Sampling, lines 9 and 19-20, page 4-7

Permittee Statements: “Field personnel will collect soil or rock samples at intervals described in Section 10.7.”

“Specific soil boring sampling activities are described in Section 10.7 for SWMU 22.”

NMED Comment: Section 10.7 is not included in the Plan. The Section must include the information described in Section ES-3.4, *SWMU 22 Group C Landfill*, at a minimum. Include the missing section in the revised Work Plan.

6. Section 4.3.4, Soil Boring Sampling, lines 9-11, page 4-7 and Section 4.3.5, Groundwater Monitoring Well Installation and Sampling, lines 33-35, page 4-7

Permittee Statements: “Samples [from exploratory borings in SWMU 22] will be collected using new, disposable, or decontaminated sampling tools, and placed in decontaminated, laboratory-provided containers for analysis.”

“Soil cores [collected during the installation of groundwater monitoring wells] will be monitored for VOCs using a PID equipped with a 10.6-eV lamp. The maximum reading reported by the PID and the ambient air temperature will be recorded on the field boring log.”

NMED Comment: Although discrete soil sampling is proposed while advancing exploratory soil borings in SWMU 22, sample collection is not proposed during the installation of four groundwater monitoring wells. Soil samples must be collected from soil cores while installing the groundwater monitoring wells, as well. VOC measurement by a PID field instrument is not sufficient for site characterization; the samples collected from the soil cores during installation of the groundwater monitoring wells must be analyzed for explosives, perchlorates, nitrate/nitrite, VOCs, SVOCs, diesel- and oil- range organics, TAL metals, PAHs, and PCBs to be generally consistent with the analytical suite for the soil samples collected from the exploratory borings. Each soil core must be sampled 5-foot intervals starting at the approximate base of the previously graded excavation floor. Revise the Work Plan accordingly.

7. Section 5.1, Background and Description, line 3, page 5-1

Permittee Statement: “The Western Rifle Range is in the western area of Parcel 2 (Figure 5-1).”

NMED Comment: The Western Rifle Range (SWMU 17) appears to be positioned in the central area of Parcel 2 according to the inset on Figure 5-1, *SWMU 17 Site Map*. Revise the statement (or Figure 5-1) to reflect the correct location of SWMU 17 in Parcel 2 in the Work Plan.

8. Section 5.5.3, Discrete-Depth Soil Sampling, line 37, page 5-3

Permittee Statement: “Table 5-3 contains the proposed sample collection details for this discrete sampling.”

NMED Comment: Table 5-3 is not included in the Work Plan. Table 5-2 is labeled as *Parcel 2 – Proposed Sampling and Analyses for SWMU 17 (Western Rifle Range)*. Revise the Work Plan accordingly.

9. Section 6.2.2, Sampling Data, lines 18-20, page 6-2, and Section 7.2.2, Sampling Data, lines 16-18, page 7-2

Permittee Statements: “The nitrate/nitrite and phosphate concentrations in soil samples collected from AOC 35 [and AOC 36] igloos did not exceed the current nitrite NMED SSL of 7,820 mg/kg or the phosphate EPA RSL of 3,800,000 mg/kg.”

NMED Comment: The screening level of phosphate is 3,800,000 mg/kg, which exceeds 100% of phosphate concentration. The phosphate concentration cannot exceed the screening level under any circumstances; the value of the screening level implies that phosphate poses no human health and ecological risks. The Permittee is not required to assess site risks associated with the compounds whose screening criteria are above 1,000,000 mg/kg. Although the phosphate analysis does not evaluate site risks directly, the phosphate concentration can be compared to its background concentration to determine whether white phosphorous have been released. The Permittee compares the site phosphate data with the historical background concentration of 659 mg/kg. This approach is appropriate. If the phosphate concentrations were detected higher than the background concentration, potential release of white phosphorous may have occurred in the past. For example, if a wipe sample from the interior of igloo H-1507 detected an elevated phosphate concentration, white phosphorus could have been stored inside the igloo and released from the igloo since the phosphate concentration in the soil sample collected from the vicinity of igloo H-1507 exceeded the background concentration. Discuss the potential release of white phosphorous and other explosives compounds in AOCs 35 and 36.

10. Section 6.5.4, Incremental Surface Soil Sampling of Igloo Drainage Areas, lines 1-6, Page 6-4

Permittee Statement: “If analysis reveals constituents exceed NMED residential SSLs or Tier 1 ESLs, a decision will be made as to whether screening level refinements are appropriate, as described in Section 11. If exceedances remain, soil removals with confirmatory sampling will be recommended [in AOC 35].”

NMED Comment: The reported constituent concentrations for incremental samples must be multiplied by the number of subsamples in each decision unit to evaluate for the presence of hot spots. If any exceedances are found during the screening process, the Permittee is required to conduct additional soil sampling by further dividing the sampling grid in the decision unit in order to determine the area of contamination. This comment applies to all AOCs and SWMUs where an incremental sampling approach is utilized. Metal concentrations may exceed the screening criteria when the reported metal concentrations are multiplied by the number of subsamples in a decision unit. Comment 4 in the NMED’s *Disapproval* dated August 24, 2015 states, “[i]f [incremental] data is used to determine risk, then [metals] background IM data must be collected for comparison to the site [incremental] data.” The Permittee must compare metal background concentrations obtained from metal background incremental (IM) data, not metal background discrete data, with the site IM data prior to evaluating cumulative risk in the RFI reports. Since metal background IM data is not available for comparison, the Permittee is required to address the relationship between discrete background data and background IM data in the revised Work Plan. Refer to Comments 21 and 25.

11. Section 8.2.1, Non-Sampling Data, lines 22-23, page 8-1

Permittee Statement: “Review of available aerial photography (Environmental Research, Inc., 2006) suggests that the building was constructed between 1935 and 1948.”

NMED Comment: Asbestos-containing materials (ACM) have been found at other sites where buildings were constructed during the similar era. An inspection for ACM must be conducted during the investigation in accordance with Permit Section VIII.A.1.e. If ACM is found, the soil must be analyzed for the presence of asbestos. This comment also applies to the former building sites at AOC 77. Revise the Work Plan to include ACM investigation for AOCs 76 and 77.

12. Section 9.5.4, Discrete-Depth Soil Sampling of the Former Combat Pistol Range, lines 36-37, page 9-3

Permittee Statement: “Figure 9-4 shows the locations of the planned discrete-depth soil samples.”

NMED Comment: Two sampling locations are shown outside of the AOC 77 boundary and three sampling locations are shown outside of the Combat Pistol Range boundary according to Figure 9-4. Provide a basis for selecting the sampling locations in the revised Work Plan; otherwise, revise the sampling locations in Figure 9-4. Comment 2 states, “[a]lthough the firing point is not known, sampling should be conducted in front of the most likely firing line.” If there is an appropriate basis for selecting the sampling locations in Figure 9-4, leave the proposed sampling locations while including additional sampling locations for the most likely firing line in Figure 9-4. Similarly, two sampling locations are shown outside of the SWMU 17 boundary according to Figure 5-2. Provide a basis for selecting the sampling locations in the revised Work Plan; otherwise, revise the sampling locations in Figure 5-2. If there is an appropriate basis for selecting the sampling locations in Figure 5-2, leave the proposed sampling locations while including additional sampling locations for the most likely firing line in Figure 5-2.

13. Section 9.5.4, Discrete-Depth Soil Sampling of the Former Combat Pistol Range, lines 37-38, page 9-3

Permittee Statement: “Sampling personnel will collect five discrete soil samples from 0 to 6 inches bgs, and these samples will be analyzed for lead.”

NMED Comment: The lead analysis is proposed for discrete soil samples while the TAL metals analysis is proposed for incremental soil samples collected from AOC 77. TAL metals analysis must be conducted in lieu of lead analysis for the discrete soil samples. Refer

to Comments 1 and 2. In addition, discrete soil samples must be analyzed for explosive compounds and SVOCs. Revise the Work Plan accordingly.

14. Figure 10-2, Location of Proposed Monitoring Wells and Soil Borings SWMU 22

NMED Comment: Installation of soil borings is not proposed within the boundary of the Group C Small Landfill according to Figure 10-2. Two borings are required because post-excavation confirmation samples were not collected for the evaluation of potential impacts on deeper soils. Install two soil borings within the boundary of the Group C Small Landfill and indicate the location of the borings on Figure 10-2 in the revised Work Plan. Collect soil samples at 5-foot intervals starting at the approximate base of the previously graded excavation floor to depths of 25 feet below the base of the excavation. The soil samples collected from the Small Landfill must be analyzed for explosives, TAL metals, perchlorate, VOCs, SVOCs, PAHs, PCBs, nitrate/nitrite, and diesel- and oil- range organics. Revise Table 10-3, *Proposed Soil Sampling and Analyses for SWMU 22*, to update the number of samples.

15. Section 11.1.2, AOC 77 Dataset, lines 37-38, page 11-1

Permittee Statement: “For the Combat Pistol Area, five discrete-depth surface soil samples (0 to 6 inches bgs), located within and downgradient of the drainageways, will be analyzed for lead.”

NMED Comment: These discrete-depth surface soil samples must be analyzed to assess the presence of metals contamination other than lead; the samples must be analyzed for TAL metals, explosive compounds, and SVOCs. Refer to Comments 1, 2, and 13. Revise the Work Plan accordingly.

16. Section 11.1.6, SWMU 22 Dataset, lines 5-9, page 11-4

Permittee Statement: “Five soil borings will be drilled along the larger Group C landfill, which will be sampled every 5 vertical feet starting at the approximate base of the previously graded excavation floor, down to 25 feet. This will result in a total of 25 samples, which will be analyzed for TAL metals, VOCs, SVOCs, PCBs, and pesticides. Five-foot increments were selected so data obtained can be applied appropriately to receptor exposure horizons.”

NMED Comment: Include soil borings for the Group C Small Landfill in SWMU 22. See Comment 14. The required analyses for the soil samples collected from soil borings in the Group C Small Landfill includes explosives, TAL metals, perchlorate, VOCs, SVOCs, PAHs, PCBs, nitrate/nitrite, and diesel- and oil-range organics. The analytical suite for soil samples collected from the larger Group C landfill must be generally consistent; revise the Work Plan accordingly. In addition, acknowledge that a data gap exists regarding deeper

vadose zone soils in both the small as well as large Group C landfills in Section 10.4, *Data Gaps*. Revise Section 10.4 in the Work Plan accordingly.

17. Section 11.1.6, SWMU 22 Dataset, lines 12-13, page 11-4

Permittee Statement: “The [groundwater] samples will be analyzed for TAL metals, VOCs, SVOCs, PCBs, TPH-DRO, TPH-GRO, pesticides, and PAHs.”

NMED Comment: Include well gauging data and water quality parameters (e.g., DO, ORP) collected from the four groundwater monitoring wells in SWMU 22 in the RFI report. In addition, the groundwater samples collected from these wells must be analyzed for explosive compounds, perchlorate, PCBs and nitrate/nitrite. Revise the Work Plan accordingly.

18. Section 11.2, Data Quality Objectives and Data Adequacy, lines 19-22, page 11-4

Permittee Statement: “For the analytes in soil with screening levels less than the DL, it is the groundwater protection screening level that is lower than the DL; the direct contact screening levels were greater than then DL.”

NMED Comment: The Permittee’s statement was discussed in Section 4.1.2, *Measurement Performance Criteria*, lines 21-32, page 4-4. However, the statement itself is confusing and readers may not understand. Revise the Work Plan to provide a more detailed and clear description. In addition, the statement contains a typographical error.

19. Section 11.3.3.2, Groundwater, line 17, page 11-7

Permittee Statement: “No current NMWQCC standard or EPA MCL has been established for perchlorate.”

NMED Comment: The NMED *Risk Assessment Guidance for Site Investigation and Remediation* (2017) includes a Tap Water Standard for perchlorate of 13.8 ug/L. The EPA Maximum Contaminant Level is 15 ug/L. Revise the Work Plan accordingly.

20. Section 11.3.4, Human Health Risk Evaluation Approach, lines 37-38, page 11-7

Permittee Statement: “2. Metals background evaluation: The second part is an evaluation of metals background concentrations.”

NMED Comment: The site attribution analyses must be conducted as the first step of the screening process. If site concentrations are determined to be within background levels, the constituent should not be identified as a potential contaminant of concern. Revise the order of risk screening steps in the Work Plan as necessary.

21. Section 11.3.4.2.2, Using Site-Specific Background Values to Evaluate Incremental Samples, lines 18-22, page 11-10

Permittee Statement: “Discrete sampling results in an understanding of the range of background values, as opposed to an estimate of the mean that is produced with incremental sampling. When comparing site data to background values, it is important to use the UTL value for background rather than the mean. Only discrete background samples allow for calculation of a UTL and, therefore, discrete samples are appropriate for developing background levels.”

NMED Comment: NMED disagrees that incremental sampling data cannot be used to calculate a UTL; however, the results will not be the same as a UTL calculated from discrete sample data. In the response to NMED’s Comment 4 of the *Disapproval*, the Permittee also states, “[t]he Army also believes that using the discrete background dataset will not result in decision errors that are non-protective of human health and the environment at FWDA.” NMED does not agree that a quantitative comparison of discrete data to incremental sampling data is a technically sound approach and it is inconsistent with Federal guidance for how to handle incremental sampling data. Background incremental sampling data must be obtained for conducting quantitative incremental sampling site attribution analyses. The Permittee must discuss the differences between discrete sample background study data as collected by the Permittee for their background study and the comparison to incremental sampling data. In addition, the incremental sampling values must be multiplied by the number of subsamples and the resulting values must be included in the qualitative background discussion. Refer to Comments 10 and 25.

22. Section 11.3.4.2.4, Step 1 – Evaluate the Maximum Concentration, lines 10-12, page 11-11

Permittee Statement: “NMED risk guidance (NMED, 2017; Section 2.8.3.3 and Section 2.8.3.3) indicates that metals can be eliminated from further consideration when the maximum detected concentration is less than or equal to its background level.”

NMED Comment: The reference is pertaining to Comparison to Background - Incremental Site Methodology (ISM) Data. The Permittee compares incremental sampling data to the background values collected from discrete sampling. Therefore, the discussion is not supported by the reference. Refer to Comments 21 and 25. Section 11.3.4.2.3, *Summary and Application of the FWDA Metals Background Studies*, is discussed based upon the approach that is unacceptable to NMED; the section must be revised to provide a qualitative discussion of the relationship between discrete and incremental sample data (see Comment 21 above) or site-specific background values for incremental sampling data must be obtained. In addition, the reference contains a typographical error (Section 2.8.3.3 and Section 2.8.3.3).

23. Section 11.3.4.2.5, Step 2 – Evaluate Essential Nutrients, lines 26-29, page 11-11

Permittee Statement: “Essential nutrients with maximum concentrations less than the SSL will not be retained as COPCs and are not evaluated further. Essential nutrients that are metals with maximum concentrations greater than the soil screening levels will progress to Step 3 of the metals background evaluation.”

NMED Comment: The soil screening levels for all essential nutrients (calcium, chloride, magnesium, phosphorus, potassium, and sodium) exceed 1,000,000 mg/kg (100%). There is no risk associated with these essential nutrients; therefore, the evaluation of risks associated with essential nutrients is not necessary. However, elevated phosphorous concentrations relative to site-specific background value may be indicative of white phosphorous release. Refer to Comment 9. The Permittee must evaluate whether white phosphorous was released to the environment.

24. Appendix E, Project Schedule

NMED Comment: The schedule for the RFI activities outlined in Appendix E was developed based on the assumption of the approval of this Work Plan. Since this Work Plan is disapproved, the project schedule must be revised accordingly. Make appropriate changes to the project schedule in the revised Work Plan.

25. The Permittee’s Response to Comment 4 of the Disapproval

Permittee Statement: “The background dataset for FWDA is comprised of 124 discrete samples. These data were statistically evaluated and the 95% upper tolerance limit (UTL) (estimated at a confidence level of 95%) was calculated and selected to represent the background value for each metal. The Army believes that using background metals concentrations derived as upper tolerance limits from discrete samples will not adversely impact decision making given the size and area covered by the background dataset. The Army also believes that using the discrete background dataset will not result in decision errors that are non-protective of human health and the environment at FWDA. Additional discussion on this topic is provided in Section 11.3.4.2.2. Comparison of an estimate of the mean concentration from the incremental samples to the 95% UTL is considered to be a reasonable approach for evaluating if a metal is present at levels consistent with background.”

NMED Comment: Incremental sampling methodology is designed to reduce variances and small-scale variability; thus, incremental sampling data are more a reflection of the mean of a dataset rather than the UTL. Comparison of incremental sampling data to a UCL would be more appropriate than comparison to a UTL. Intuitively, comparison of a “mean” to an UTL seems conservative and may result in decision errors that result in stricter regulation. However, as the data are statistically incomparable; comparisons should be limited to a qualitative discussion at best. While some one-tailed statistical tests might be applied, the level of uncertainty would be high. Thus, NMED does not agree that discrete and

incremental sampling data may be quantitatively compared. For a quantitative analysis, the Permittee must collect incremental sampling background data for comparison to the proposed incremental sampling data. The comparison of the discrete background data to site incremental sampling data may be used as a qualitative line of evidence, but may not be used to eliminate an inorganic constituent as a potential constituent of concern. If incremental samples are to be used, background incremental sampling must be conducted for quantitative comparison to site incremental sampling data. Refer to Comments 10, 21 and 22. However, if the Permittee still wants to pursue comparing discrete data to incremental sampling data, the Permittee must contact the EPA and developers of ProUCL to see if Parcel 2 could be used as a data case for testing new methodologies under Monte Carlo Background Incremental Sample Simulator (BISS) module. As noted in Section 4.4.3.2 of the *ITRC Guidance* for incremental sampling, comparing or combining discrete and incremental sampling data, conceptually, can only be done when specific conditions are met. If the Permittee chooses to propose a test data case to EPA, the following issues must be evaluated thoroughly prior to contacting EPA about using Fort Wingate Depot Activity (FWDA) as a test facility for BISS:

- a. The design for selecting the discrete samples must be known (i.e., simple random sampling, adaptive cluster sampling, etc.), and the discrete sample set must be representative of the entire decision unit (i.e., the sampling design was statistically based and not biased). The number of previous background data representative of Parcel 2 may not be sufficient for comparison to incremental sampling data. The Permittee must justify that the entire database is appropriate for use.
- b. The samples must have been collected using the same collection method or methods similar enough to ensure equivalent particle size distributions between types of samples. The background data collected during the 2010 sampling event used field screening of samples with a No. 4 screen (4.76 mm). However, Method 8330B uses a No. 10 mesh screen (2 mm). The inclusion of larger particles in the discrete data is likely to result in differences. Further, the discrete data were not ground prior to analyses, but Method 8330B will include grinding of the aliquots before collecting a subsample for analysis. Grinding of the samples will likely result in greater concentrations of metals compared to the discrete data. Given the differences in sample collection methods and processing of the data, there is a potential that the incremental sampling data will result in higher metals concentrations compared to the discrete background data.
- c. The samples are representative of the same soil conditions (e.g., soil type, depth). The 2010 background sampling data were based on ecozones rather than soil type. The discrete samples collected during the 2013 sampling event represent soil from 6-12 bgs. For the incremental sample, one sample is proposed for 0-6 inches and a second sample from 6-12 inches according to Section 4.3.3. Justification must be provided to show that the data from 6-12 inches bgs is appropriate for the surface incremental sampling data collected from the 0-6 inches bgs interval.
- d. The samples have been processed in a laboratory using the same sample preparation method or methods similar enough to ensure equivalent digestion and extraction of contaminants from the sample matrix for analysis. As noted above, there are differences in sample preparation, specifically grinding of samples, that could result in differences in

concentrations and add a layer of uncertainty to the comparison of discrete to incremental sampling data.

- e. The samples have been analyzed in a laboratory using the same analytical method or methods sufficiently similar to ensure equivalent analytic results.
- f. The quality of both data sets is understood (via data validation reports) such that it is known that the data are appropriate for the intended use.

26. The Permittee's Response to Comment 11 of the Disapproval

Permittee Statement: "If unacceptable risk remains [associated with incremental sampling], soil removals with confirmatory sampling will be conducted beneath former drain locations."

NMED Comment: The constituent concentrations for incremental samples must be multiplied by the number of subsamples in each decision unit to determine the potential presence of unacceptable risk. If any exceedances in organic constituents are found during the screening process, the Permittee must conduct additional soil sampling by further dividing the sampling grid in the decision unit. Refer to Comment 10. If the Permittee elects to remove soils instead, soil confirmation sampling must be conducted subsequent to soil removal.

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 to the Work Plan. The revised Work Plan must be submitted no later than **August 31, 2018**.

Messrs. Patterson and Smith
February 6, 2018
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Should you have any questions, please contact Ben Wear of my staff at (505) 476-6041.

Sincerely,



John E. Kielling
Chief
Hazardous Waste Bureau

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File: FWDA 2018 and Reading, Parcel 2, FWDA-15-009