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October 25, 2015

DCN: NMED-2015-21

Mr. David Cobrain  
New Mexico Environment Department (NMED)  
Hazardous Waste Bureau  
2905 Rodeo Park Dr. E/Bldg 1  
Santa Fe, NM 87505

RE: Evaluation of the *Final RCRA Facility Investigation Work Plan Parcel 20*, Fort Wingate Depot Activity, McKinley County, New Mexico, May 22, 2015.

Dear Mr. Cobrain:

Attached please find draft technical comments on the *Final RCRA Facility Investigation Work Plan Parcel 20*, Fort Wingate Depot Activity (FWDA), McKinley County, New Mexico, dated May 22, 2015 (RFI Work Plan). The main text of the work plan document was subjected to a thorough technical review. Information provided in the appendices supporting the main text was reviewed as it related to the design of the field investigation and satisfactory accomplishment of the investigation objectives. Appendices B, E, G, and H were not reviewed.

While extensively reviewed as part of this evaluation, a full technical review of Appendix D [Uniform Federal Policy for Quality Assurance Project Plan (UFP-QAPP)] was not performed. NMED may wish to conduct such a review before the commencement of field activities at Parcel 20. However, the information contained in Appendix D provides adequate support for the discussions in the main text and in many cases, provides additional information and/or additional details on the performance of field activities, laboratory analysis of the collected samples, QA/QC for the sampling effort, and evaluation, validation, and usability of the resulting data.

If you have any questions, please contact me at (801) 451-2864 or via email at [paigewalton@msn.com](mailto:paigewalton@msn.com).

Thank you,

Paige Walton  
AQS Senior Scientist and Program Manager

cc: Neelam Dhawan, NMED (electronic)  
Ben Wear, NMED (electronic)  
Joel Workman, AQS (electronic)

**Draft Technical Comments on the  
Final RCRA Facility Investigation Work Plan Parcel 20  
Fort Wingate Depot Activity (FWDA), McKinley County, New Mexico**

**May 22, 2015**

**General Comments**

1. Some confusion exists in the *Final RCRA Facility Investigation Work Plan Parcel 20* dated May 22, 2015 (RFI Work Plan) regarding the determination of background values for metals that can be used at Parcel 20 and SWMU 38. The discussion of Metals Background in Section 4.3.1 (Soil Sampling) of the RFI Work Plan identifies three sources of information on background levels for metals: Soil Background Study and Data Evaluation Report Version 2 authored by Shaw Environmental, Inc. (Shaw) and referenced to 2010, NMED's Evaluation of Background Levels for Arsenic in Soil dated December 18, 2013, and a "2012 background study." Section 5.2.2.3 (Soil Background Study and Data Evaluation Report, 2010) of the RFI Work Plan provides additional information on soil background values. This discussion references the Phase 2 Soil Background Report dated February 5, 2013 and the NMED document mentioned in Section 4.3.1. Only two of these documents, Shaw's Soil Background Study and Data Evaluation Report dated 2010 and NMED's Evaluation of Background Levels for Arsenic in Soil dated December 18, 2013 are listed in Section 7.0 (References) of the RFI Work Plan. Thus, the sources of background information to be used in the upcoming RFI are unclear. In addition, neither Section 4.3.1 nor Section 5.2.2.3 includes a demonstration that the areas from which background samples were collected are appropriate for establishing background values for Parcel 20 and SWMU 38. Review the information sources cited for information on background values in Sections 4.3.1 and 5.2.2.3. Based on the results of the review, revise these two sections for accuracy and consistency. Provide exact titles for each identified information source and ensure each cited source is listed in Section 7.0. In addition, revise Section 5.2.2.3 to include information demonstrating that the cited information sources are appropriate sources of background values for use at SWMU 38.
2. No dedicated discussion of sampling procedures and sample analysis (including data validation) is provided in the main text of the RFI Work Plan. The majority of the information related to sampling procedures and sampling analysis is provided in Appendix D [Uniform Federal Policy for Quality Assurance Project Plan (UFP-QAPP)] worksheets and Appendices A and B of the UFP-QAPP. For example, Section 4.4.10 of the main text addresses Field Documentation. The discussion lists some of the types of information to be documented in during the investigation of SWMU 38 and provides a general reference to Appendix A (Field SOPs) of the UFP-QAPP. Examination of Appendix A of the UFP-QAPP indicates that Worksheet #14&6, MC SOP 5 (Field Log Book Entries), MC SOP 6 (Chain of Custody) provide additional details regarding in-field documentation. A similar example can be provided for sample analysis. Section 4.4.9.2 of the main text summarizes chain of custody procedures. Additional details are available in Worksheet #26&27 of the UFP-QAPP and field SOP MOC 6. The laboratory SOPs in Appendix B (Laboratory Quality Assurance Management Plans, SOPs and Certifications) of the UFP-QAPP each address

laboratory chain of custody procedures. However, Section 4.4.9.2 does not reference any of these additional sources of information. Sections 4.0 and 5.0 and the associated subsections should be revised to reference the UFP-QAPP worksheets as well as the field and laboratory SOPs that present detailed and/or additional information on the subjects addressed in the main text. In addition, brief discussions on sampling procedures and sample analysis should be added to the main text of the RFI Work Plan with the discussions focused on referencing the worksheets and SOPs related to these subject areas (e.g., Worksheet #19&30 for sample containers and sample preservation, Worksheets #34 through #36 for data validation). Revise the RFI Work Plan to address this issue.

3. The main text of the RFI Work Plan does not contain or reference a Data Management Plan. However, the Data Management Plan is provided in UFP-QAPP) as part of Worksheet #14&16. A summary of the description of the Data Management Plan in Worksheet #14&16 should be included in the main text of the RFI Work Plan. The summary should also reference Worksheet #14&16 for additional details regarding the Data Management Plan. Revise the RFI Work Plan to address this issue.

### **Specific Comments**

1. Section 4.3.1. The fourth bullet under the discussion entitled Risk/Hazard-Based Screening Level Hierarchy states: “If an analyte does not have an NMED SSL or USEPA RSL, appropriate surrogates may be used with NMED approval.” Additional information regarding the risk-based screening of analytes without a NMED SSL or a USEPA RSL should be provided in the RFI Work Plan. Specifically, the procedures that will be followed in identifying suitable surrogates and submitting the surrogate information to NMED for approval should be provided. Revise the RFI Work Plan to identify those analytes which may require identification of a suitable surrogate for risk-based screening; discuss the approach that will be used to identify suitable surrogates; and describe how the identified surrogates will be provided to NMED for review and approval.
2. Section 4.3.2. The second bullet under item 4 on page 4-6 indicates that the depth of intrusive investigation will not exceed 4 feet below ground surface (bgs) for hand dug anomalies and 12 feet bgs for backhoe-dug anomalies. Based on the current discussion, it is not clear how these depths were determined. Revise the second bullet under item 4 on page 4-6 to indicate how it was determined that the vertical extent of hand-dug anomalies should be 4 feet bgs and vertical extent of backhoe-dug anomalies should not exceed 12 feet bgs.
3. Section 4.3.2. Bullets 3 and 4 of item 4 on page 4-6 state that the maximum vertical extent of the intrusive investigations in the 38-acre investigation area and the Arroyo Investigation Area will be determined by the depth of detection of the portable magnetometer (e.g., Schonstedt GA-52). This same information is provided in Worksheet #11 of the UFP-QAPP. It does not appear that the manufacturer’s specifications for the Schonstedt GA-52 or similar instrument are provided in the RFI Work Plan. Revise the third and fourth bullets of item 4 on page 4-6 to include an estimate of the maximum vertical extent of the intrusive investigations to be conducted in the 38-acre investigation area and the Arroyo Investigation Area. NMED acknowledges that the estimates are subject to change based on final selection of the portable magnetometer used in these investigations and that the maximum depth of the

intrusive investigations will not exceed 4 feet bgs. In addition, ensure that the manufacturer's specifications for the portable magnetometer used in all intrusive investigations at SWMU 38 are included in the RFI Report.

4. Section 4.3.2. The first bullet under item 7 on page 4-7 states that up to 1,600 linear feet will be excavated from ten trenches. Further, this bullet indicates that the trenches will be 18 inches wide and excavated to a maximum depth of 5 feet. This same information is provided in worksheet #11 of the UFP-QAPP and similar information is listed in Table ES-1 (Table ES-1 indicates 9 trenches will be used). An additional discussion on trenching (which indicates ten trenches will be used) is provided in Section 4.4.5. It is not clear how the nominal specifications for the investigation trenches cited in the RFI Work Plan were determined. Review Table ES-1 and if appropriate, revise the table to indicate ten trenches will be used. In addition, revise the RFI Work Plan to describe how the nominal dimensions of the investigative trenches (up to 1,600 linear feet of trench, excavated to a width of 18-inches and maximum depth of 5 feet).
5. Section 4.4.7. The discussion in Section 4.4.7 indicates that anomalies in the Arroyo Investigation Area and the 35-acre investigation area will be identified using a handheld magnetometer. Section 4.4.16 also states that a handheld magnetometer will be used to detect surface MEC and subsurface anomalies in these areas. A discussion demonstrating that this technology is appropriate for the task is not provided. Revise the RFI Work Plan to demonstrate that a handheld magnetometer is appropriate for identifying anomalies in these two investigation areas. The provided discussion should be brief and focus on the technology's probability of detection versus the possibility of false alarms as compared to other applicable technologies.
6. Section 4.4.9.2. Section 4.4.9.2 discusses chain-of-custody for the project including the use of a chain-of-custody form for recording pertinent sampling information and maintaining sample possession information. However, it does not appear that an example form has been included in the RFI Work Plan. Revise the RFI Work Plan to include an example of the chain-of-custody form that will be used for this project.
7. Section 4.4.12. Section 4.4.12 states: "All excavations created from excavation of anomalies, detonations, and access will be backfilled and restored to original grade." However, the primary source of the backfill material is not specified [the discussion at the bottom of page 5-20 (Section 5.4.1) does state that if borrow material is required, it will be taken from the FWDA designated area]. Revise Section 4.4.12 to identify the source of the backfill to be used to fill in the excavations created during the field activities associated with this project. Describe how it will be determined that the material is suitable for use as backfill.
8. Section 4.4.15. The third bullet in Section 4.4.15 states that used, non-decontaminated disposable sampling equipment or PPE will be placed in polyethylene trash bags and disposed of in suitable facility trash receptacles. However, the discussion does not indicate how it will be determined that used, non-decontaminated disposable sampling equipment and PPE is suitable for disposal as general refuse. Revise the discussion in the third bullet to identify any characterization of used, non-decontaminated disposable sampling equipment

and PPE to be performed in determining if the items are suitable for disposal as general refuse.

9. Section 5.1.4. The last sentence of Section 5.1.4 reads: “Based on the operational history, the COPCs for SWMU 38 are explosives, RCRA 8 metals, perchlorate, and SVOCs.” The identification of COPCs is also discussed in Section 5.3.1. The information provided in the RFI Work Plan implies that the COPCs for SWMU 38 were determined by examining its operational history. However, the data collected during previous investigations (described in Section 5.2 of the RFI Work Plan) as well as any data gaps associated with those investigations should also be considered when identifying COPCs. Revise Section 5.1.4 to identify and discuss all types of information considered in identifying the COPCs for SWMU 38. If the selection process was limited to examination and evaluation of the operating history of the SWMU, revise the RFI Work Plan to state that at a minimum, the operating history, historical data collected at the site, and the data gaps in the historical data will be used to identify COPCs for the SWMU 38 investigation.
10. Section 5.2.2. The discussion in Section 5.2.2 indicates that historical data will be included in the evaluation of risk and hazard in the RFI report. However, it is not clear that the historical data have been evaluated for use in a risk assessment. Revise the discussion in Section 5.2.2 to describe the evaluation performed on historical data to determine that it can be combined with newly collected data and used in the evaluation of risks and hazards present at SWMU 38. If the evaluation of historical data was performed using procedures described in the UFP-QAPP, ensure that Section 5.2.2 includes reference to those worksheets.
11. Section 5.2.3.3. The last sentence of Section 5.2.3.3 indicates that FWDA provides habitat for antelope, prairie dogs, rattlesnakes, field mice, and various insects and animals. Birds are not mentioned as potential ecological receptors. Revise the discussion in Section 5.2.3.3 to explain why birds are not considered potential ecological receptors at Parcel 20 and SWMU 38. Ensure the discussion considers the potential for birds to come to the site to feed.
12. Section 5.4.1. Section 5.4.1 addresses the discrete surface and subsurface soil sampling to be performed at SWMU 38. Additional information regarding discrete soil sampling is provided in Worksheet #17 of the UFP-QAPP. However, Section 5.4.1 does not include a reference to Worksheet #17. Revise Section 5.4.1 to reference Worksheet #17 of the UFP-QAPP for additional information on the discrete soil sampling to be performed at SWMU 38.
13. Section 5.4.2. Section 5.4.2 discusses the multi-incremental soil sampling to be performed at SWMU 38. Additional information regarding multi-incremental soil sampling is provided in Worksheet #17 of the UFP-QAPP. However, Section 5.4.2 does not include a reference to Worksheet #17. Revise Section 5.4.2 to reference Worksheet #17 of the UFP-QAPP for additional information on the multi-incremental soil sampling to be performed at SWMU 38.
14. Section 5.4.2.2. According to Section 5.4.2.2 composite samples will be collected from all 45 decision units (DUs) with each composite consisting of 6 subsamples. The samples will be analyzed for SVOCs. Worksheet #17 of the UFP-QAPP provides the sample design and rationale for the discrete and ISM samples to be collected within SWMU 38. A similar

discussion is not provided for the composite samples. Revise Section 5.4.2.2 to include a discussion of the sampling design and rationale for collecting and analyzing composite samples within SWMU 38.

15. Section 6.0. The discussion of the Project Management Plan provided in Section 6.0 includes a project schedule and references to several appendices of the RFI Work Plan including: Appendix D [Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP) for the project], Appendix E (Accident Prevention Plan/Site Safety and Health Plan), and Appendix H (Waste Management Plan, Hazardous Waste Contingency Plan, and the Environmental Protection Plan). However, no discussion of the management structure, the lines of communication among project participants (i.e., the Army, its contractors and subcontractors), and the qualifications of project staff and their project responsibilities is provided in Section 6.0. Much of the information missing from Section 6.0 is provided in Worksheets #3&5, #4, 7 & 8, #6, and Figure 2-1 in the UFP-QAPP. The information presented in the UFP-QAPP but not presented in Section 6.0 should be summarized within Section 6.0. References to specific spreadsheets and figures in the UFP-QAPP should be included in the Section 6.0 discussion. Revise Section 6.0 to include a summary of the project organization, staff qualifications, and communication pathway information contained in the UFP-QAPP. In addition, the specific worksheets and figures from which the information is drawn should be referenced in the Section 6.0 discussion.
16. Section 6.2. A schedule for the project is provided in Section 6.2. A reference to the complete, detailed project schedule in Appendix L of the RFI Work Plan is also provided. The schedule presented in Section 6.2 is an abbreviated version of the schedule found in Worksheet #14&16 of the UFP-QAPP. In addition to the information provided in Section 6.2, the schedule in Worksheet #14&16 lists the party responsible for the listed activity and the types of project deliverables associated with each activity. Revise the schedule presented in Section 6.2 to include all the information provided in the schedule presented in Worksheet #14&16 of the UFP-QAPP. Ensure that the reference to the detailed schedule in Appendix L is retained in the text.
17. Appendix D, UFP-QAPP, Worksheet #1&2, Page 6 of 114, and Worksheet #3&5, Page 9 of 114. Worksheet #1&2 lists Shahrukh Kanga of PIKA-PIRNIE JV as the Contracting Organization Technical Lead and Dennis Meyers of USACE as the Contracting Organization Contracting Officer's Representative (COR). Worksheet #3&5 lists Steve Smith as the USACE Program Manager, Dennis Meyers as the USACE Project Manager, and Scottie Fiehler as the USACE COR. Worksheet #3&5 also lists Shahrukh Kanga as the Project Manager for PIKA-PIRNIE JV. Review Worksheets #1&2 and #3&5 to determine if the appropriate staff is listed in both worksheets. Based on the results of the review, revise the worksheets as necessary for accuracy and consistency.