



BILL RICHARDSON  
Governor

DIANE DEN-ISH  
Lieutenant Governor

NEW MEXICO  
ENVIRONMENT DEPARTMENT

*Hazardous Waste Bureau*

2905 Rodeo Park Drive East, Building 1

Santa Fe, New Mexico 87505-6303

Phone (505) 476-6000 Fax (505) 476-6030

[www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)



RON CURRY  
Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 5, 2010

Mark Patterson  
Ravenna Army Ammunition Plant  
Building 1037  
8451 State Route 5  
Ravenna, OH 44266

Steve Smith  
CESWF-PER-DD  
819 Taylor Street, Room 3A12  
PO Box 17300  
Fort Worth, TX 76102-0300

**RE: SECOND NOTICE OF DEFICIENCY  
RCRA FACILITY INVESTIGATION WORK PLAN PARCEL 3  
FORT WINGATE DEPOT ACTIVITY, NEW MEXICO  
EPA ID# NM6213820974  
FWDA-06-004**

Dear Mr. Patterson:

The New Mexico Environment Department (NMED) received the Department of the Army's (the Permittee) *Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan Parcel 3* (Work Plan), dated August 31, 2009, submitted pursuant to NMED's Notice of Deficiency (NOD) dated June 5, 2009. NMED has reviewed the revised Work Plan and hereby issues this second Notice of Deficiency. The Permittee must satisfactorily address the following comments before NMED can approve the Work Plan.

**COMMENT 1**

In Section 2.3.2.3 (Data Screening), page 2-5, lines 7-13, the Permittee states "[a]s a first attempt to evaluate existing environmental data relative to risk to human health, soil and sediment analytical data were compared to NMED Residential Soil Screening Levels (SSLs). If a Residential SSL has not been established for a given detected constituent, the data were

compared to proposed cleanup levels based on USEPA Region 6 Human Health Medium-Specific Screening Levels (HHMSSLs), as described in Permit Attachment 7, Section 7.2.” The most recent HHMSSLs have been replaced by EPA’s Regional screening levels (RSLs), which can be found at [http://www.epa.gov/earth1r6/6pd/rcra\\_c/pd-n/screen.htm](http://www.epa.gov/earth1r6/6pd/rcra_c/pd-n/screen.htm). The Permittee must revise the Work Plan to incorporate this change.

#### **COMMENT 2**

In Section 5.4.2 (Waste Debris / Characterization), page 5-13, lines 13-16, the Permittee states “FWDA believes that data collected will demonstrate that many of the waste materials are simply solid wastes which are not RCRA regulated and which do not pose a threat to human health or the environment, and therefore can be closed with those materials remaining in place.” The Army has buried waste at these sites for many years and there is evidence of munitions and munitions debris in and around Solid Waste Management Units (SWMUs) 14, 15, 33 and throughout Parcel 3. While SWMUs 14, 15, 33 and the rest of Parcel 3 are not subject to the Closure and Post-Closure requirements in 40 CFR 264 Subpart G, waste similar to that present at the Hazardous Waste Management Unit was also disposed at these sites and must be treated in a similar fashion. Hazardous waste (for the purposes of corrective action) and Hazardous Constituents are defined in Section I.H of the RCRA Permit (December 1, 2005) and releases of hazardous waste or hazardous constituents present in Parcel 3 are subject to the corrective action requirements of the Permit. The Permittee must therefore remove all buried waste from these sites, and collect confirmation samples to ensure that constituents of concern have not migrated to the underlying soil or groundwater. Although the removal of waste will be completed during a separate phase of this investigation, the Permittee must revise the Work Plan to include the waste characterization activities as well as any other activities and state that the waste will be removed and the details of removal will be included in a separate work plan.

#### **COMMENT 3**

In Section 5.2.1 (Geophysical Surveys), page 5-3, the Permittee states that “[i]t was planned to use ground penetrating radar (GPR) in addition to the EM and MAG technologies, to collect data at specified anomalies identified by the EM (electromagnetic) and MAG (magnetic) surveys. However, because GPR performed poorly at another FWDA site with similar soil types, it was not used to evaluate the Closed Open Burn/Open Detonation (OB/OD) Area SWMUs.” The Permittee does not specify at which site the GPR survey was conducted nor were survey details were not included in the Work Plan. During this phase of investigation the Permittee must determine the extent of buried waste and locate the old burning grounds throughout the entire Fenced Up Horse Valley (including SWMUs 14, 15, and 33). The Permittee must conduct a GPR survey or select an alternate method subject to NMED review and approval that can detect ground disturbances or debris up to ten feet below ground surface. The Permittee must ensure that the survey encompasses the arroyos and the arroyo flood plains. The Work Plan must be revised to include the proposed activities as well as include the results from the previous GPR survey.

**COMMENT 4**

In Section 6.4 (Scope of Activities), pages 6-2 and 6-3, the Permittee states that “[a]s shown in Figure 6-1, the area proposed for digital geophysical mapping (DGM) contains the area where the previous handheld magnetometer investigation was performed.” Based on Figure 6-1, it is unclear where the previous handheld magnetometer investigation was performed. The Work Plan does not include a discussion about this survey (e.g., what were the survey depths). It is also unclear why the entire Area of Concern (AOC) 74 footprint has not been included within the proposed geophysical investigation boundary. The Permittee must revise Figure 6-1 to include the boundary for the previous geophysical investigation as well as to either include the entire AOC 74 footprint in the proposed geophysical investigation, or explain why the entire footprint is not included in the proposed investigation. The Permittee must also include the details and results from the previous geophysical survey in the revised Work Plan.

**COMMENT 5**

In Section 6.4 (Scope of Activities), pages 6-2 & 6-3, the Permittee states that “[a]s shown in Figure 6-2, the following decision tree is proposed for the survey area” and “[a]s previously discussed, geophysical investigations are planned within and around the SWMU 74.” Figure 6-2 includes “Aerial Geophysics”; however, the Permittee does not discuss aerial geophysics as part of the investigation at SWMU 74 in this section or in Section 11 (Investigation Methods). If the aerial geophysics have already been completed at SWMU 74, or any SWMUs and AOCs in Parcel 3, the Permittee must include the survey results and details (e.g., survey depths, figures, sites surveyed) in the revised Work Plan. If the aerial geophysics have not been completed, the Permittee must revise all applicable sections of the Work Plan to include details for the proposed aerial geophysical survey.

**COMMENT 6**

In Section 7.4 (Scope of Activities) (AOC 89- Features 30 & 34), pages 7-2 & 7-3, lines 39-4, the Permittee states “[a]s noted in the response to NMED HWB Comment 15, AOC 89 is located within the Kickout Area, and the land surface within AOC 89 will be part of a magnetometer-assisted surface unexploded ordnance / munitions and explosives of concern (UXO/MEC) clearance effort planned for the Kickout Area.” In the Comment Response (Comment 15), the Permittee states that “[f]ollowing completion of this surface clearance, further environmental characterization will be warranted. FWDA believes that samples collected from one multi-incremental (MI) exposure unit established within each barricade footprint will be adequate to characterize the locations following removal of existing debris.” The Permittee may proceed with the surface clearance at AOC 89 (features 30 & 34) as part of the kickout area surface clearance, however, all of Parcel 3 is located within the kickout area and various other SWMUs and AOCs within Parcel 3 are being investigated as part of this phase of investigation. Therefore, unless AOC 89, and specifically Feature 30, contains a large number of anomalies that make it impossible to access the necessary sites for characterization or to conduct a geophysical survey, the Permittee must proceed with characterization of Feature 30 during this phase of investigation.

The Permittee must collect soil samples from each revetment located within Feature 30. If MI sampling is the preferred choice for sampling for soil screening at Feature 30, the Permittee must collect two MI samples from each revetment: one from 6-12 inches, and another from 18-24 inches below ground surface (bgs). Soil sample analyses must include dioxins/furans, cyanide, polychlorinated biphenyls (PCBs), nitrate, perchlorate, explosives, and RCRA metals. The Permittee must also collect one discrete soil sample from depths of 6-12 inches bgs, from within each revetment and include volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) in the analyses. The Permittee must revise the Work Plan to include the proposed investigation details.

Given that Feature 34 is the proposed site for the Corrective Action Management Unit, no characterization is necessary as part of this phase of investigation.

#### **COMMENT 7**

In Section 9.4 (Scope of Activities), page 9-2, the Permittee states that “[d]uring this clearance activity, the clearance teams will collect observational data regarding the nature of the physical features noted in the aerial photos and assess their potential association with military use or munitions handling/disposal activities. Following the evaluation of these observations, FWDA will assess the need for and types of supplemental environmental characterization data required to appropriately evaluate this site.” NMED concurs with this approach for this phase of investigation. The Permittee must ensure that the results from the surface clearance and observations are included in the RFI Report for Parcel 3.

#### **COMMENT 8**

In Section 10.4.2 (Soil Investigation), page 10-2, the Permittee states “[f]igure 10-1 shows the location of the physical features identified within AOC 92 as a result of the review of historic aerial photography. These features are likely related to the former use of this area as a munitions detonation area. Therefore soil sampling in the vicinity of these features is warranted.” In the Comment Response, Comment 21, the Permittee states “[t]he proposed soil sampling will take place prior to conducting the surface clearance effort in this area of Parcel 3.” As stated in the Work Plan, a large number of anomalies have been identified at AOC 92 using aerial based geophysics. It is unclear why soil sampling is proposed to be completed before the surface clearance. Given that AOC 92 consists of detonation sites, it is also unclear why discrete sampling was the method chosen for collection soil samples rather than MI sampling.

For practical reasons as well as for safety reasons, and as part of this phase of investigation at Parcel 3, the Permittee must complete the surface clearance at AOC 92 before collecting soil samples. Once the surface clearance has been completed the Permittee must collect soil samples as proposed in the Work Plan. In addition to these samples, the Permittee must collect discrete soil samples from within the actual feature or crater from the same depths as proposed in the Work Plan. The Permittee must also divide AOC 92 into 50 x 50 ft decision units and collect 30 increments of soil samples from depths of 6-12 and 18-24 inches bgs (2 MI samples per decision

unit). Soil sample analyses must include the constituents proposed in the Work Plan. The Permittee must modify the Work Plan accordingly.

**COMMENT 9**

Figure 10-1 shows AOC 92 and related features. In this figure there is a feature that appears to be a detonation crater, located 250 feet south of sample location DBASO19. This feature is not included in the AOC 92 boundary and is not proposed to be included as part of the investigation activities at this AOC. The Permittee must either modify the AOC 92 boundary or the Hazardous Waste Management Unit Boundary to include this feature as part of either investigation. The Permittee must revise the Work Plan accordingly.

**COMMENT 10**

In Section 11.3 (Geophysical Investigations), the Permittee discusses the two types of geophysical instruments proposed to be used throughout Parcel 2: the Geonics EM61-MK2 and the Geometrics G-858. The Permittee does not include the depth to which the Geometrics G-858 can detect. The Permittee must revise the Work Plan to include these details.

**COMMENT 11**

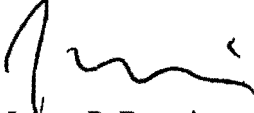
In Appendix A (Multi-Incremental Sampling Information), the Permittee states that “[f]or the thoroughly saturated clayey sediments, the entire saturated sample may be mixed and 30 small sub-samples may be taken randomly across the mix to fill each of the analytical sample jars.” The Permittee also states that the required equipment includes “two coffee grinders”. Based on the Environmental Protection Agency (EPA) 8330B method, Section 11 (Procedure), coffee grinders are not used for grinding soil samples. Additionally the method calls for drying all soil samples collected. The Permittee must adhere to the approved EPA method 8330B for all MI samples collected and ensure that the method is followed. This applies to all field investigations at the Facility and future investigations where MI sampling is proposed. The Permittee must revise the Work Plan and all future submittals to provide the correct information applicable to EPA method 8330B.

The Permittee must address all comments contained in this letter and submit a revised Work Plan no later than August 31, 2010. The cover page must indicate that the submittal is a revision and was prepared for NMED. The revised Work Plan must be accompanied with a response letter that details where all revisions have been made, cross-referencing NMED’s numbered comments. The Permittee must also submit an electronic copy of the Revised Work Plan with all edits and modifications shown in redline-strikeout format.

Messrs. Patterson and Smith  
March 9, 2010  
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If you have any questions regarding this letter, please contact Tammy Diaz-Martinez of my staff at (505) 476-6056.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

cc:

Dave Cobrain, NMED HWB  
Tammy Diaz-Martinez, NMED HWB  
John Kieling, NMED HWB  
Laurie King, U.S EPA Region 6 (6PD-N)  
Charles Hendrickson, U.S. EPA Region 6  
Sharlene Begay-Platero, Navajo Nation  
Eugenia Quintana, Navajo Nation  
Edward Wemytewa, Pueblo of Zuni  
Steve Beran, Pueblo of Zuni  
Clayton Seoutewa, BIA  
Rose Duwyenie, BIA  
Judith Wilson, BIA  
Eldine Stevens, BIA  
Ben Burshia, BIA

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