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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 8, 2008

Mark Patterson Ravenna Army Ammunition Plan 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: NOTICE OF DISAPPROVAL

PARCEL 21 RCRA FACILITY INVESTIGATION WORK PLAN, FEBRUARY 7, 2008 FORT WINGATE DEPOT ACTIVITY, MCKINLEY

COUNTY, NEW MEXICO EPA ID# NM6213820974 FWDA-06-003

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) has completed its review of the Department of the Army's (the Permittee) *Resource Conservation and Recovery Act (RCRA) Facility Investigation Work Plan for Parcel 21*, (Work Plan) dated February 7, 2008. This Work Plan submittal is in response to the Notice of Disapproval (NOD) dated September 5, 2007. NMED has determined that the Work Plan is deficient and hereby issues this NOD. The Permittee must address all comments contained in this NOD and submit a revised Work Plan. NMED will reevaluate the Work Plan once the requested information is provided.

COMMENT 1

Although some of the many structures in Parcel 21 may be demolished in the future, the Permittee must identify and/or locate all drain lines, underground utilities and/or sumps that are associated with each structure. This information must be included in the revised Work Plan.

COMMENT 2

In Section 15.2.2 (Multi Incremental Soil Sampling), page 15.2, the Permittee states that "[r] eview of soil sampling strategies and consequent results at Army installations throughout the U.S. has indicated that the likelihood of determining small scale hot spots of contamination by conventional discrete sampling is low, difficult to duplicate, and may not be legally defensible. Therefore, the primary purpose of collecting, preparing, and analyzing a multi-incremental (MI) sample is to provide a repeatable and accurate measure of the average concentrations of constituents of concern within a specific sampling area." MI sampling has only been applied to areas where the highest concentrations of energetic material residues have been found (e.g., near firing points, around targets, and areas where unexploded ordnance (UXO) or discarded munitions have been blown in place (BIP)). In the event that constituents unrelated to explosives may be a concern, MI sampling has not been shown to be an appropriate method for detection of these types of constituents.

In instances where explosives are a concern, MI sampling has been approved by NMED to be utilized as a screening tool only. Based on the results from MI or any other sample collection activities, the Permittee may be required to collect additional samples.

COMMENT 3

The data summary tables provided for each SWMU do not include definitions for Method Detection Limit (MDL), Contract Required Detection Limit (CRDL), and Chemical Abstract Services (CAS). The Permittee must define these acronyms in the footnotes in revisions of the appropriate tables.

COMMENT 4

In Section 3.1.1 (Location, Description, and Operational History), page 3-1, lines 8-9, the Permittee states that "[t]he building and related structures were demolished in 1998." The Permittee does not specify if the underground utilities and/or the sanitary sewer lines were removed during the demolition process. The Permittee must include this information in the revised Work Plan.

COMMENT 5

In Section 3.2.4 (Building 503 Remediation and Demolition), page 3-5, lines 40-41, the Permittee states "[s]oil samples A8035-109 thru A8035-144 were collected directly beneath the steel trough after it had been removed." During the June 20, 2007 field visit, a trough

extending from the approximate area of the settling basins and crossing Arterial Road 4 to the post-1962 leaching beds was still in place. In Figure 3-1, the Permittee includes the locations of previous soil sampling; however, it appears that soil samples were not collected from areas near or beneath the trough that extends across Arterial Road 4. The Permittee must confirm that hazardous constituents are not present in the soil beneath this trough by collecting soil samples from areas beneath and in the vicinity of the trough. Proposed sample investigation details must be included in the revised Work Plan.

COMMENT 6

In the comment response provided in Appendix A, Comment 28, the Permittee states that "[a]s noted in the response to Comment 19, a brief summary of the TNT Washout Plan demolition and associated cleanup activities has been added as Section 3.1.4.3 in the revised Work Plan." Section 3.1.4.3 does not exist in the Work Plan. The Permittee must include this section in the revised Work Plan, or otherwise resolve the discrepancy.

COMMENT 7

In Section 3.2.3 (Ground Water Characterization) the Permittee states that monitoring well construction data can be found in Table 3-4; well construction diagrams are not included in the Work Plan. The Permittee must include as an Appendix in the revised Work Plan well construction diagrams and well construction data for all wells located on Parcel 21. The Permittee must also include all parcel-related well construction diagrams and well construction data in all future Work Plan submittals.

COMMENT 8

In Section 3.4 (Scope of Activities), page 3-11, lines 25-30, the Permittee states that "[a]s discussed above and in the companion Summary of Historical Information (SRHI) for Parcel 21, numerous investigations have been conducted to characterize the nature and extent of releases from SWMU 1. Areas of soil and groundwater containing constituents exceeding Permit cleanup levels have been identified, and it is believed that SWMU 1 can proceed into a Corrective Measures Study (CMS) with the information generated."

In the response to Comment 8 of the NOD, the Permittee concurs that further investigation is necessary to identify potential saturated zones within Parcel 21. Therefore, prior to proceeding with a CMS, the Permittee must identify these potential zones of saturation by conducting the proposed geophysical survey. Following the geophysical survey NMED will determine if further groundwater characterization is necessary for all SWMUs and AOCs within Parcel 21.

COMMENT 9

In the response to Comment 16 of the NOD, the Permittee states that information regarding the Investigation Derived Waste (IDW) is included in Section 15.8 of the Work Plan. However, the Permittee does not specify how the waste from both soil and groundwater characterization

studies will be managed. The Permittee must include investigation derived waste characterization and disposal details for both soil and groundwater in this section of the revised Work Plan.

COMMENT 10

In Section 4.1.1 (Location, Description, and Operational History), page 4-1, the Permittee states that a historical drawing (FWDA Drawing No. A-5-205) is provided in Appendix E. This drawing shows a "Mens Room" located at the east end of the building. However, in the text the Permittee does not discuss this "Mens Room" and does not discuss the plumbing, sumps or underground piping that may be associated with the "Mens Room" (e.g., sinks, commodes, floor drains...). The Permittee must incorporate additional soil characterization at SWMU 2 (see Comment 10) and ensure that any associated piping and/or plumbing associated with the "Mens Room" is removed as part of the Corrective Action process.

COMMENT 11

In Section 4.4.1 (Soil Characterization) the Permittee proposes to collect MI soil samples from the paint debris disposal area, and from the concrete pad area and associated metal drain trough. In the response to Comment 15 of the NOD, the Permittee states that the "[U]nited States Environmental Protection Agency (USEPA) has referenced MI sampling in its latest revision of the analytical method for the trace analysis of explosives and propellant residues." Explosives and/or propellant are not likely constituents of concern at the paint debris disposal area (see Comment 2) and therefore MI sampling does not apply. The Permittee must therefore collect discrete soil samples from the areas mentioned above. NMED's suggested sample collection locations are shown in the attached Figure 4-2.

COMMENT 12

In the response to NOD Comment 36, the Permittee states that soil samples were collected from areas downgradient of the two double doors located on the west side of the building (i.e., the four corners of Building 515). Samples collected from the corners of the building are not representative samples for potential spills that may have been related to loading/unloading activities. During a previous site visit, NMED observed that the asphalt located near the doorway was damaged. Therefore, it is likely that if any spills occurred, the underlying soil may have been affected. The Permittee must collect one soil from the native soil just below the subgrade (at the location marked in the attached Figure 4-2).

COMMENT 13

In Section 5.4.1.1 (Characterization of Fill Pipe to Northeastern Pit), page 5-5, the Permittee proposes to remove the fill pipe and to collect soil samples from one and five ft depths. Rather than collecting samples at one and five ft depths, the Permittee must collect samples from the native soil directly below the pipeline backfill (where the pipe comes in contact with the native

soil). If staining of soil is observed, then the Permittee must proceed with collection of samples from the one ft and five ft sampling depths and must also collect samples from the stained areas.

COMMENT 14

In Section 5.4.1.2 (Confirmation of Southeastern Pit Location), page 5-5, the Permittee states that "[i]f there is evidence of a pit in the location previously investigated and no gross contamination is observed, the test pits will be surveyed as described in Section 15.6, and the excavations will be backfilled using the excavated soil and compacted to the extent possible with the excavator or backhoe. If the pit location is confirmed and gross contamination is observed, samples will be collected from the visibly contaminated soil and at depths of one ft and five ft below; in this scenario, a maximum of three soil samples would be collected."

The Permittee must excavate the test pits as planned and soil samples must be collected at depths of five ft (from the pit bottom) and 10 ft below ground surface (bgs). The test pit must be logged at each depth and samples must be analyzed for diesel range organics (DRO) and gasoline range organics (GRO). If contamination is observed, the Permittee must also collect a soil sample from the visibly contaminated soil.

COMMENT 15

In Section 5.5 (Analytical Program), page 5-6, the Permittee states that soil samples will be collected and analyzed for volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), polychlorinated biphenols (PCBs), and Resource Conservation and Recovery Act (RCRA) total metals. The Permittee must also include total petroleum hydrocarbons (TPH), diesel range organics (DRO) extended, and gasoline range organics (GRO) as part of the sample analyses.

COMMENT 16

In Section 6.2.1 (Historical Aerial Photograph Analysis), the Permittee states that "[a]s noted in the aerial photo analysis report, there was visible staining adjacent to and north of Building 501 in the 1962 and 1966 aerial photos. Because the boilers inside of Building 501 were coal fired until converted to natural gas in 1969, it is believed that the observed "stains" are in fact low coal piles."

In Section 6.4.1 (Soil Characterization) the Permittee proposes to collect MI soil samples from the former area of SWMU 19 to provide data on average concentrations of PCBs that may be present. As mentioned in Comment 2, MI sampling has only been applied to areas where explosives constituents may be present. The activities at SWMU 19 are not related to activities involving explosives and, given that transformers were stored in this building, the Permittee must collect discrete soil samples from the designated areas as shown in the attached Figure 6-2. The samples must be analyzed for PCBs, VOCs, SVOCs, DRO, and TAL metals. In addition samples must be collected from the depths proposed in this section. If staining is observed, samples must be collected from the stained areas.

COMMENT 17

In Section 6.4.2 (Ground Water Characterization) the Permittee states that no specific characterization has been completed to evaluate groundwater for the potential of PCBs at SWMU 19. The Permittee also states that "[b]ecause TMW 13 is one of the 40 wells to be sampled semi-annually, data from TMW13 collected as part of the Interim Facility-Wide Ground Water Monitoring Plan (IFGWMP) will be evaluated as part of the corrective action planning for SWMU 19."

Analysis for PCBs is not included in the proposed sample analyses in the IFGWMP for well TMW13. PCBs are a concern at SWMU 19; the Permittee must therefore analyze one groundwater sample for PCBs. The sample must be analyzed for PCBs using Environmental Protection Agency (EPA) method 1668. Proposed sampling details must be included in the revised Work Plan.

COMMENT 18

In Section 7.2.2 (Historical Records Review and Site Reconnaissance Findings), page 7-4, lines 11-13 the Permittee states that "[n]umerous empty brass cartridge casings were observed southwest of Building 530, between the railroad spur and the road, as shown in Figure 7-1 and Photo 7-8." The Permittee must provide details that explain the source of the brass cartridges. If the brass cartridges are still present, the Permittee must explain how the surrounding area will be characterized. This information must be included in the revised Work Plan.

COMMENT 19

In Section 7.2.2 (Historical Records Review and Site Reconnaissance Findings), lines 3-9, page 7-3, the Permittee states that "[t]he pole-mounted transformers were replaced with two padmounted transformers as part of the conversion to the APE-1400 WP PAC in the early 1980s; drawing notes indicate that the pad-mounted transformers were filled with mineral oil and therefore presumed to have been PCB-free. There is no documentation regarding the removal and disposition of the pole-mounted transformers." It is unknown if the underlying soil has any observable staining from the former pole mounted transformers. The Permittee must therefore expose the soils to a depth of one ft from each side of the concrete pad and determine if there is any observable staining in the underlying soil. If there is any observable staining the Permittee must collect samples of the stained soils for analysis for PCBs. The Permittee must revise the Work Plan to propose this evaluation.

COMMENT 20

In Section 7.4.1.1 (Characterization of Acid Pits), page 7-7, lines 39-41, the Permittee states that "[i]f floor drains are present in the pits, the drain piping will be traced to its discharge location. If the discharge location can be located and is accessible for sampling, soil samples will be collected using a decontaminated stainless steel hand auger, as described in Section 15.2." If the drain pipe is located, the Permittee must collect samples of the soil directly beneath the pipeline

backfill at a frequency of one per 25 linear feet (LF) of pipe. Samples must be analyzed for SVOCs, VOCs, explosives, white phosphorus, and TAL metals. The Permittee must revise the Work Plan to propose these activities.

COMMENT 21

In Section 7.4.1.2 (Characterization of Sump Pit Discharge), page 7-9, lines 4-7, the Permittee states that "[i]f the sump pit drain pipe discharge location can be located, soil samples will be collected using a decontaminated stainless steel hand auger, as described in Section 15.2." The Permittee does not state that soil samples will be collected from within the pit. Also, based on the information provided summarizing previous investigations (See Section 7.2.4), it appears that soil samples were not collected from within the pit. Following the removal of any accumulated soil/sediment, the Permittee must collect samples of the accumulated sediment above the base of the pit, from the native soil at the base of the pit, and from five feet below the base of the pit. The samples must be analyzed for SVOCs, VOCs, explosives, white phosphorus, and TAL metals. Details for this investigation must be included in the revised Work Plan.

COMMENT 22

In Section 7.4.2 (Housekeeping Activities), page 7-9, the Permittee states that "[a]n appropriate response action will be implemented to remove the brass cartridge casings observed southwest of Building 530." It is unclear what is meant by "an appropriate response action". The Permittee must describe the response action in the revised Work Plan, including proposed activities to remove all debris (as shown in Figure 7-1) such as the brass casings from areas around building 530. The Permittee must document that the debris is disposed of properly.

COMMENT 23

The Drawing A-5-51 contains a Plot Plan of the building. This plan shows that the pit located at the northeast end of the building may be connected to what appears to be a trough or depression in the concrete. The trough trends northeast – southwest. In Photo 7-6 the trough still appears to be present but also looks as if it has been filled with gravel or concrete and is in poor condition. In addition to the sample collection from within the pit referenced in Comment 21, the Permittee must also collect soil samples at one location per 15 LF from the native soils located directly below the trough (from beneath the concrete). Soil samples must be analyzed for SVOCs, VOCs, explosives, white phosphorus, and TAL metals.

COMMENT 24

In Figure 7-2 the Permittee shows the proposed sample locations for SWMU 72. Proposed samples are to be collected outside of the building footprint and from the southern side only. The Permittee must collect soil samples from within the building footprint and from all sides of the building. Soil samples must be analyzed for SVOCs, VOCs, explosives, white phosphorus, and TAL metals. The Permittee must propose the additional sampling in the revised Work Plan.

COMMENT 25

In Section 8.0 (AOC-60 – Building 522, Ammunition Renovation Building), the Permittee discusses the demolition of the building as well as post-demolition activities. The Permittee does not discuss the potential for asbestos and how it will be addressed before, during, or after the demolition process. The Permittee must address any potential asbestos issues before building demolition is initiated. This information must be included in the revised Work Plan. If asbestos is not a concern in this building, the Permittee must state this in the revised Work Plan and provide supporting evidence.

COMMENT 26

In Section 8.2.3 (Site Reconnaissance Findings), page 8-2, the Permittee states that "[a] single small room at the northwest corner of Building 522 contained restroom facilities, including a wash basin, former urinal, and two toilets that are presumed to be connected to the sanitary sewer system; there was no visual evidence of illicit discharges to any of these fixtures." The Permittee must provide figures that depict the underground piping associated with the sanitary sewer system and Building 522. The Permittee must also provide a figure that shows the location of the sanitary sewer system and any associated piping. This information must be included in the revised Work Plan.

COMMENT 27

In Section 8.3 (Scope of Activities) the Permittee states that "[c]haracterization underneath former munitions disassembly and handling operations within the building and the land surface surrounding the building will be planned as part of post-demolition activities, in the same way that additional characterization was completed at SWMU 1 and SWMU 19 following the demolition and removal of Buildings 503 and 501, respectively." NMED understands that the Army intends to demolish Building 522. Prior to the demolition of Building 522, the Permittee must submit a plan for NMED review and approval that includes proposed characterization, sampling, and disposal activities.

COMMENT 28

In Section 9.4.1 (Soil Characterization) the Permittee proposes to collect soil samples using MI sampling. The MI sampling area will be established over a ¼ acre exposure unit (also shown in Figure 9-2) and each unit will be divided into four sub-units and with eight sub-samples collected from each sub-unit (totaling 32 sub-samples).

Utilization of MI sampling at this location is approved for screening purposes only and will be used to evaluate the distribution of any potential hazardous constituents. Nonetheless, the Permittee must establish sub-units that are no larger than 2500 ft², and collect 30 sub-samples from each sub-unit from the depths proposed in the Work Plan (resulting in eight MI samples). Once the contaminant distribution has been determined, the Permittee may be required to collect discrete soil samples from the areas where the contaminants are more concentrated. The

Permittee must revise the Work Plan to reflect the reduction of the exposure unit size, and that MI sampling is for screening purposes only.

COMMENT 29

In Section 10.4.1 (Soil Characterization) the Permittee is proposing to collect MI soil samples from two different exposure units. One exposure unit surrounds Buildings 509 and 510 and one exposure unit is located under the overhead vacuum lines. As a result, the Permittee will obtain a total of eight soil samples. The area that surrounds Buildings 509 and 510 and beneath the vacuum lines is rather large and eight soil samples may not be sufficient to determine if contaminants are present. The Permittee must therefore establish four to five sub-units that are no larger than 2700 ft² that encompass the area around Buildings 509 and 510, collect 30 sub-samples from each sub-unit, from the depths proposed in the Work Plan (resulting in eight to nine MI samples). The Permittee must also establish four sub-units beneath the overhead vacuum lines; no larger than 3000 ft², collect 30 increment samples from each sub-unit, from the depths proposed in the Work Plan to include these requirements.

Because explosives are of concern at this site, the Permittee may use MI sampling as a screening tool for determining the extent of potential hazardous constituents. Based on the results, the Permittee may be required to collect discrete soil samples from areas of concern.

COMMENT 30

In Photos 10-12 and 10-13, there is piping present on the outside of Building 510 and what appears to be an electrical junction in the interior of the building along with piping. The Permittee must describe these features in the text of the revised Work Plan, and state whether the piping is slated for removal.

COMMENT 31

In Section 11.4.1 (Soil Characterization), the Permittee states that three MI soil sampling areas will be established surrounding Buildings 509 and 510 as shown in Figure 11-2. In Figure 11-2 the three proposed MI sampling areas surround Buildings B511, B512, and B513. The Permittee must correct this discrepancy.

COMMENT 32

In Section 11.4.1 (Soil Characterization), the Permittee states three MI sampling areas will be established surrounding Buildings 509 and 510. As shown in Figure 11-2, it is assumed that the Permittee is establishing MI sampling areas surrounding Buildings 511, 512, 513 rather than Buildings 509 and 510. Based on this assumption, the Permittee must establish four sub-units around each Building (511, 512, and 513) no larger than 2200 ft² each and collect 30 increment samples from within each sub-unit (24 MI samples total) from the depths proposed in the Work Plan. The Permittee must revise the Work Plan to propose this approach.

Because explosives are of concern at this site, the Permittee may use MI sampling as a screening tool for determining the distribution of detected hazardous constituents. Based on the results, the Permittee may be required to collect discrete soil samples from the AOCs.

COMMENT 33

In Section 12.4.1 (Soil Characterization), the Permittee proposes to collect soil samples using MI sampling. The MI sampling area will be established over a ¼ acre exposure unit and eight soil sub-samples will be collected (totaling 32 sub-samples) resulting in two MI samples.

The Permittee must divide the ¼ acre exposure unit into four sub-units that are approximately 2300 ft² and collect 30 sub-samples from each sub-unit, from the depths proposed in the Work Plan (resulting in eight MI samples). The Permittee must revise the Work Plan to include these changes.

MI sampling in this area is for screening purposes only and will be used to evaluate the distribution of any detected hazardous constituents in the area. Based on the results, the Permittee may be required to collect additional samples.

COMMENT 34

In Section 13.4 (Scope of Activities) the Permittee proposes to collect MI soil samples from both the fenced concrete pad north of Building 501 and the former pole-mounted transformers west of Building 515. MI sampling is not an appropriate method for soil sample collection at this location (See Comment 2).

The Permittee must propose to collect discrete soil samples at the fenced concrete pad location as proposed in this Work Plan and as directed in Comment 79 of the NOD. The Permittee must also collect one discrete surface soil sample (0-0.5 feet) from each side of the concrete pad (four samples total). The Permittee may homogenize two of the samples collected from each side of the concrete pad resulting in two composite samples. The Permittee must also collect one discrete sample from the soil directly beneath the former pole mounted transformers. The sample must be collected from a depth of 0 - 0.5 feet bgs. In the event that staining is observed the Permittee must collect discrete soil samples from the impacted area. The Permittee must revise the Work Plan accordingly.

COMMENT 35

In Section 14.4.1 (Soil Characterization), the Permittee states that four MI soil sampling areas will be established over four acre units at AOC 86. The Permittee also states that this process will result in two MI samples from each exposure unit resulting in a total of eight soil samples. For AOC 86, MI samples will be used as a screening tool to determine the extent of potential constituents. In addition to the already proposed constituents, the Permittee must also analyze

the samples for TAL metals. Based on the results, the Permittee may be required to collect additional discrete samples.

The Permittee must address all comments contained in this letter and submit a revised Work Plan. 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. The revised Work Plan must be submitted to NMED no later than August 30, 2008.

If you have any questions please call Tammy Diaz of my staff at 505-476-6056.

Sincerely,

James P. Bearzi

Chief

Hazardous Waste Bureau

cc:

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