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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 23, 2009

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: NOTICE OF DISAPPROVAL

RCRA FACILITY INVESTIGATION WORK PLAN FOR PARCEL 22 FORT WINGATE DEPOT ACTIVITY

EPA ID# NM6213820974

FWDA-07-009

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) received the Department of the Army's (the Permittee) Resource Conservation and Recovery Act (RCRA) Facility Investigation Work Plan for Parcel 22, dated June 9, 2008 (Work Plan) submitted pursuant to Section VII.H of the Fort Wingate Hazardous Waste Facility Permit. NMED has reviewed the Work Plan and hereby issues this Notice of Disapproval (NOD). The Permittee must address the following comments:

COMMENTS ON THE RELEASE ASSESSMENT

COMMENT 1

In Section 5.1 (Location, Description, and Operational History) (AOC 69- Buildings 301, 302, 312 (Standard Magazine) and Building 316 (Field Lunch Room)), page 5-1, lines 11-12, the Permittee states that "[t]he buildings are adjacent to a railroad siding and have loading docks along the south side of the structures." In Section 5.4 (Release Assessment Conclusion), page 5-

4, the Permittee states it is unlikely that a release of hazardous waste occurred at these buildings and that Area of Concern (AOC 69) (Buildings 301, 302, and 312 (Standard Magazines), and Building 316 (Field Lunch Room)) be designated corrective action complete without controls. AOC 69 cannot be designated as corrective action complete without controls because this AOC has not been investigated nor has soil characterization been completed around these buildings. Since loading and unloading activities have occurred at Buildings 301, 302 and 312, the Permittee must confirm the absence of hazardous constituents in media.

The Permittee must therefore collect surface soil samples (~ 2-3 inches) at 25 foot intervals along the railroad tracks located south of Buildings 301, 302, and 312. The surface soil samples must be analyzed for volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), target analyte list (TAL) metals, diesel range organics (DRO), polychlorinated biphenyls (PCBs), and explosive compounds. The Permittee must include all proposed activities for the investigation of AOC 69 as well as provide a Figure that includes the proposed sample locations in the revised Work Plan.

COMMENT 2

In Section 5.3.1 (Historical Records/Document Review), pages 5-2 & 5-3, lines 41-2, the Permittee states that "[t]he contractor performed a visual inspection of the interior and exterior of Buildings 301, 302, 312, and 316. Other than the presence of asbestos containing material and potential lead based paint, the Phase I ESA did not note any concerns with the buildings." As stated in Section 5.3.2 (Site Reconnaissance Findings), page 5-3, lines 9-13, the Permittee states that debris consisting of asbestos, tile roofing, and munitions shipping containers, were observed outside of the magazines. The Permittee must ensure that the soils surrounding Buildings 301, 302, 312, and 316 do not contain lead, asbestos, or explosives. The Permittee must therefore collect two discrete soil samples from the north and south sides and one discrete sample from the east and west sides of each of the magazines. The soil samples must be collected from depths of 0 to 6 inches below ground surface (bgs) and analyzed for explosive constituents, asbestos and lead. The proposed sampling activities for AOC 69 as well as a Figure that includes the sample locations must be included in the revised Work Plan.

COMMENT 3

In Section 5.4 (Release Assessment Conclusion), page 5-4, lines 10-12, the Permittee states that "[a]s noted in Section 5.3.2, coal bottom ash was placed by FWDA south of Building 302 as part of the former railroad spur." The Permittee must ensure that hazardous constituents are not a concern in the soils beneath the coal ash. The Permittee must remove the coal ash or remnants of the coal ash and collect a representative number of discrete soil samples from depths of 6 to 12 inches bgs. Sample analysis must include SVOCs and priority pollutant metals.

COMMENT 4

In Section 7.3.2.1 (Building 536 Transformers) (AOC 75), page 7-2 & 7-3, the Permittee states that "[i]n addition, two pad-mounted transformers were observed at Building 536 during the site

reconnaissance. A large single transformer was located east of Building 536. It had no markings; however; this transformer appeared fairly new and appeared to be a large air-cool unit. A small transformer was located inside Building 536 and appeared to be a non-PCB, air cooled unit." Although the Permittee states that the transformers are fairly new, it is still unknown if the transformers contain PCBs. The Permittee must ensure that the transformers do not contain PCBs by providing supporting documentation. The Permittee must also include this information in the Solid Waste Management Unit (SWMU) 75 related section of the revised Work Plan. The Permittee must visually inspect for soils for staining to ensure that leaks have not occurred.

If the transformers contain PCBs then the Permittee must collect one discrete soil sample from each side of the concrete pad from depths of 6-12 inches bgs. If a floor drain exists in Building 536, the Permittee must collect one discrete soil sample from beneath the floor drain. The soil sample must be collected from native soil and must be analyzed for PCBs. The Permittee must include the sampling activities in the revised Work Plan.

COMMENT 5

In Section 7.3.1.2 (Building 527 Transformers) (AOC 75), page 7-2, the Permittee states "[a]ccording to FWDA records, three pole-mounted electrical transformers were located at Building 527. These transformers were considered non-PCB. These transformers were relocated to Vault A near Building 15 in 1992." Although the transformers have been relocated from Building 527, the Permittee must ensure that these transformers did not contain PCBs and that leaks did not occur in the past prior to removal. If the Permittee cannot provide information confirming that the transformers did not contain PCBs, the Permittee must collect one discrete soil sample from directly beneath the former location of the transformers. The soil sample must be collected from 6 to 12 inches bgs and analyzed for PCBs. The proposed sampling activities must be included in the SWMU 75-related section of the revised Work Plan. If the Permittee can provide evidence that the former transformers did not contain PCBs, the Permittee must include this information in the revised Work Plan.

COMMENT 6

In Section 7.3.1.3 (Building 528 Transformers) (AOC 75), page 7-2, the Permittee states that the three pole-mounted transformers were located at Building 528 but were removed in 1993 and were considered non-PCB. In Section 7.3.2.3, page 7-3, the Permittee states that during the site reconnaissance, a pad-mounted transformer was observed on the south side of Building 528 and appeared to be "a non-PCB air cooled unit". The Permittee must ensure that these transformers did not contain PCBs and that leaks did not occur in the past. If the Permittee cannot provide information confirming that the transformers did not contain PCBs, the Permittee must collect one discrete soil sample from directly beneath the former location of the pole-mounted transformers and one sample from each side of the recently observed concrete pad. The soil samples must be collected from 6 to 12 inches bgs and analyzed for PCBs. The proposed sampling activities must be included in the SWMU 75-related section of the revised Work Plan. If the Permittee can provide evidence that the former transformers did not contain PCBs, the Permittee must include this information in the revised Work Plan.

COMMENTS ON THEWORK PLAN

COMMENT 7

In Section 3.4.2.2 (Building 536 –Cesspool) (SWMU 12- Building 536 & 535, inspectors workshop and ammunition renovation depot)), page 3-6 & 3-7, lines 38-2, the Permittee states "[a] second sediment sample will be collected at the discharge point of the cesspool drainage pipe, at the face of the arroyo located to the west of the cesspool." Because this location was the cesspool outfall it is likely that contaminants may have migrated vertically over time to depths greater than six inches. Therefore, in addition to the sediment sample collected at the surface of the arroyo (previous sample location STB536-004 as shown in Figure 3-3), the Permittee must also collect one soil sample from a depth of three feet from the arroyo sediment. Soil samples must be analyzed for VOCs, SVOCs, PCBs, RCRA metals, nitrate, perchlorate, and explosives. The Permittee must propose this sampling in the revised Work Plan.

COMMENT 8

In Section 3.4.2.3, page 3-7, lines 6-10, the Permittee states that "[m]anhole F-1 has not been previously been sampled; a sediment sample will be collected and a suite of target constituents will be analyzed. Manhole F-2 has been previously sampled but explosives compounds were not analyzed. Manhole F-2 will be re-sampled and the sediment sample analyzed only for explosives." In addition to the sediment samples collected from each manhole, the Permittee must also collect one soil sample from Manhole F-1 and from Manhole F-2, from the native soil directly beneath the sewer line backfill. The Permittee must include VOCs, SVOCs, PCBs, RCRA metals, nitrate, perchlorate, and explosives as part of the sample analysis. The Permittee must revise the Work Plan to include these proposed sampling activities.

COMMENT 9

In Figures 3-1, 3-2, and 3-3, the Permittee includes a dashed line in the legend that is described as "sanitary sewer and flow direction". Based on the figures provided, it appears that the sanitary sewer drained to both the septic tank and cesspool areas, as well as in the direction of the Facility sanitary sewer system. Based on the figures provided, it is unclear if drainage to the cesspool and septic tank from building 536 was through the same system as the drainage from the building to the sanitary sewer system. If the cesspool and septic tank system drained through different lines than those of the sanitary sewer system, the Permittee must state this in the revised Work Plan and provide a figure that shows the former drainage systems. If the drainage lines for the cesspool, septic tank, and sanitary sewer are the same for all three, the Permittee must clarify this in the text of the revised Work Plan. The Permittee must also provide a revised figure that clearly distinguishes between the different drainage systems.

COMMENT 10

In Section 3.2.2 (Historical Document Review and Site Reconnaissance Findings), page 3-2, lines 29-33, the Permittee states that "[h]istorical drawings for Building 535 showed the boiler, a

sump pit, a condensate pit, and an area drain in the exterior stairwell that drains to the sump pit. The sump pit discharged via a drain line to the south exterior of the building." In this same section, page 3-3, lines 26-30 the Permittee states that "[a] small sump and pump were observed in the northeast corner of the building. The sump appeared to have a concrete bottom and discharged to the ground surface near the northeast corner of the building." Unless there are two different sumps, these two statements appear to be contradictory. It is unclear which side (south or north) of the building the drain from the sump pit discharges. In addition, it is unclear where the "condensate pit" is located and if it discharges to any specific location.

The Permittee must collect soil samples from the sump pit and from the condensate pit. Each soil sample must be collected from the native soil directly beneath the fill or sub-grade. If there are two separate sumps and discharge locations, the Permittee must also collect a discrete soil sample from beneath each sump at the water table. In addition the Permittee must state in the revised Work Plan that there are two sumps and two discharge locations. The soil samples collected must be analyzed for DRO; if the DRO concentrations exceed the New Mexico Environment Department total petroleum hydrocarbons (NMED TPH) screening guideline (http://www.nmenv.state.nm.us/hwb/Guidance_docs/NMED%20TPH%20Guidance%2010-2006.pdf) for unknown oil of 800 parts per million (ppm), the Permittee must include SVOCs in the soil sample analysis. In addition the Permittee must also collect a soil sample from the discharge location(s). The soil sample(s) must be collected from a depth of 6 to 12 inches bgs and analyzed for DRO and, if the DRO concentrations exceed 800 ppm, the Permittee must include SVOCs in the soil sample analysis.

The Permittee must revise the Work Plan to correct the above discrepancy, as well as to include investigation of the location of the condensate pit. The Permittee must also include a photograph of the condensate pit, sump(s) (if applicable), as well as photographs showing the discharge location from the sump(s) and condensate pit. The Permittee must also update the associated proposed sampling location figures in the revised Work Plan.

COMMENT 11

In Photo 3-19, there are two coal chutes located on the west side of Building 535. The Permittee must collect one soil sample from the west side of the building in the vicinity of the coal chutes. The soil sample must be collected from 6 to 12 inches bgs and analyzed for TAL metals, SVOCs and DRO extended. The Permittee must revise the Work Plan to include these changes.

COMMENT 12

In Section 3.2.1 (Historical Aerial Photograph Analysis), page 3-2, lines 7-13, the Permittee states that "[t]he aerial photo analysis also noted disturbed ground and probable debris in the 1948 aerial and disturbed ground in the 1952 aerial, north of Building 536. It is not known if this site was associated with operations in SWMU 12." The Permittee must provide photographs of this site in the revised Work Plan.

COMMENT 13

In Section 4.2.2 (Historical Records Review and Site Reconnaissance Findings), page 4-4, lines 28-30, the Permittee states that "[a] single valve pit and pump was observed in the utility room in the south end of Building 528 (Photo 4-24 and Photo 4-25) and appears to be associated with the heating system." Photo 4-24 shows a "condensate pit"; assuming that this is the referenced "valve pit", the Permittee must state whether this pit contains a concrete base or is unlined. If the pit is unlined, the Permittee must collect one discrete sample from the native soil just beneath the pit. The soil sample must be analyzed for perchlorate, TAL metals, VOCs, SVOCs, nitrocellulose and explosives. The Permittee must revise the Work Plan to include the appropriate changes and revised figure(s).

COMMENT 14

In Section 4.2.2 ((Historical Records Review and Site Reconnaissance Findings), page 4-4, lines, 19-22, the Permittee states that "[a] small stained concrete pad, and associated impacted soil near its edges, was observed on the south side of Building 528 (Photo 4-13). Several pipes were observed protruding the exterior walls of Building 528 and several had staining associated at each location (4-14)." In Section4.5.1 (Soil Investigation), page 4-13, lines 9-11 the Permittee does not propose to include PCBs in the soil sample analysis. Since there was staining observed at the site, the Permittee must include PCBs in the analysis for soil samples collected. The Permittee must revise the Work Plan to include these changes.

COMMENT 15

In Section 4.2.2 (Historical Records Review and Site Reconnaissance Findings), page 4-6, lines 9-10, the Permittee states that "[b]uilding 551A, an earth-covered service magazine, was found in good overall condition during the site reconnaissance (Photo 4-75 and Photo 4-76)." Photos 4-75 and 4-76 are photos of Building 551B. Based on the text of the Work Plan and the photographs provided, it is unclear what the correct structure number is. The Permittee must clarify this discrepancy in the revised Work Plan.

COMMENT 16

In Section 4.4.2 (Soil Investigation), pages 4-11 and 4-12, lines 36-11, the Permittee states that 36 multi-incremental (MI) sampling areas will be established over ½ acre decision units; a total of 30 sub-samples will be collected and samples will be collected from a 0 to 3 inches and one foot depths. The proposed sampling area is large and therefore the Permittee may proceed with MI sampling for the first phase of investigation. However, the 30 subsamples proposed to be collected are not spatially representative of the area and the underlying soil within each decision unit. In order to obtain an "accurate measure of the average concentrations of constituents of concern" within each decision unit, the Permittee must collect 100 subsamples from each decision unit, from the proposed depths. The Permittee must revise the Work Plan to incorporate these changes.

COMMENT 17

In Section 4.4.3 (Ground Water Characterization), page 4-12, lines 25-27, the Permittee states that "[a]s shown in Figure 4-6, four additional monitoring well pairs are proposed to further evaluate subsurface conditions and characterize the extent of perchlorate contamination detected in previous ground water samples." NMED concurs with the proposed well locations as shown Figure 4-6. The Permittee has also stated to NMED, that in order to delineate the perchlorate plume in and around Parcel 22 additional wells will be installed. The Permittee must discuss the actions to be taken if borings do not encounter groundwater. The Permittee must include a revised Figure that includes the currently proposed wells, as well as the additional wells in the revised Work Plan.

COMMENT 18

Figure 4-5 includes the proposed decision units for MI sampling. The proposed MI sampling units do not cover other areas of concern where debris (e.g., an empty nitrate bag, anomalies and flare pieces) has been found. The Permittee must add additional decision units for MI sampling to encompass the locations where the debris has been found. The Permittee must refer to the attached Figure 4-5 for the proposed placement of these decision units. In addition, the Permittee must also collect 100 subsamples from these decision units (see Comment 15). The Permittee must provide a revised Figure to include the additional decision units as well as the revise the text where applicable in the revised Work Plan.

COMMENT 19

Figure 4-5 includes the proposed soil sampling locations and shows two manholes (I-1 and I-2) located west of Building 528. The Permittee does not propose to collect soil samples from these manhole locations. As stated in Section 4.2.2, page 4-4, Building 528 had a floor drain that may have been associated with a sink basin in the work area (as shown in photo 4-23), which drained to the sanitary sewer system (which includes the I-1 and I-2 manholes); the Permittee must therefore collect one discrete soil sample from each of the I-1 and I-2 manholes. The soil samples must be collected directly adjacent to the manholes from native soils directly beneath the sewer line backfill. The soil samples collected must be analyzed for perchlorate, TAL metals, VOCs, SVOCs, nitrocellulose and explosives. The Permittee must revise the Work Plan to include the appropriate changes and revised figure(s).

COMMENT 20

In Section 5.4.2 (Soil Investigation), pages 5-6, lines 9-25, the Permittee states that 30 multi-incremental (MI) sampling areas will be established over ¼ acre decision units; a total of 30 subsamples will be collected and samples will be collected from a 0 to 3 inches and one foot depths. The Permittee may proceed with MI sampling for the first phase of investigation. The proposed sampling area is large and therefore the 30 subsamples proposed to be collected are likely not representative of the area and the underlying soil within each decision unit. In order to obtain an "accurate measure of the average concentrations of constituents of concern" within

each decision unit, the Permittee must collect 100 subsamples from each decision unit, from the proposed depths. The Permittee must revise the Work Plan to incorporate these changes.

COMMENT 21

The Permittee must provide a figure that depicts the topographic lows and/or drainages in and around SWMU 27 and SWMU 70. The figure must be included in the revised Work Plan.

COMMENT 22

In Section 6.4.1 (Igloo Soil Investigation), page 6-7, lines 18-37, the Permittee states that a total of 30 MI samples will be collected from 0 to 3 inch depths, from around the apron and from across the road of each igloo in Parcel 22. The Permittee also provides Figure 6-2, which includes the three decision units where the proposed 30 MI subsamples will be collected. The Permittee may proceed with MI sampling around each igloo; however, the MI decision units must encompass any drainages or topographic depressions located around each igloo. If the depressions do not appear to be across the road from the each igloo (as shown in Figure 6-2), the Permittee may exclude the decision unit located across the road from the proposed sampling. However, the Permittee is still required to collect a total of 30 MI subsamples from around each decision unit. The Permittee must revise the Work Plan to include these changes as well as provide revised figures that include the various scenarios for proposed MI sampling and decision units, as well as include the various types of aprons located in the front of each igloo (this may result in the need for multiple figures). The above approach to sampling applies to the igloos with a ground surface apron and the igloos with an elevated apron. This approach to sampling must be applied to all future sampling and included in all work plans that contain an igloo block.

COMMENT 23

In Section 6.4.2 (Open Storage Site Soil Investigation), page 6-7 & 6-8, the Permittee states that "[a]dditional soil samples will be collected at 2 randomly selected open storage sites located within Parcel 22." On page 6-8, the Permittee also states that "[f]or each of the two open storage sites to be sampled as part of the planned Parcel 22 RFI effort, one MI soil sampling area will be established over a 1/4 acre decision unit to provide a repeatable and accurate measure of the average concentrations of constituents of concern that may be present within this area at which human receptors may potentially be exposed." In Section 6.1.1 (Location, Description, and Operational History), pages 6-2 & 6-3, lines 34-1, the Permittee states "[a]s noted in the TMs, outside storage was only to be used temporarily and only as an emergency expedient (e.g., before, during, or following a war, when munitions were received faster than they could be safely placed in storage within an igloo or when igloos were filled to capacity)." Given that the open storage sites were used for the placement of munitions, the Permittee must sample the remaining 11 open storage sites (excluding the two that have already been sampled). The Permittee may proceed with the proposed MI sampling at each of the open storage sites; however, the Permittee must ensure that a large number of the sub-samples are collected from the center of the earthen berm or the location where the munitions were contained. In addition, the soil subsamples must be

collected from 2 to 6 inches bgs rather than the proposed 0 to 3 inches bgs. The Permittee must revise the Work Plan accordingly.

This approach to sampling must be applied to all future sampling and included in all work plans that contain an igloo block.

COMMENT 24

In Section 6.1 (Background), page 6-3, lines 5-12, the Permittee states "[f]ollowing FWDA closure in 1993, the 53 igloos in Parcel 22 were used by TPL for storage of munitions and munitions components. TPL's storage operations in the igloos differed from that of the Army; TPL stored propellant removed from munitions in TPL demilitarization operations in SWMU 27. Rather than being present inside munitions and their shipping containers, the removed propellant was stored in bags and other containers, and was stored awaiting reuse or recycling." Based on TPL's use of the 53 igloos and the management of munitions and perchlorate, the Permittee must collect seven swipe samples from the floor of each of the 53 igloos. Three swipe samples must be collected from separate locations the front, in the center of, and back of the igloo floors and the remaining two swipe samples must be collected from discretionary random locations from the floors. In addition, the Permittee must collect one swipe sample from each of the indoor drainage troughs, specifically from locations less than three feet from the drain outlet.

All swipe samples must be analyzed for arsenic, barium, lead, and mercury using X-ray fluorescence (XRF). Two of the seven swipe samples collected (one from the floor and one from the drainage trough) must be sent to the laboratory for verification of the XRF results. The laboratory analysis must include RCRA metals, explosives using method 8330, and perchlorate. The Permittee must revise the Work Plan to include the proposed sampling activities as well as include a figure with the proposed igloo swipe sample locations.

All igloos throughout the Facility must be characterized using the same approach as stated above; however, perchlorate may be excluded from the laboratory analysis. The Permittee must include the proposed sampling approach in all future applicable Work Plans.

COMMENT 25

In Section 7.4.2 (Soil Investigation), pages 7-4, lines 6-18, for AOC 88 (Former Buildings or Structures and Disposal Areas Southwest, South, and Southeast of Building 528), the Permittee states that 12 multi-incremental (MI) sampling areas will be established over ¼ acre decision units; a total of 30 subsamples will be collected and samples will be collected from a 0 to 3 inches and one foot depths. The Permittee may proceed with MI sampling for the first phase of investigation; however based on the results from this study, the Permittee may be required to collect additional samples.

In addition since Napalm B was present in munitions stored at AOC 88A, the Permittee must also include GRO, benzene, toluene, ethylbenzene, and total xylenes (BTEX), in the soil sample analysis. The Permittee must revise the Work Plan to include these changes.

COMMENT 26

In Table 11-1 the Permittee includes Method 9056 for the analysis of nitrate. The method has been revised to 9056A. The Permittee must ensure that the revised Work Plan, as well as all future Work Plans includes the most current methods. The Permittee must revise the Work Plan to include the current Method 9056A.

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 September 18, 2009.

If you have any questions regarding this letter, please contact Tammy Diaz-Martinez at (505)-476-6056.

Sincerely,

James P. Bearzi

Chief

Hazardous Waste Bureau

cc: Tammy Diaz-Martinez, NMED HWB

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