



DEPARTMENT OF THE ARMY
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March 12, 2021

Base Realignment and Closure Operations Branch

Mr. Kevin Pierard
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RE: Final Hazardous Waste Management Unit Progress Status Report, 2012 – 2018,
Army's Response to the New Mexico Environment Department Letter of Disapproval dated
November 20, 2020. Fort Wingate Depot Activity, McKinley County, New Mexico. EPA#
NM6213820974, HWB-FWDA-20-005

Dear Mr. Pierard:

This letter is in reply to the New Mexico Environment Division (NMED) Letter of Disapproval
November 20, 2020, reference number HWB-FWDA-20-005, Final Hazardous Waste
Management Unit Progress Status Report, 2012-2018 dated May 19, 2020. The following are
Army's responses to NMED comments, detailing where each comment was addressed and
cross-referencing the numbered NMED comments.

Comments:

GENERAL COMMENTS

Timely Submission of the Reports-

NMED Comment: NMED's [Response to the Permittee's] Extension Request for the Parcel 3
Hazardous Waste Management Unit Investigation and Remediation Report, dated April 18,
2019, required the Permittee to submit the Report no later than September 30, 2019. However,
the Report was not submitted to NMED until May 28, 2020, which was approximately eight
months after the due date. The Permittee must submit future reports in a timely manner.

Army Response, Concur. The Permittee will make every effort to submit future reports in a
timely manner.

SPECIFIC COMMENTS

NMED Comment 1: Permittee Statement: "This status report has been prepared in
response to a request by the New Mexico Environment Department (NMED) for an update
on field operations and sampling results pertaining to the Removal Action at the Hazardous
Waste Management Unit (HWMU) (Open Burning/ Open Detonation [OB/OD] Unit) (FTWG-
002-R-01), at Fort Wingate Depot Activity (FWDA), McKinley County, New Mexico."

NMED Comment: A reference to the NMED's letter requiring the status reports (see
Comment 1) must be included in the statement. Also, the reference "FTWG-002-R-01" is not

included in Section 5, References. Include the reference in Section 5, as appropriate. Correct the issues in the revised Report.

Army Response: Concur. Section 1.1 has been revised as follows: “This Status Report has been prepared in response to a request made by the New Mexico Environment Department (NMED) in a letter dated April 18, 2019 (NMED 2019). The letter requires the Army to submit annual Status Reports describing the work completed through the end of the previous calendar year at the Hazardous Waste Management Unit (HWMU) (Open Burning/Open Detonation [OB/OD] Unit), at Fort Wingate Depot Activity (FWDA), McKinley County, New Mexico.”

Reference to “FTWG-002-R-01” is related to Army’s internal site tracking database and will be removed from the report.

NMED Comment 2: Permittee Statements: “After OB/OD operations were completed within the detonation craters, residual material and wastes were placed around the HWMU, typically pushed onto or over the arroyo bank.”

NMED Comment: Since residual material and wastes were pushed onto or over the arroyo bank, munition debris and associated residual contaminants may be found farther downstream in the arroyo. After removal activities in HWMU is complete, soils along the arroyo must be investigated appropriately. No revision required.

Army Response: Concur. No text revisions required per the comment.

NMED Comment 3: Permittee Statement: “If the stockpile soil sample results indicated that screening criteria have been exceeded, but were below hazardous waste disposal criteria, the soil was hauled to the Northwest New Mexico Regional Solid Waste Authority landfill.”

NMED Comment: In Appendix A, residential soil screening levels for the analytes are listed; however, hazardous waste disposal criteria are not provided. Provide information regarding the hazardous waste disposal criteria in the revised Report.

Army Response: Concur. A new table (Table 1-1 titled Landfill Disposal Criteria) has been added to describe the disposal criteria, and a reference to the table has been added to the text in Section 1.4.2.

NMED Comment 4: Permittee Statement: “Each 250 cubic yard stockpile was placed on 6 mil poly and was given a unique numeric identifier so that when analytical results were received and validated, the results could be correlated with a specific stockpile.”

NMED Comment: It is not clear how many and where the stockpiles are stored at the site and what area footage each stockpile occupies. Clarify the information in the revised Report. In addition, provide photographs of the stored stockpiles in the revised Report.

Army Response: Concur. The first paragraph of Section 2.2.1 has been revised as follows: “In total, 1,228 stockpiles were constructed either within the HWMU boundary or south of the HWMU boundary in an approved Area of Concern. The base of each stockpile was approximately 1,900 square feet. Following sampling collection, stockpiles determined to be acceptable for re-use (i.e., based on comparison to SSLs and cumulative risk calculations)

were moved and used as backfill.” A new Appendix (Appendix E) has been added to include example photographs.

NMED Comment 5: Permittee Statement: “The confirmation soil sampling grid locations are presented on Figure 2-1.”

NMED Comment: Clarify whether confirmation soil samples were collected from solely detonation craters where MEC was destroyed in place or also from other locations. Confirmation soil sampling must be conducted specifically for detonation craters, if identified, regardless of the spacing specified in the work plan.

In addition, the method for the sample identification used in Appendix A is not explained in the Report. For example, the sample identified as P3HWMU-CDC01-EB-001 has four components (e.g., P3HWMU, CDC01, EB, and 001). However, it is not clear what each component represents. Define each component in the revised Report.

Army Response: Concur. The first paragraph of Section 2.2.2 has been revised as follows: “Confirmation samples were collected from within detonation craters (when present); however, the entire HWMU is undergoing excavation and due to depths of the excavation and sloping requirements, individual craters have typically not been identifiable. In these cases, confirmation samples were collected from within the grid locations presented on **Figure 2-1**, which encompass the historical detonation craters.”

A new section (Section 2.3) has been added to include details regarding sample identification.

NMED Comment 6: Permittee Statement: “Confirmation soil samples were collected from the excavation. Due to the varying size and shape of each excavation, a composite sample was collected for every 100 ft of linear sidewall. If the excavation exceeded 20 ft in depth, a composite sample was collected for every 10 ft of depth every 100 ft of sidewall. Composite samples were also collected from the bottom of each 100 ft by 100 ft (i.e., 10,000 square ft) excavation (URS 2013).”

NMED Comment: The locations where confirmation samples were collected are not presented in the Report. Provide separate figures that present sampling locations in the revised Report.

Army Response: Concur. Figure 2-1 has been revised to include an inset feature which shows a typical sampling pattern.

NMED Comment 7: Permittee Statement: “Each composite sample consisted of nine subsamples randomly collected from within each sampling area.”

NMED Comment: Provide information regarding how composite samples are composed (e.g., weight of each subsample, mixing method) in the revised Report.

Army Response: Concur. The fifth paragraph of Section 2.2.2 has been revised as follows: “Each composite sample was composed of sixteen subsamples (each subsample approximately 50 to 60 grams) randomly collected from within each sampling area.

Subsamples were combined into a decontaminated or disposable bowl and thoroughly mixed with the sampling spoon. The samples were submitted...”.

NMED Comment 8: Permittee Statement: “Refer to Section 2.2.1.1 for field QA/QC procedures and samples.”

NMED Comment: If field QA/QC procedures are identical between stockpile and confirmation sampling, clarify that fact in the revised Report.

Army Response: Concur. Section 2.2.2.1 has been revised as follows: “The field QA/QC procedures used during confirmation soil sampling match the procedures described for the stockpile soil sampling, which are described in **Section 2.2.1.1.**”

NMED Comment 9: Permittee Statement: “Table 3-2 summarizes chemicals with a detection limit greater than the NMED SSL. One chemical (N-Nitrosodimethylamine) exhibited this quality. There were no detections of N-Nitrosodimethylamine in any of the soil samples submitted for laboratory analysis.”

NMED Comment: Even if the compound was not detected, the concentration of the compound may still exceed the screening level because the detection limit is greater than the screening level. The Permittee has previously been directed to provide analyses whose method detection limits, reporting detection limits, and practical quantitation limits are below the applicable screening level for each contaminant of concern. All data provided by analyses where the method detection limit, reporting detection limit, or practical quantitation limit exceed the screening level are considered data quality exceptions and cannot be used to demonstrate compliance.

Army Response: Concur. The third paragraph of Section 3.1 has been revised as follows: “...submitted for laboratory analysis. Until recently, laboratory instrumentation did not allow for the N-Nitrosodimethylamine detection limit to meet the screening level. The Army is aware of this issue and recognizes the NMED considers this a data quality exception. The Army is currently working with the NMED on resolution of this issue.

NMED Comment 10: Permittee Statement: “Some metals, such as manganese, have screening values that are more conservative for construction workers. Metals are initially screened against established background values. Generally, those metals with nonresidential screening values lower than residential screening values are lower than background. Therefore, background values would supersede the lower risk screening values.”

NMED Comment: In case of arsenic, NMED previously directed the Permittee to use the higher risk screening value rather than lower background value. Similarly, the use of higher background values relative to lower risk screening values is acceptable. However, if metals concentrations are detected above risk screening values but below background values, such detections must be identified.

Army Response: Concur. No text revisions required per the comment.

NMED Comment 11: Permittee Statement: “The locations of each MEC item recovered during the surface sweeps are shown on Figure 3-1.”

NMED Comment: In the revised Report, indicate the locations where MEC items were destroyed by detonation in place. Since detonation of MEC items may potentially disperse munition debris and contaminated soils in the vicinity, propose to investigate presence of munition debris and contaminated soils outside the detonation craters, if such areas are not covered by the survey grids presented in Figures 1-3 and 2-1.

Army Response: Concur. Figure 3-1 has been revised to show detonation in place locations within the HWMU. Text has been added to the end of Section 3.3.1.2 as follows: “MEC disposal of unacceptable to move items found during surface sweep was conducted within the HWMU where the item was originally located. Following disposal operations, the detonation crater and surrounding area was inspected by qualified UXO technicians to ensure no explosive hazards remain and recovered MD was removed. Additionally, detonation in place operations were conducted in a grid that will undergo excavation and sampling in the future. Detonation in place operations occurred prior to the start of excavation and sampling. The detonation in place locations for items found during the surface sweep are shown on Figure 3-1.”

NMED Comment 12: Permittee Statement: “132 items were determined to be unacceptable to move and were destroyed by detonation in the HWMU at the end of each day.”

NMED Comment: Indicate the location(s) where the items were destroyed by detonation. Since detonation of MEC items may potentially disperse munition debris and contaminate soils in the vicinity, propose to investigate for the presence of residual soil contamination and munition debris (e.g., radius of 100 feet), if the locations of detonation are not included in the grids shown in Figures 1-3 and 2-1 (see Comment 12).

Army Response: Concur. Figure 3-1 has been revised to show detonation in place locations within the HWMU. Text has been added to the end of Section 3.3.1.2 as follows: “MEC disposal of unacceptable to move items were detonated within the HWMU (i.e., within a HWMU grid that still requires excavation and processing). Following disposal operations, the detonation crater and surrounding area was inspected by qualified UXO technicians to ensure no explosive hazards remain and recovered MD was removed. The detonation in place operations for items recovered from 2012 through 2015 occurred in HWMU Grids E6, E7, G9, G10, H10, and H9, which required excavation and sampling in the future. Detonation in place operations occurred in HWMU Grid H25 (shown on **Figure 2-1**), which will undergo excavation and sampling in the future. The detonation in place location is also shown on **Figure 3-1**.”

NMED Comment 13: Permittee Statement: “Further excavation was completed to recover these seven items, and DGM was reperformed for clearance following the excavations. The item locations are illustrated in Figure 3-1.”

NMED Comment: Include a table that includes information regarding the locations and depths where the items were recovered and the size of each item in the revised Report.

Army Response: Concur. Section 3.3.1.3 has been revised as follows: “Further excavation was completed to recover these seven items, and DGM was reperformed for the clearance

following the excavations. The items detected during the DGM survey were located between two and twenty-four inches bgs (see **Table 3-4**). The item locations are illustrated in **Figure 3-1**.”

NMED Comment 14: Permittee Statement: “The discovery of an AN-M66A2, 2,000-pound general purpose bomb, which contained 1,146 pounds of high explosive filler, exceeded the allowable quantity of explosives treated at the CAMU.”

NMED Comment: Provide information regarding the date, location, and depth where the item was recovered in the revised Report.

Army Response: Concur. The location (Northing, Easting) and depth of this MEC is provided in the Appendix C.3 table. Section 3.3.2.1 has been revised as follows: “In November 2014, the discovery of an AN-M66A2, 2,000-pound general purpose bomb, which contained 1,146 pounds of high explosive filler, exceeded the allowable quantity of explosives treated at the CAMU. The item was recovered at approximately 18 feet below ground surface during excavation sloping activities at along the southwestern HWMU boundary.”

NMED Comment 15: Permittee Statement: “Remedial activities at the FWDA Parcel 3 HWMU area have been in operation from 2011 to current.”

NMED Comment: Section 1.1, *Introduction*, lines 7, page 7, states, “[r]emoval action operation have been conducted at FWDA since 2012.” Presumably, there is a typographical error in the statement or the remedial activities conducted in 2011 were different from the removal activities discussed in the status report. Explain the nature of the remedial activities conducted in 2011 or correct the typographical error in the revised Report.

Army Response: Concur. Section 1.1 has been revised as follows: “Removal activities have been conducted at the HWMU since 2012.”

Section 4 has been revised as follows: “Removal activities at the FWDA Parcel 3 HWMU area have been conducted from 2012 to current; however,...”.

The report was also reviewed and revised, as needed, to correct inconsistencies or conflicting information.

NMED Comment 16: Permittee Statement: “Stockpile soil samples and confirmation soil samples that exceeded SSLs are summarized in Tables 3-1 and 3-2, respectively.”

NMED Comment: None of the constituents in the confirmation soil samples exceeded the soil screening levels. They are not listed in Table 3-1. Table 3-2 is titled as *Chemical Detection Limits Greater Than SSLs*. Table 3-2 is not relevant to the discussion. Correct the statement for accuracy.

Army Response: Concur. Section 4 (third paragraph) has been revised as follows: “Stockpile soil samples that exceeded SSLs are summarized in **Table 3-1**.”

NMED Comment 17: Permittee Statement: “Most items were properly destroyed within the CAMU area; however, items that were designated unacceptable to move were detonated within the HWMU.”

NMED Comment: Clarify that CAMU is located in SWMU 14 rather than the HWMU. Include a map that presents the locations of both CAMU and SWMU 14 in the revised Report.

Army Response: Concur. A description of the CAMU location and a CAMU location have been added to Figure 1-2 and included in Section 3 of the revised report where MEC and MEC disposal are first introduced. Text has been added to Section 3.3.2 as follows: “MEC disposal of acceptable to move items was conducted within the CAMU, which is adjacent to the Solid Waste Management Unit (SWMU) 14. The CAMU and SWMU 14 are located approximately one-half mile north of the HWMU. The CAMU and SWMU 14 locations relative to the HWMU are shown on **Figure 1-2.**”

The second to last paragraph in Section 4 will be revised as follows: “Most items were properly destroyed within the CAMU area (which is adjacent to SWMU 14); however, items that were designated unacceptable to move were detonated within the HWMU.”

Disposal of unacceptable to move MEC items were detonated within the HWMU (i.e., within a HWMU grid that still requires excavation and processing).

NMED Comment 18: Permittee Statement: “A total of 3.95 million pounds (1,975 tons) of MD was removed, inspected, designated as MDAS, flashed, and recycled.

NMED Comment: The summary section must also include information regarding (1) the total volume of soil treated, (2) the survey grids where confirmation samples were collected and absence of contamination was confirmed, if applicable, and (3) the grids where soils are planned to be treated in the following year (2019). Include the information in the revised Report.

Army Response: Concur. The following text has been added to the beginning of the sixth paragraph of Section 4: “Approximately 300,100 cubic yards of soil were excavated and processed through the closed-loop processing plant from 2012 to 2018.”

Text has been added to the end of the third paragraph of Section 4 as follows: “...summarized in **Table 3-1.** Confirmation samples were collected and confirmed the absence of contamination in the following 44 grids: A9 through A13, B9 through B16, C9 through C16, D1 through D6, E1 through E6, F2 through F6, G3 through G6, and H5 through H6, as shown on **Figure 2-1.** It is expected that the following grids will be excavated, processed, and sampled in 2019: B17 through B19, C17 through C20, and D10 through D20.”

If you have questions or require further information, please contact me at George.h.cushman.civ@mail.mil, 703-455-3234 (Temporary Home Office, preferred) or 703-608-2245 (Mobile).

Sincerely,

A handwritten signature in cursive script that reads "George H. Cushman IV".

George H. Cushman IV
BRAC Environmental Coordinator
Fort Wingate Depot Activity
BRAC Operations Branch
Environmental Division

Enclosures

CF:

Dave Cobrain, NMED HWB
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