

DEPARTMENT OF THE ARMY OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT 600 ARMY PENTAGON WASHINGTON, DC 20310-0600

May 9, 2019

Base Realignment and Closure Division

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

RE: Final Work Plan Inner Fence Revision 2.0, Parcel 3, Response to Approval with Modifications, Fort Wingate Depot Activity, McKinley County New Mexico, EPA # NM6213820974, HWB-FWDA-17-001.

Dear Mr. Kieling,

This letter presents the Army's response to comments presented in the New Mexico Environment Department (NMED) Letter of Approval dated September 18, 2018, under RCRA Permit USEPA ID NO. NM6213820974. The following are the Army's responses to NMED comments detailing where each comment was addressed and cross-referencing the numbered NMED comments. Replacement pages, as required by NMED's modifications, are also attached (pages 3-33 through 3-38).

1. Long Term Inspections

NMED Comment: The Hazardous Waste Management Unit, including the kickout area, is subject to post-closure care. Follow-up inspection details are not provided in this work plan and are to be provided by the Army at a later date. As 100% removal of munitions of explosive concern [sic] (MEC) cannot be guaranteed, along with the fact that several areas of the parcel with slopes greater than 35% are not being investigated, there is potential for items to erode from hillsides and migrate downslope. As such, long term inspections and clearance must be included as part of post-closure care for this parcel.

Army Response: Comment noted. Details regarding post-closure care will be provided in a future submittal.

2. Low Density Areas and Individual Items

NMED Comment: Confirmation samples are only proposed in high density areas where mechanized removals will be conducted. However, demonstration that there is minimal potential contamination associated with individual items and that contamination associated with lower density clusters of items will not impact overall risk has not been provided. Provide data collected from the historical investigations to show that soil contamination resulting from lower density clusters and individual items are insignificant with respect to risk. If no data are available, then a statistical number of low density areas must be sampled until it can be demonstrated that residual soil contamination from low density areas and individual items is insignificant and would not affect overall human health and ecological risk. Revise the Plan to include a demonstration that there is minimal potential contamination associated with low density areas and individual items by providing supporting data or proposing further sampling. Provide NMED with replacement pages detailing the demonstration.



Army Response: In response to this comment, the Army reviewed past documentation related to regulatory requirements at Fort Wingate. A review of Section IV(B) of the 2005 RCRA permit (revised February 2015) only references surface clearance of waste military munitions in the Kickout Area. There is no reference to potential residual soil contamination in the Kickout Area (outside of AOCs and SWMUs). Accordingly, the Army submitted the Final Work Plan for Munitions and Explosives of Concern Removal and Surface Clearance in the Kickout Area (PIKA, 2015) that addressed removal of waste military munitions. The Work Plan specifically noted that: "MC [Munitions Constituents] sampling will not be conducted under the WP for this task. Soil sampling of the AOCs and SWMUs will be covered under a separate WP." This Work Plan was approved by NMED on May 8, 2015.

Based on the approved Kickout Area Work Plan described above, the Army entered into a separate contract to perform subsurface removal of waste military munitions in that portion of the Kickout Area within the Inner Fence of Parcel 3. The *Final Work Plan Inner Fence, Parcel 3* was submitted to NMED on March 9, 2017. The Notices of Disapproval (NOD) received from NMED on the first and second versions of the work plan did not mention any concern for MC in the low density MEC Kickout Area. The Army subsequently submitted a third version of the work plan, *Final Work Plan Inner Fence, Parcel 3*, *Revision 2* on July 30, 2018. On September 18, 2018, NMED issued an Approval with Modification for this work plan, raising the issue of potential residual soil contamination in the Kickout Area for the first time.

In response to NMED's request for data from historical investigations showing that soil contamination resulting from lower density MEC Kickout areas is insignificant with respect to risk, the Army consulted other installations in the region that have completed such investigations. The attached table (Table 1) summarizes results from eight projects at seven installations that analyzed soil samples from MEC Kickout areas under the Formerly Used Defense Sites (FUDS) program and Military Munitions Response Program (MMRP). The results for two of the projects are from Kirtland AFB in Albuquerque. Of the 105 soil samples taken from these seven installations, no explosives were detected in any of the analyzed soil samples. Additionally, of the reports that evaluated risk, all determined that risks to human health and the environment were insignificant. Electronic copies of the reports referenced in the attached table can be made available to NMED upon request.

Based on the regulatory history described above, and the historical information provided in the attached table and associated reports, the Army respectfully proposes to proceed with removal of waste military munitions as proposed in the approved work plan, without sampling soils beneath individual MEC items or within low density MEC areas in the Kickout Area. Given that the Permit does not require sampling for residual soil contamination in the Kickout Area, and that the approved Kickout Area Work Plan specifically stated that such sampling would not be performed, the Army is unable to support requests for additional sampling in these areas.

3. Section 3.12.6.1, Human Health, p 3-33

Permittee Statement: "NMED guidance (NMED 2017) assumes that residents could be exposed to surface (0 to 1 foot below ground surface [bgs]) and subsurface soils (1 to 10 ft bgs) during home maintenance activities, yard work, landscaping, and outdoor play activities, and specify that an exposure interval of 0-10 ft bgs be assumed. NMED guidance (NMED 2017) assumes construction workers are involved in digging, excavation, maintenance, and building construction projects and could be exposed to surface as well as subsurface soil. Therefore, a soil exposure interval of 0-10 feet bgs is considered appropriate for the construction worker. NMED guidance (NMED 2017) assumes that the industrial/occupational worker activities occur at or near the surface at not greater than 1 ft bgs. Therefore, the soil exposure interval for industrial/occupational worker is defined as 0-1 ft bgs."

NMED Comment: If the depth of the sample is greater than one foot below grade, then the residential and construction worker scenarios need only be calculated for risk. Conducting an industrial scenario for a sample collected at depth may appear conservative, but inclusion of deeper samples could skew the exposure point concentration and result in a non-conservative estimation of risk to the industrial worker. In the discussions of the "Soil Exposure Intervals", the soil exposure interval for the industrial worker is defined as zero to one foot below grade. It is not clear from the text what data are to be used for the industrial worker. Only samples from zero to one-foot below grade should be included in the assessment of potential risks to an industrial worker. Clarify this in the text and provide replacement pages for the Plan.

Army Response: Concur. The last sentence of the Soil Exposure Interval text was revised to read, "Therefore, only data from the 0 to 1 ft bgs interval will be used to assess potential risks to industrial workers." Please see replacement page 3-33, lines 31-32, attached.

4. Section 3.12.6.1, Human Health, p 3-33

Permittee Statement: "For exposure to soil deeper than 2 ft bgs, the exposure concentration will be the singular analytical result for the deeper soil interval at each excavation/grid."

NMED Comment: This statement is unclear. The maximum detected result for each constituent of potential concern must be used as the initial exposure point concentration. Clarify how the exposure point concentrations will be derived for the initial screening assessment for each receptor in the response letter and provide replacement pages for the Plan.

Army Response: Concur. The Preliminary Screening Exposure Concentrations text was revised to read, "For all exposure intervals, the exposure concentration used in the preliminary screening will be the maximum detected concentration for a specific excavation/grid." Please see replacement page 3-33, lines 34-35, attached.

5. Section 3.12.6.1, Human Health, p 3-34

Permittee Statement: "In the absence of NMED SSLs, US EPA RSLs (USEPA 2018, or most current version) will be selected (carcinogenic RSLs will be adjusted to a risk of IE-05, consistent with NMED SSLs). Residential soil RSLs will be selected for resident. Industrial soil RSLs will be selected for the industrial/occupational worker and construction worker."

NMED Comment: If a NMED soils screening level is not available for the construction worker scenario, application of the Regional Screening Level (RSL) for an industrial worker is not acceptable. The inhalation pathway typically drives the construction worker scenario and for constituents with inhalation risk/hazard, the use of the industrial RSL may not be appropriately conservative. For these cases, the tables provided in the NMED Soil Screening Guidance should be used to derive an appropriate screening level for the construction worker. Alternatively, the RSL on-line calculator may be used with modification using NMED-specific input values as defined in the NMED Soil Screening Guidance. Revise the Plan accordingly and provide replacement pages.

Army Response: Concur. The first paragraph for the Calculation of Cumulative Human Health Risk was revised to read, "...Industrial soil RSLs will be selected for the industrial/occupational worker. USEPA RSLs do not provide a construction worker RSL; therefore, a construction worker SSL will be calculated in accordance with NMED Risk Guidance (NMED 2017, or most current version)." Please see replacement page 3-34, lines 9-12, attached.

6. Section 3.12.6.1, Human Health, p 3-36

Permittee Statement: "A qualitative discussion of potential vapor intrusion risk will be completed in accordance with Section 2.5 of the NMED risk guidance (NMED 2017, or most current version)."

NMED Comment: If significant volatile organic compounds (VOCs) are detected in confirmation samples, then a quantitative evaluation of the vapor intrusion pathway may be warranted. The vapor intrusion pathway must be evaluated following the tiered approach outlined in Section 2.5 of the NMED Soil Screening Guidance. Revise the Plan to include the potential quantitative evaluation and provide NMED with the corresponding replacement pages.

Army Response: Concur. The Vapor Intrusion Risk text on page 3-36 was revised to read, "...indoor spaces. Sample results from previous work completed at FWDA indicated that VOCs are not detected at high concentrations in areas such as the Inner Fence. Therefore, a qualitative discussion of potential vapor intrusion risk will be completed in accordance with Section 2.5 of the NMED risk guidance (NMED 2017, or most current version). If significant concentrations of VOCs are detected in confirmation samples, then a quantitative evaluation of the vapor intrusion pathway will be completed following the tiered approach outlined in Section 2.5 of NMED Risk Guidance (NMED 2017, or most current version)." Please see replacement page 3-36, lines 1-7, attached.

If you have questions or require further information, please call me at (505) 721-9770.

Sincerely,

PATTERSON.MAR Digitally signed by K.C.1229214493 Date: 2019.05.09 13:07:43 -04'00'

Mark Patterson BRAC Environmental Coordinator

Enclosures

CF:

Dave Cobrain, NMED HWB Ben Wear, NMED HWB Michiya Suzuki, NMED HWB Ian Thomas, BRACD Mark Patterson, FWDA BEC Steve Smith, USACE Fort Worth Saqib Khan, USACE Fort Worth Saqib Khan, USACE SWT Alan Soicher, USACE Heather Theel, ERDC Cheryl Montgomery, ERDC Chuck Hendrickson, U.S EPA Region 6 B.J Howerton, BIA Clayton Seoutewa, BIA George Padilla, BIA/NRO/DECSM Sharlene Begay-Platero, NN/IDR Mark Harrington, Pueblo of Zuni Oliver Whaley, Navajo EPA Jennifer Turner, DOI FWDA Admin Record, OH/NM

- industrial/occupational worker (incidental ingestion of soil, dermal contact with soil, 1 inhalation of airborne soil particulates and volatile emissions and inhalation of volatile 2 3 emissions via vapor intrusion);
- 4 resident (incidental ingestion of soil, dermal contact with soil, inhalation of airborne soil . 5 particulates and volatile emissions, inhalation of volatile emissions via vapor intrusion, ingestion of tap water, dermal contact with tap water, inhalation of volatile emissions during 6 7
- domestic use of tap water, and beef ingestion); and,
- construction worker (incidental ingestion of soil, dermal contact with soil, inhalation of 8 . 9 airborne soil particulates and volatile emissions).
- Confirmation samples will be collected from excavation sidewalls and bottoms. Therefore, the 10
- risk screening evaluation will assume that any of the three potentially exposed populations would 11
- be exposed to concentrations detected in the confirmation samples, regardless of the location of 12
- the sample. This is a conservative approach because the excavations will be backfilled with 13

clean soil; therefore, surface soil exposure would be limited to clean fill not the excavation 14

- 15 sidewalls and bottoms.
- There are no permanent surface water bodies within the Inner Fence Area; therefore, the surface 16 17 water exposure pathways were considered incomplete.

18 Target Risk Levels

- NMED SSLs are based on 1E-05 (1 in 100,000) target excess cancer risk or a target hazard 19
- quotient of 1.0 for noncarcinogens. Exceeding NMED SSLs means that further evaluation of 20
- 21 chemical concentrations and exposure assumptions may be warranted.

22 Soil Exposure Intervals

NMED guidance (NMED 2017) assumes that residents could be exposed to surface (0 to 1 foot 23

below ground surface [bgs])and subsurface soils (1 to 10 ft bgs) during home maintenance 24

- activities, yard work, landscaping, and outdoor play activities, and specify that an exposure 25
- interval of 0-10 ft bgs be assumed. NMED guidance (NMED 2017) assumes construction 26
- workers are involved in digging, excavation, maintenance, and building construction projects and 27 28
- could be exposed to surface as well as subsurface soil. Therefore, a soil exposure interval of 0-29
- 10 feet bgs is considered appropriate for the construction worker. NMED guidance (NMED 30
- 2017) assumes that the industrial/occupational worker activities occur at or near the surface at 31
- not greater than 1 ft bgs. Therefore, only data from the 0 to 1 ft bgs interval will be used to 32 assess potential risks to industrial workers.

Preliminary Screening Exposure Concentrations 33

For all exposure intervals, the exposure concentration used in the preliminary screening will be 34 the maximum detected concentration for a specific excavation/grid. 35

Field Investigation Plan

1 Calculation of Cumulative Human Health Risk

NMED guidance indicates that the potential cumulative risks and hazards should be evaluated in 2 the screening evaluation to conclude whether further evaluation may be necessary. Therefore, 3 consistent with the guidance, screening will be performed by comparing maximum chemical 4 concentrations detected at the site with NMED SSLs (NMED 2017, or most current version). 5 NMED has published SSLs for a resident, industrial/occupational worker, and construction 6 worker. In the absence of NMED SSLs, USEPA RSLs (USEPA 2018, or most current version) 7 will be selected (carcinogenic RSLs will be adjusted to a risk of 1E-05, consistent with NMED 8 SSLs). Residential soil RSLs will be selected for resident. Industrial soil RSLs will be selected 9 for the industrial/occupational worker. USEPA RSLs do not provide a construction worker RSL; 10 therefore, a construction worker SSL will be calculated in accordance with NMED Risk 11 12 Guidance (NMED 2017, or most current version). 13 SSLs for individual carcinogenic chemicals are based on a cancer risk of 1E-05. SSLs for individual noncarcinogenic chemicals are based on a hazard quotient of 1.0. Cumulative site 14 15 screening risks and hazards will be calculated as follows: 16 Site Screening Risk = (C1/SSL1 + C2/SSL2 +Cn/SSLn) x 1E-05 Site Screening Hazard Index = (C1/SSL1 + C2/SSL2 +Cn/SSLn) x 1 17 . 18 . Where: C1...Cn = Screening exposure concentration for chemical "1" to chemical "n". 19 20 SSL1...SSLn = Soil screening level for chemical "1" to chemical "n" based on a SSL 21 carcinogenic risk of 1E-05 or noncarcinogenic hazard of 1.0. Site risks less than the

- 22 NMED target level of 1E-05 and hazard indices less than the NMED target level of 1.0 23
- indicate that concentrations at the site are unlikely to result in adverse health impacts.

24 **Risk Refinement**

In accordance with NMED risk guidance (NMED 2017), if the total cancer risk is greater than 25 the target risk level of 1E-5 or if the hazard index is greater than one, concentrations at the site 26 may warrant further, site-specific evaluation. Further site-specific evaluation may include 27 refinement of receptor-specific exposure point concentrations via calculation of 95 percent UCLs 28 and/or target organ/system assessment for chemicals with a noncarcinogenic endpoint. The 29 UCLs will be calculated in accordance with Section 2.5 of the NMED risk guidance (NMED 30 2017). USEPA's ProUCL 5.1 software will be used to calculate the 95% UCL of the mean, 31 provided there are eight or more samples. The lower of the 95% UCL and the maximum will be 32 selected as the exposure point concentration (EPC) for the calculation of refined risks for the site. 33 The calculation of 95% UCLs will be limited to the shallow exposure zone (0 to 2 ft bgs) 34 because this data set will be comprised of multiple discrete soil samples. The deeper exposure 35 36

zone data set for each excavation/grid will be comprised of a single sample.

Field Investigation Plan

- 1 concentrated in indoor spaces. Sample results from previous work completed at FWDA
- 2 indicated that VOCs are not detected at high concentrations in areas such as the Inner Fence.
- 3 Therefore, a qualitative discussion of potential vapor intrusion risk will be completed in
- 4 accordance with Section 2.5 of the NMED risk guidance (NMED 2017, or most current version).
- 5 If significant concentrations of VOCs are detected in confirmation samples, then a quantitative
- evaluation of the vapor intrusion pathway will be completed following the tiered approach
- 7 outlined in Section 2.5 of NMED Risk Guidance (NMED 2017, or most current version).

8 Beef Ingestion

- 9 NMED risk guidance (NMED 2017, Section 2.6) indicates two acres as the size of parcel
- 10 requiring evaluation of the beef ingestion pathway. The excavation/grid size for the Inner Fence
- 11 work is smaller than 2 acres. However, if considered contiguously, the grids could provide

12 enough land surface for grazing purposes. Additionally, grazing is a viable future land use for

- 13 the area.
- 14 Therefore, in accordance with NMED risk guidance (NMED 2017), a qualitative assessment of

15 ingestion of beef from cattle grazing on the Inner Fence Area will be completed and included in

16 the Uncertainties Section of the risk assessment.

17 Uncertainties

- 18 There are several sources of uncertainties associated with a human health risk assessment. An
- 19 uncertainties section will be included in the human health risk assessment to discuss and address
- 20 the various uncertainties encountered during the risk assessment process.

21 3.12.6.2 Ecological Risk Assessment

- 22 The overall objectives of an ecological risk assessment (ERA) are to understand how site-related
- 23 chemicals may be distributed in relation to ecological receptors (including both habitats and/or
- species potentially present) and evaluate how the entities may be affected by those chemicals.
- 25 Ecological risk evaluation procedures will be in general accordance with NMED's Risk
- Assessment Guidance for Site Investigations and Remediation, Volume 2 (NMED 2017, or most
- 27 current version). NMED Guidance outlines two phases for completing an ecological risk
- 28 assessment:
- 29 Phase I Screening Assessments
- Screening Assessment (Tier 1 and 2)
- Phase II Site-Specific Assessments
- Site-Specific Ecological Risk Assessment (Tier 3).
- This Work Plan presents the approach for a Phase I ecological risk assessment. Tier 1 and Tier 2
 screening methodologies are described below:

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Field Investigation Plan

In Tier 1, maximum site concentrations of COPECs are compared with NMED ecological 1

2 screening levels (ESLs) for representative receptor species (such as the deer mouse, horned lark,

kit fox, pronghorn antelope, red-tailed hawk, shallow- and deep-rooted plants). Tier 1 ESLs 3 4

developed by NMED are based on toxicity reference values (TRVs) representing no-observed-5

adverse-effect levels (NOAELs). For all non-burrowing receptors and for shallow-rooted plants, the soil exposure interval is typical of surface conditions and is considered to be between zero (0) 6

and one ft bgs. For all burrowing receptors (and receptors that may use borrows) and deep-rooted 7

plants, the soil interval to be evaluated is 0 - 10 ft bgs. 8

If a Tier 2 SLERA is warranted following completion of Tier 1, less conservative methodologies 9 10 are applied:

11 Exposure models are adjusted for site-specific conditions and less conservative and more representative exposure assumptions are used. Specifically, exposure is quantified using a 12 conservative estimate of the mean (an upper 95th percent confidence limit of the mean). 13 USEPA's ProUCL 5.1 software is used to calculate the 95% UCL of the mean, provided there 14 are eight or more samples and more than four detections. The lower of the 95% UCL and the 15 maximum is selected as the EPC. If sample number or detections are too few to calculate a 16

- 17 95% UCL, the maximum detected concentration is used as the EPC.
- An ingestion exposure model approach is recommended by NMED for higher-level 18 . receptors. The model is used to estimate an average exposure dose to be compared with an 19 20 oral TRV.
- COPECs are evaluated by comparing site EPCs with lowest-observed adverse effect levels 21 22 rather than NOAEL TRVs.

Following each of the steps in the tiered process, results are evaluated to assess whether or not 23 24

information is sufficient for making remedial decisions at the site (i.e., a technical decision 25

point), or whether further evaluation may be warranted.

- A preliminary ecological site conceptual exposure model is provided in Figure 3-4. 26
- There are several sources of uncertainties associated with ecological risk estimates. An 27
- uncertainties section will be included in the ecological risk assessment to discuss and address the 28

various uncertainties encountered during the risk assessment process. 29

30 3.13 BACKFILLING EXCAVATIONS

- All excavations created from excavation of anomalies, detonations, and access will be backfilled 31
- with soil generated during the excavation that has been determined to be acceptable for reuse. 32
- 33 Areas will be restored graded to promote positive drainage.

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Field Investigation Plan

1 3.13.1 Munitions and Explosives of Concern Accountability/Daily Reporting

2 All activities accomplished at the site will be documented, on a grid-by-grid basis. In addition,

- operational data will be provided to the USACE OESS on a daily basis. Data to be provided
 includes:
- 5 Personnel on-site.
- 6 Grids started and finished.
- MEC nomenclature located by grid.
- MD and RRD (by pound).
- 9 Daily Safety Briefing.
- 10 The Daily QC Report.
- 11 3.13.2 Demobilization
- 12 Upon completion of the tasks covered under this Performance Work Statement (PWS), field
- personnel will demobilize from the site. The demobilization activities will consist of the following steps:
- Remove temporary facilities.
- Recycle/dispose of all material in the ECMs under CE control before returning control to the government.
- 18 Perform final maintenance of the CAMU.
- A final walk through will be performed by the FWDA Caretakers, USACE, and the contractor to correct any identified issues.
- Decontaminate equipment as needed. Demobilize equipment and personnel.

Christy Esler

From: Sent: To: Cc:	Christy Esler <cesler@sundance-inc.net> Thursday, May 09, 2019 1:39 PM john.kieling@state.nm.us (dave.cobrain@state.nm.us); Ben Wear (benjamin.wear@state.nm.us); Michiya Suzuki; Ian Thomas (ian.m.thomas2.civ@mail.mil); Steven Smith (steve.w.smith@usace.army.mil); Saqib SWF Khan (Saqib.Khan@usace.army.mil); 'Soicher, Alan J CIV USARMY CESWF (USA)'; Theel, Heather J ERDC-EL-MS; Montgomery, Cheryl R ERDC-EL-MS; hendrickson.charles@epa.gov; B.J Howerton; Clayton Seoutewa; george.padilla@bia.gov; Sharlene Begay-Platero; Mark Harrington; Oliver Whaley;</cesler@sundance-inc.net>
	Jennifer Turner
Subject:	Final Work Plan, Inner Fence Revision 2.0, Parcel 3 Response to Approval with Modifications, FWDA
Attachments:	Final WP Inner Fence Rev 2_Parcel 3_Response AwM_FWDA_9May2019.pdf; Parcel 3 _Inner Fence Work Plan Replacement Pages (3-33_3-38).pdf; Table 1 _MCSamplingResults.pdf

Mr. Kieling,

The attached letter presents the Army's response to comments presented in the New Mexico Environment Department letter of approval dated September 18, 2018.

If you have any questions please contact Mark Patterson at 505-721-9770.

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Respectfully submitted, **Christy Esler | Program Manager** Sundance Consulting, Inc. Woman-Native American- Owned Small Business 4292 Tallmadge Rd. | Rootstown, OH 44272 330 578-3024 Office | 330 727-0042 Cell 330 358-7311 (U.S Army office/ Fort Wingate Army Depot) <u>cesler@sundance-inc.net</u> www.sundance-inc.net

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			Number of	
		Formerly Used Defense Sites (FUDS) or	Soil	Sa
# Facility Name/Location	City/Country and State	Military Munitions Response Program	Samples	De

Table 1. Summary results from Munitions Constituents (MC) sampling at Munitions and Explosives of Concern (MEC) sites.

			Formerly Used Defense Sites (FUDS) o	r		Soil		Sample	Results from	
_	# Facility Name/Location	City/County and State	(MMRP) Number	Report Type	Date	Samples	famile Trees	Depths	Explosives	
1	1 Former Borrego Maneuver Area, Former Borrego Hotel	San Diego County, California	FUDS Identification Number: J09CA701104	REMEDIAL INVESTIGATION REPORT	March-11	16	Discrete	0-6"; 6-24"	Non-detect	Conclusions as Quoted in Report "Based on these results no evidence of MC within the investigation area was found."
2	2 Dry Canyon Artillery Range	Ventura County, California	FUDS Identification Number: J09CA034801	REMEDIAL INVESTIGATION REPORT	February-17	3	ISM	0-3"	Non-detect	"no detections of the explosives and no indicated toxicity risk to people or the environment due to the metals."
3	3 Williams Field Bomb Target Ranges #4, #9, #10, and #12	Pinal County, Arizona	FUDS Identification Numbers: J09A2072501, J09A2072901, J09A2071201, and J09A2071301	REMEDIAL INVESTIGATION / FEASIBILITY STUDY REPORT	February-13	16	Discrete	0-2"	Non-detect	*because explosives and antimony have not been detected in any sample collected from the site and all other metals are below background concentrations, there is no evidence that a release has occurred; therefore, potential risks from exposure of receptors to MC are not anticipate at the site."
4	Hawthorne Army Depot, Whiskey Flat Munitions Response Site	Mineral County, Nevada	MMRP Site: HWAAP-020-R-01	REMEDIAL INVESTIGATION REPORT	April-13	25	Seven-point wheel composite	unknown	Non-detect	"Based on results of this RI, there is no unacceptable risk to human health from exposure to soil at the Whiskey Flat MRS. A potential risk for adverse effects on ecological receptors associated with exposure to copper and zinc was identified however, these risks are considered to be negligible"
5	i Goffs Campsite	San Bernardino County, California	FUDS Identification Number: J09CA0379	REMEDIAL INVESTIGATION / FEASIBILITY STUDY REPORT	April-18	11	Discrete	4-6"	Non-detect	"there is no unacceptable human health risk expected from exposure to potential MC in the surface soil at MRS01 – Goffs Butte OE Disposal Area or at MRS02 – Rifle and Pistol Ranges."
6	i Fort Sill	Comanche County, Oklahoma	MMRP Site: FSILL-001-R-01	REMEDIAL INVESTIGATION / FEASIBILITY STUDY REPORT	November-10	3	ISM	0-2"	Non-detect	"Risk assessment results of surface soil sampling for MC indicate no adverse impact to human health and the environment."
7	Former Kirtland Air Force Base Precision Bombing Ranges/Munitions Response Site N-2/New Demolition Area West Mesa Munitions Response Area	Albuquerque, New Mexico	FUDS Identification Number: K06NM044501	REMEDIAL INVESTIGATION / FEASIBILITY STUDY REPORT	September-11	25	ISM	0-4"	Non-detect	"No HE MC contamination was detected at MRS N-2/NDA during the RI or previous investigations. Therefore, no HE MC risk/hazard to human health is expected[and]no HE MC risk/hazard to ecological receptors is expected."
8	Former Kirtland Air Force Base Precision Bombing Ranges/Munitions Response Site N-2/New Demolition Area West Mesa Munitions Response Area	Albuquerque, New Mexico	FUDS Identification Number: K06NM044501	SITE-SPECIFIC REMEDIAL DESIGN / REMEDIAL ACTION REPORT	October-17	6	ISM	0-4"	Non-detect	"No residual MC was identified in the soil samples collected at the MEC demolition locations."

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