

**Bureau of Land Management Area B
Unit A
Munitions and Explosives of Concern
Remedial Action
Technical Information Paper
Former Fort Ord, California**

December 2019

Prepared for



**U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814-2922**

Prepared by



**KEMRON Environmental Services, Inc.
1359A Ellsworth Industrial Blvd.
Atlanta, GA 30318
404-636-0928**

Table of Contents

| | |
|---|-----|
| List of Tables..... | ii |
| List of Figures..... | ii |
| List of Appendices..... | ii |
| List of Acronyms | iii |
| 1.0 Introduction | 1 |
| 1.1 Site Location..... | 1 |
| 1.2 Applicable or Relevant and Appropriate Requirements | 2 |
| 1.3 Summary of MEC Item Removed Prior to Remedial Action..... | 2 |
| 2.0 Work Completed | 3 |
| 2.1 Vegetation Clearance | 4 |
| 2.2 Technology-Aided Surface MEC Removal | 5 |
| 2.3 Subsurface MEC Remediation | 5 |
| 2.3.1 Trails | 6 |
| 2.4 Summary of MEC/MD Removed | 6 |
| 3.0 Field Work Variance(s) | 8 |
| 4.0 Observations of Evidence of Potential Soil Contamination | 8 |
| 5.0 Environmental Protection..... | 8 |
| 5.1 Description of Impacts and Mitigation Measures | 8 |
| 5.2 Biological Monitoring | 11 |
| 6.0 Conclusion | 12 |
| 7.0 References | 12 |

List of Tables

- Table 1 Unit A MEC Items Recovered Prior to Remedial Action
- Table 2 Unit A Cumulative Results
- Table 3 Unit A Vegetation Clearance
- Table 4 Unit A Surface MEC Removal
- Table 5 Unit A MEC Items Recovered During Remedial Action

List of Figures

- Figure 1 Location
- Figure 2 MEC Items Removed Prior to Remedial Action
- Figure 3 Vegetation Clearance
- Figure 4 MEC Items Removed During Remedial Action
- Figure 5 Munitions Debris Weight per Grid

List of Appendices

- Appendix A Unit A MEC Items Recovered Prior to Remedial Action
- Appendix B Surface MEC Removal Quality Assurance and Quality Control Results
- Appendix C Subsurface MEC Removal Quality Assurance and Quality Control Results

List of Acronyms

| | |
|--------|--|
| AR | Administrative Record |
| ARAR | Applicable or Relevant and Appropriate Requirement |
| Army | United States Department of the Army |
| bgs | Below Ground Surface |
| BLM | United States Bureau of Land Management |
| BO | Biological Opinion |
| DGM | Digital Geophysical Mapping |
| DMM | Discarded Military Munitions |
| FWV | Field Work Variance |
| HMP | Habitat Management Plan |
| ISD | Insufficient Data |
| KEMRON | KEMRON Environmental Services, Inc. |
| lbs | Pounds |
| MD | Munitions Debris |
| MEC | Munitions and Explosives of Concern |
| OD | Other Debris |
| QA | Quality Assurance |
| QC | Quality Control |
| RA | Remedial Action |
| RD | Remedial Design |
| RI/FS | Remedial Investigation /Feasibility Study |
| ROD | Record of Decision |
| RRD | Range-Related Debris |
| RWA | Remedial Work Area |
| SSWP | Site-Specific Work Plan |
| TIP | Technical Information Paper |
| USACE | U.S. Army Corps of Engineers |
| USFWS | United States Fish and Wildlife Service |
| UXO | Unexploded Ordnance |
| WP | Work Plan |

1.0 Introduction

This Technical Information Paper (TIP) describes the Munitions and Explosives of Concern (MEC) Remedial Actions (RAs) performed by KEMRON Environmental Services, Inc. (KEMRON), with Gilbane as a subcontractor, within Bureau of Land Management (BLM) Area B, Unit A ([Figure 1](#)). The RAs within BLM Area B, Unit A occurred under the following documents:

- *Final Record of Decision Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* [Track 2 ROD; United States Department of the Army (Army), 2017];
- *Final Work Plan Remedial Design (RD)/Remedial Action (RA) Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* [RD/RA Work Plan (WP); KEMRON, 2017a];
- *Final Site-Specific Work Plan Munitions and Explosives of Concern Remedial Action BLM Area B Former Fort Ord, California* (BLM Area B SSWP; KEMRON, 2017b); and
- *FINAL BLM Area B – Units A, B, and C PRESCRIBED BURN PLAN* (Prescribed Burn Plan; Presidio of Monterey Fire Department, 2017).

In 2018, a prescribed burn was planned in Unit A. The burn prescription was not met; therefore, a burn could not occur. The required combination of weather and other factors to meet the burn prescription is described in the Prescribed Burn Plan (Presidio of Monterey Fire Department, 2017). This TIP documents the RAs that have been performed as part of the burn site preparation, and the subsurface MEC removal conducted along the existing trails within Unit A. Completion of the remaining RAs within Unit A is pending a prescribed burn in a future burn season.

1.1 Site Location

The BLM Area B SSWP (KEMRON, 2017b) identified Unit A as 324 acres; however, the northern boundary was subsequently revised. The total acreage of Unit A is now approximately 305 acres as shown in [Figure 1](#). Unit A is bounded by West Machine Gun Flats Road to the south, Lions

Revenge Road to the north, Watkins Gate Road to the west, and Hennekens Ranch Road to the east ([Figure 1](#)).

1.2 Applicable or Relevant and Appropriate Requirements

Applicable or relevant and appropriate requirements (ARARs) were outlined in the Track 2 ROD (Army, 2017). The performance of this RA was in compliance with the ARARs outlined in that document.

1.3 Summary of MEC Item Removed Prior to Remedial Action

Items found during activities prior to the KEMRON RA are detailed in the *Final, Revision 2 Track 2 Remedial Investigation /Feasibility Study BLM Area B and MRS-16 Former Fort Ord, California* (BLM Area B RI/FS, Gilbane, 2015). These include 21 insufficient data (ISD¹) item records, and 40 unexploded ordnance (UXO) item records ([Appendix A](#), [Figure 2](#), and [Table 1](#)). Work performed in approximately 18 acres in the southeast corner of Unit A (part of BLM Area B sub-area B-4) consisted of surface, 1-foot or 4-foot removal, as described in the BLM Area B RI/FS (Gilbane, 2015). These items were removed from depths of 0 inches to 16 inches below ground surface (bgs) and are identified in [Appendix A](#).

¹ Based on the review of the database, if sufficient data is unavailable in the historical record to definitively confirm an item as explosive (MEC) or inert (MD), it is categorized as insufficient data (ISD). ISD items are conservatively considered as MEC in the Fort Ord Military Munitions Response Program.

Table 1. Unit A MEC Items Recovered Prior to Remedial Action

| Description | DMM Qty | UXO Qty | ISD Qty |
|---|---------|---------|---------|
| Flare, surface, trip, M49 series | 0 | 4 | 0 |
| Fuze, grenade (model unknown) | 0 | 1 | 0 |
| Fuze, projectile, point detonating, M8 | 0 | 1 | 0 |
| Grenade, hand, illumination, MK I | 0 | 1 | 0 |
| Grenade, hand, smoke, M18 series | 0 | 1 | 1 |
| Mine, antitank, practice, M12 series | 0 | 2 | 1 |
| Mine, antitank, practice, M20 | 0 | 0 | 2 |
| Projectile, 3inch, Stokes mortar, practice, MK I | 0 | 18 | 12 |
| Projectile, 60mm, mortar, high explosive, M49 series | 0 | 8 | 0 |
| Projectile, 60mm, mortar, practice, M50 series | 0 | 2 | 0 |
| Projectile, 81mm, mortar, high explosive, M43 series | 0 | 1 | 2 |
| Projectile, 81mm, mortar, practice, M43 series | 0 | 1 | 0 |
| Signal, illumination, ground, M125 series | 0 | 0 | 1 |
| Signal, illumination, ground, M126 series | 0 | 0 | 1 |
| Simulator, launching, antitank guided missile and rocket, M22 | 0 | 0 | 1 |
| Total Items Recovered | 0 | 40 | 21 |

Note: This is a summary table of the information provided in [Appendix A](#). These items were removed from depths that range from 0 inches to 16 inches bgs.

DMM: Discarded Military Munitions

mm: millimeter

2.0 Work Completed

KEMRON initiated field work in Unit A in July 2017 in accordance with the BLM Area B SSWP (KEMRON, 2017b). The scope of the Unit A RA included technology-aided surface MEC removal (surface MEC removal) and digital geophysical mapping (DGM) in the Unit A Remedial Work Area (RWA) following a prescribed burn, and subsurface removals on trails and other areas (to be selected). To date, work completed in Unit A included vegetation clearance ([Figure 3](#)) and surface MEC removal in burn containment line areas; and subsurface MEC removal along existing trails. The prescribed burn planned in 2018 for Unit A was not conducted. Lion's Revenge Road was developed as part of burn preparation and was conducted with UXO construction support; no MEC was encountered during this work. As part of the burn preparation, areas just outside the RWA

were subjected to surface MEC removal (Figure 4). Table 2 shows the cumulative results for the work completed to date. KEMRON implemented quality control (QC) processes in accordance with the BLM Area B SSWP (KEMRON, 2017b). Quality assurance (QA) was provided by the U.S. Army Corps of Engineers (USACE).

Table 2. Unit A Cumulative Results

| Parameter | Totals |
|--|--------|
| Surface MEC removal acreage* | ~132.4 |
| Subsurface MEC removal acreage | ~3.7 |
| MEC items** | 60 |
| Total Estimated Munitions Debris (MD) Weight (lbs) | 4,904 |
| Total Estimated Range Related Debris (RRD) and Other Debris (OD) (lbs) | 12,958 |

*Areas outside of the RWA received surface MEC removal to support a prescribed burn.

**Encountered during surface and subsurface MEC removal. Two subsurface items were recovered during the pond anomaly investigation as listed in Table 5.

The intrusive investigation of anomalies within Pond 41 is reported in *BLM Area B Track 2 Ponds Geophysical Anomaly Investigation Technical Information Paper Former Fort Ord, California* (BLM Area B Ponds TIP, KEMRON, 2019).

2.1 Vegetation Clearance

Vegetation clearance occurred in the containment line of the unit in order to support a planned prescribed burn. Vegetation clearance occurred in accordance with the BLM Area B SSWP (KEMRON, 2017b) and the Prescribed Burn Plan (Presidio of Monterey Fire Department, 2017).

Figure 3 and Table 3 display Unit A's vegetation clearance operations.

Table 3. Unit A Vegetation Clearance

| Operation ID | Vegetation Clearance Type | Acres | Date |
|------------------------------------|---------------------------|-------|-----------------------|
| Containment Line for Units B and C | Mechanical | 63.6 | July 2017 |
| | Manual | 1.4 | July 2017 |
| Containment Line for Unit A | Mechanical | 109.3 | June – September 2018 |
| Trails | Mechanical | 3.5 | January 2019 |
| | Manual | 0.2 | January 2019 |

In support of burn preparations, vegetation was cut along Lions Revenge Road, Watkins Gate Road, West Machine Gun Flats Road, and Hennekens Ranch Road ([Figure 3](#)). The BLM Area B SSWP (KEMRON, 2017b) stated that vegetation would be cut to a height of six inches or less above the ground surface (excluding trees with a diameter of four inches or larger at breast height) unless vegetation is specifically marked for protection and avoidance. Hand crews limbed the trees left standing to a height specified for fire safety and retained all branches larger than four inches in diameter. Hand crews manually cleared the understory so that UXO personnel could conduct surface MEC removal in this area.

In January 2019, approximately 3.7 acres of vegetation was cut in the Unit A trails ([Figure 3](#)). Approximately 3.5 acres of vegetation was mechanically cut, and 0.2 acres of vegetation was manually cut.

2.2 Technology-Aided Surface MEC Removal

Surface MEC removal was conducted in grids shown in [Figure 4](#) following vegetation cutting. In support of burn preparations for Units B and C, surface MEC removal was conducted between July and August 2017 ([Figure 4](#) – gray). In support of burn preparations for Unit A, surface MEC removal was conducted between August to September 2018 ([Figure 4](#) – orange and purple). UXO personnel with Schonstedt magnetometers used search lanes approximately five feet in width. The QA and QC results are included in [Appendix B](#). [Table 4](#) presents a summary of the completed surface MEC removal.

Table 4. Unit A Surface MEC Removal

| Operation ID | Acres | Date |
|--|-------|--------------------|
| Containment Line* (Figure 4 – gray) | 54.6 | July – August 2017 |
| Containment Line (Figure 4 – orange) | 62.3 | August 2018 |
| North of Lions Revenge Road (Figure 4 – purple) | 15.5 | September 2018 |

*Cut for prescribed burns in Unit B and C.

2.3 Subsurface MEC Remediation

The BLM Area B SSWP (KEMRON, 2017b) indicated that subsurface MEC removal would occur in portions of BLM Area B to address the risk associated with specific reuse, such as proposed or

existing roads, fuel breaks, proposed or existing trails in the BLM trail network, and future habitat restoration sites.

Subsurface removal was conducted in 2019 in the existing trails in Unit A. The trail network is subject to adjustment after conducting a prescribed burn and the remaining RAs within Unit A.

2.3.1 Trails

The Army completed a 12-foot wide (6 feet on either side of the trail centerline) subsurface MEC removal to depth within the existing trail alignments, in coordination with BLM ([Figure 4](#) - green portions). On Trails 65, 66, 67, 68, and 69, the subsurface MEC removal was conducted through an intrusive investigation using a hand-held metal detector and a Geonics EM61-MK2A in analog mode. Subsurface MEC removal met the measurement quality objectives and the QC/QA practices outlined in the BLM Area B SSWP (KEMRON, 2017b). No QC failures occurred within Unit A. USACE did not issue any corrective action requests. The QC and QA results are included in [Appendix C](#).

2.4 Summary of MEC/MD Removed

The UXO personnel managed items encountered and removed during RAs in a manner consistent with the BLM Area B SSWP (KEMRON, 2017b) and the *Final Quality Assurance Project Plan Former Fort Ord, California Volume II Appendix A Munitions and Explosives of Concern Remedial Action* (KEMRON, 2016). The UXO personnel recovered 60 MEC items during the RA under the BLM Area B SSWP (KEMRON, 2017b). These include 32 DMM item records and 28 UXO item records ([Figure 4](#), and [Table 5](#)). During subsurface MEC removal, 23 items were removed (21 DMM items from one location and 2 UXO items). Two MEC items were recovered during the pond anomaly investigation and are documented in the BLM Area B Ponds TIP (KEMRON, 2019). The MEC items (DMM and UXO) and MD recovered did not indicate the presence of munitions with sensitive fuzes. [Table 2](#) provides a summary of MD as well as RRD and OD removed as part of the RA. [Figure 5](#) shows MD weights per remedial work grid.

Table 5. Unit A MEC Items Recovered During Remedial Action

| Date | Unique ID | Qty | Description | Depth (inches) | Type | Operation |
|-----------------------|-----------|-----|--|----------------|------|-----------------------------|
| 7/11/2017 | 2148166 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 7/25/2017 | 2148116 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/9/2017 | 2148225 | 1 | Fuze, grenade, hand, practice, M205 series | 0 | DMM | Surface MEC Removal |
| 8/9/2017 | 2148238 | 1 | Fuze, grenade, hand, practice, M205 series | 0 | DMM | Surface MEC Removal |
| 8/9/2017 | 2148058 | 1 | Grenade, hand, smoke, M18 series | 0 | UXO | Surface MEC Removal |
| 8/10/2017 | 2148069 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/16/2017 | 2148298 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2147872 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2147947 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148008 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148110 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148132 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148161 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148240 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148263 | 1 | Grenade, rifle, smoke, white phosphorous, M19 series | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148049 | 1 | Signal, illumination, ground, M52A1 | 0 | UXO | Surface MEC Removal |
| 8/29/2017 | 2148326 | 1 | Signal, illumination, ground, M52A1 | 0 | UXO | Surface MEC Removal |
| 8/31/2017 | 2148308 | 1 | Simulator, flash artillery, M110 | 0 | UXO | Surface MEC Removal |
| 7/30/2018 | 2153256 | 1 | Flare, surface, trip, M49 series | 0 | UXO | Surface MEC Removal |
| 8/2/2018 | 2153255 | 1 | Simulator, projectile, airburst, M74 series | 0 | UXO | Surface MEC Removal |
| 8/8/2018 | 2153262 | 1 | Signal, illumination, ground, parachute, M19 series | 0 | UXO | Surface MEC Removal |
| 8/13/2018 | 2153266 | 9 | Projectile, 60mm, mortar, high explosive, M49 series | 0 | DMM | Surface MEC Removal |
| 8/20/2018 | 2153274 | 1 | Flare, surface, trip, M49 series | 0 | UXO | Surface MEC Removal |
| 8/21/2018 | 2153277 | 1 | Flare, surface, trip, M49 series | 0 | UXO | Surface MEC Removal |
| 9/13/2018 | 2153282 | 1 | Projectile, 37mm, low explosive, MK I | 0 | UXO | Surface MEC Removal |
| 9/25/2018 | 2153283 | 1 | Projectile, 37mm, low explosive, MK I | 0 | UXO | Surface MEC Removal |
| 9/26/2018 | 2153284 | 1 | Signal, illumination, ground, M126 series | 0 | UXO | Surface MEC Removal |
| 10/18/2018 | 2153525 | 1 | Signal, illumination, ground, M125 series | 11 | UXO | Pond Anomaly Investigation* |
| 10/22/2018 | 2153849 | 1 | Flare, surface, trip, M49 series | 1 | UXO | Pond Anomaly Investigation* |
| 3/6/2019 | 2156386 | 1 | Simulator, projectile, airburst, M74 series | 12 | UXO | Subsurface MEC Removal |
| 3/6/2019 | 2156487 | 1 | Simulator, projectile, airburst, M74 series | 3 | UXO | Subsurface MEC Removal |
| 3/7/2019 | 2156496 | 21 | Projectile, 60mm, mortar, high explosive, M49 series | 24 | DMM | Subsurface MEC Removal |
| Total Items Recovered | | 60 | | | | |

*The pond anomaly investigation is documented in the BLM Area B Ponds TIP (KEMRON, 2019).

3.0 Field Work Variance(s)

During execution of field work, unforeseen circumstances or events may arise that require modification to field work procedures. Field Work Variances (FWVs) document these modifications. The RAs in Unit A required a FWV to the BLM Area B SSWP (KEMRON, 2017b). *Field Work Variance 021 to the Final Site-Specific Work Plan, Munitions and Explosives of Concern Remedial Action BLM Area B, Former Fort Ord, California* (FWV 021; KEMRON, 2018) described a limited subsurface MEC removal with advanced geophysical classification utilizing the Geometrics Metal Mapper 2x2 for several vernal ponds. The BLM Area B Ponds TIP (KEMRON, 2019) presented the results of the geophysical anomaly investigation.

4.0 Observations of Evidence of Potential Soil Contamination

During field operations, UXO field personnel noted no features or items that might indicate potential soil contamination, such as for small arms training (e.g., mounds, berms, structures, concentrations of expended bullets, or concentrations of other munitions-related items).

5.0 Environmental Protection

5.1 Description of Impacts and Mitigation Measures

The project area is within the Natural Resource Management Area which is designated for transfer to BLM as undeveloped habitat reserve as described in the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California* (HMP; USACE, 1997). The HMP (USACE, 1997) describes special land restrictions and habitat management requirements within habitat reserve areas. Habitat reserve areas support plant and animal species protected under the Endangered Species Act; implementation of mitigation measures identified in the HMP (USACE,

1997) are required to minimize potential adverse impacts to listed species. Vegetation in the project area consists primarily of central maritime chaparral and contains numerous species listed as protected in the HMP (USACE, 1997).

Mitigation measures to reduce impacts to protected species during MEC RAs are described in the HMP (USACE, 1997), the *Reinitiation of Formal Consultation for Cleanup and Property Transfer Actions Conducted at the Former Fort Ord, Monterey County, California*. [Programmatic Biological Opinion (BO); United States Fish and Wildlife Service (USFWS), 2017]. Mitigation and other environmental protection measures that were implemented during this project are summarized below:

Minimize Disturbance Associated with MEC Removal: Disturbances were limited to those required for the above-mentioned activities. As required by the HMP (USACE, 1997), existing roads were used with the exception of where it was necessary to traverse the site using tracked vehicles in order to remove piles of debris, remove vegetation, and conduct the DGM portion of the field work. Access roads, staging areas, temporary vegetation stockpile areas, and other appurtenant facilities were sited to avoid impacts to HMP plant and wildlife species. Additionally, removal of multiple large Monterey manzanitas and coast live oak trees (*Quercus agrifolia*) were avoided during vegetation removal activities.

Avoid Disturbance of HMP Annual Plant Populations: While MEC removal and DGM activities were necessary within the HMP annuals plant population areas, no equipment or personnel were permitted within these areas from approximately March (approximate time of germination) through June (approximate time of seed-set) for Monterey spineflower and sand gilia, and through approximately September for Seaside bird's-beak.

Conduct Employee Education Program: Training for all supervisors and field personnel was conducted by the Project Biologist. Any new personnel also received biological training prior to working on the site. Training included information on rare, threatened, and endangered species on the site, including a description of the species, their protected status, a list of measures to be implemented to avoid and reduce impacts to these species and their habitat, and contact information to report unforeseen impacts to HMP species. Additionally, a Habitat Checklist was prepared by the Project Biologist prior to each activity that outlined specific avoidance and

minimization measures, which were communicated to the project supervisors prior to work initiation.

Minimize Impacts to Black Legless Lizard: Supervisors and field personnel were trained during the Employee Education Program to identify black legless lizard and were informed of the potential for this species to occur within the project site and the established protocol if any individuals were encountered. However, no black legless lizards were observed during the course of this work.

Minimize and Compensate for Impacts to California Linderiella, California Tiger Salamander, and California Red-legged frog: Supervisors and field personnel were trained during the Employee Education Program to identify California Tiger Salamander and California Red-legged frog and were informed of the potential for these species to occur within the project site and the established protocol if any individuals were encountered. Additionally, work within the vernal pond areas was only permitted during the dry season and heavy equipment was excluded from within 50 feet of the vernal ponds. Limited excavation was necessary within the vernal ponds, however, procedures in the *Standard Operating Procedure AGCMR-09, Anomaly Reacquisition and Intrusive Investigation*, as modified by FWV 021 (KEMRON, 2018), were followed to reduce impacts. Therefore, no restoration of habitat for these three species was necessary.

No California Red-legged frogs were observed during the course of this work.

Invasive Weed Control: In order to reduce the spread of invasive weeds, existing roads were used to the greatest extent feasible. Equipment, vehicles, and gear were required to be cleaned daily or before moving out of the area within areas identified to be highly invaded with Kalamath weed (*Hypericum perforatum*).

Erosion Control: To reduce erosion concerns normal vehicle access was restricted to existing roads and established access routes. Tracked vehicles were used to conduct vegetation removal and DGM surveys over the site. KEMRON monitored the work site for potential erosion problems and a final inspection was conducted by the Project Biologist.

5.2 Biological Monitoring

Prior to the initiation of work, baseline studies were conducted within the project area to document the location and abundance of HMP shrub and annual plant species and habitats; the results of these surveys are presented in the following reports:

- *1998 Annual Monitoring Report, Biological Baseline Studies and Follow—Up Monitoring at Unexploded Ordnance Sites on Former Fort Ord, Presidio of Monterey Annex, Monterey, California* (Harding Lawson Associates, 1998),
- *2015 Biological Monitoring Report BLM Area B, Subareas A, B, B-3 East, B-3 West, and C, and Units 05, 13, and 20; Units 01 West, 02 West, and 03 West; Units 02 East and 03 East; Units 15, 21, 32, and 34; and 2015 Annual Wetland Vegetation and Wildlife Monitoring Report, Former Fort Ord* (Burleson Consulting (Burleson), 2016), and
- *2017 Annual Report Wetland Vegetation and Wildlife Monitoring, Former Fort Ord* (Burleson, 2018).

Follow-up monitoring was conducted by Burleson in 2018; results of these surveys are presented in the following reports:

- *2018 Annual Report, Wetland Vegetation and Wildlife Monitoring, Former Fort Ord* (Burleson, 2019a) and
- *2018 Annual Report, Biological Monitoring for Units 13, 17, and 20; BLM Area B-3 West, and BLM Area B Subareas A and B Containment Lines; Units 5A, 9, 23, and 28; Units 1 East, 6, 7, 10, Watkins Gate Unburned Area, and MOUT Buffer; Units 15, 21, 32, and 34, Former Fort Ord* (Burleson, 2019b).

Monitoring within Unit A will continue according to the Programmatic BO (USFWS, 2017) to document the recovery of HMP species and habitat.

6.0 Conclusion

Vegetation clearance ([Figure 3](#)) was completed in burn preparation areas totaling 179.5 acres in accordance with the BLM Area B SSWP (KEMRON, 2017b) and the Prescribed Burn Plan (Presidio of Monterey Fire Department, 2017). Surface MEC removal ([Figure 4](#)) was conducted in 116.9 acres within Unit A. An additional 15.5 acres received surface MEC removal in the area north of Lion's Revenge Road. In addition, 3.7 acres of trails were subjected to subsurface MEC removal. The prescribed burn planned for 2018 for Unit A was not conducted. In summary the work completed to date in Unit A includes vegetation clearance and technology-aided surface MEC removal in the burn containment areas and subsurface MEC ([Figure 4](#)) removal within the interior of the unburned part of Unit A on existing trails. Completion of the remaining RA within Unit A is pending a prescribed burn during a future burn season.

7.0 References

United States Department of the Army (Army), 2017. *Final Record of Decision Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California*. [Administrative Record (AR)# OE-0897]

Burleson Consulting (Burleson), 2016. *2015 Biological Monitoring Report BLM Area B, Subareas A, B, B-3 East, B-3 West, and C, and Units 05, 13, and 20; Units 01 West, 02 West, and 03 West; Units 02 East and 03 East; Units 15, 21, 32, and 34; and 2015 Annual Wetland Vegetation and Wildlife Monitoring Report, Former Fort Ord*. (AR# BW-2795)

Burleson, 2018. *2017 Annual Report Wetland Vegetation and Wildlife Monitoring, Former Fort Ord*. (AR# BW-2844)

Burleson, 2019a. *2018 Annual Report, Wetland Vegetation and Wildlife Monitoring, Former Fort Ord*. (AR# BW-2868)

Burleson, 2019b. *Annual Report, Biological Monitoring for Units 13, 17, and 20; BLM Area B-3 West, and BLM Area B Subareas A and B Containment Lines; Units 5A, 9, 23, and 28; Units 1 East, 6, 7, 10, Watkins Gate Unburned Area, and MOUT Buffer; Units 15, 21, 32, and 34, Former Fort Ord.* (AR# BW-2870)

Gilbane, 2015. *Final, Revision 2 Track 2 Remedial Investigation /Feasibility Study BLM Area B and MRS-16 Former Fort Ord, California.* (AR# OE-0802D)

Harding Lawson Associates, 1998. *Annual Monitoring Report, Biological Baseline Studies and Follow—Up Monitoring at Unexploded Ordnance Sites on Former Fort Ord, Presidio of Monterey Annex, Monterey, California.* (AR# OE-0431)

KEMRON Environmental Services, Inc. (KEMRON), 2016. *Final Quality Assurance Project Plan Former Fort Ord, California Volume II Appendix A Munitions and Explosives of Concern Remedial Action.* (AR# OE-0884A)

KEMRON, 2017a. *Final Work Plan Remedial Design (RD)/Remedial Action (RA) Track 2 Bureau of Land Management Area B and Munitions Response Site 16 Former Fort Ord, California* (AR# OE-0899B)

KEMRON, 2017b. *Final Site-Specific Work Plan Munitions and Explosives of Concern Remedial Action BLM Area B Former Fort Ord, California.* (AR# OE-0900B)

KEMRON, 2018. *Field Work Variance 021 to the Final Site-Specific Work Plan, Munitions and Explosives of Concern Remedial Action BLM Area B, Former Fort Ord, California.* (AR# OE-0900B.3)

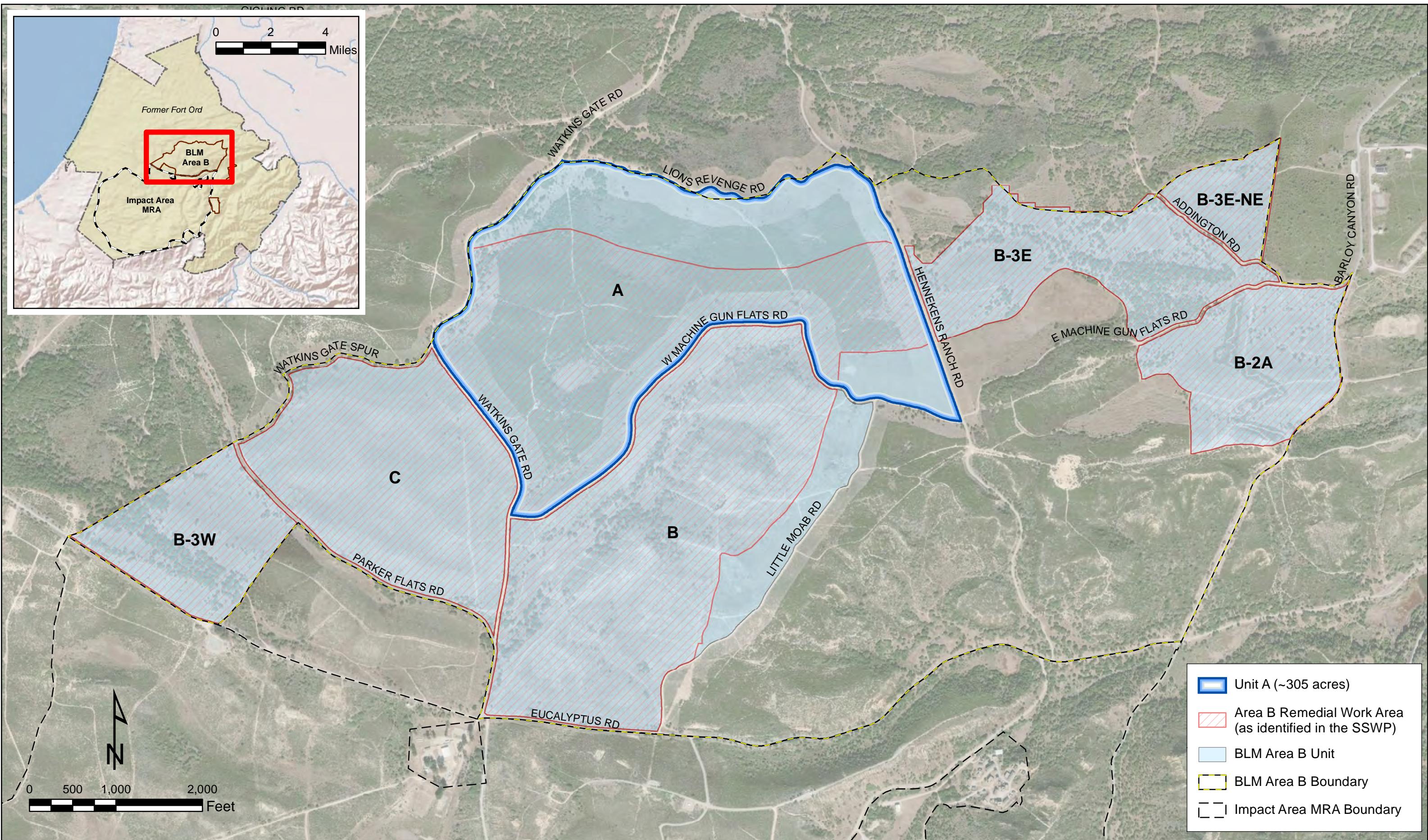
KEMRON, 2019. *BLM Area B Track 2 Ponds Geophysical Anomaly Investigation Technical Information Paper Former Fort Ord, California.* (AR# OE-0966)

Presidio of Monterey Fire Department, 2017. *FINAL BLM Area B – Units A, B, and C PRESCRIBED BURN PLAN.* (AR# OE-0901B)

U.S. Army Corps of Engineers (USACE), 1997. *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California.* (AR# BW-1787)

United States Fish and Wildlife Service (USFWS) 2017. *Reinitiation of Formal Consultation for Cleanup and Property Transfer Actions Conducted at the Former Fort Ord, Monterey County, California.* (AR# BW-2747A)

Figures

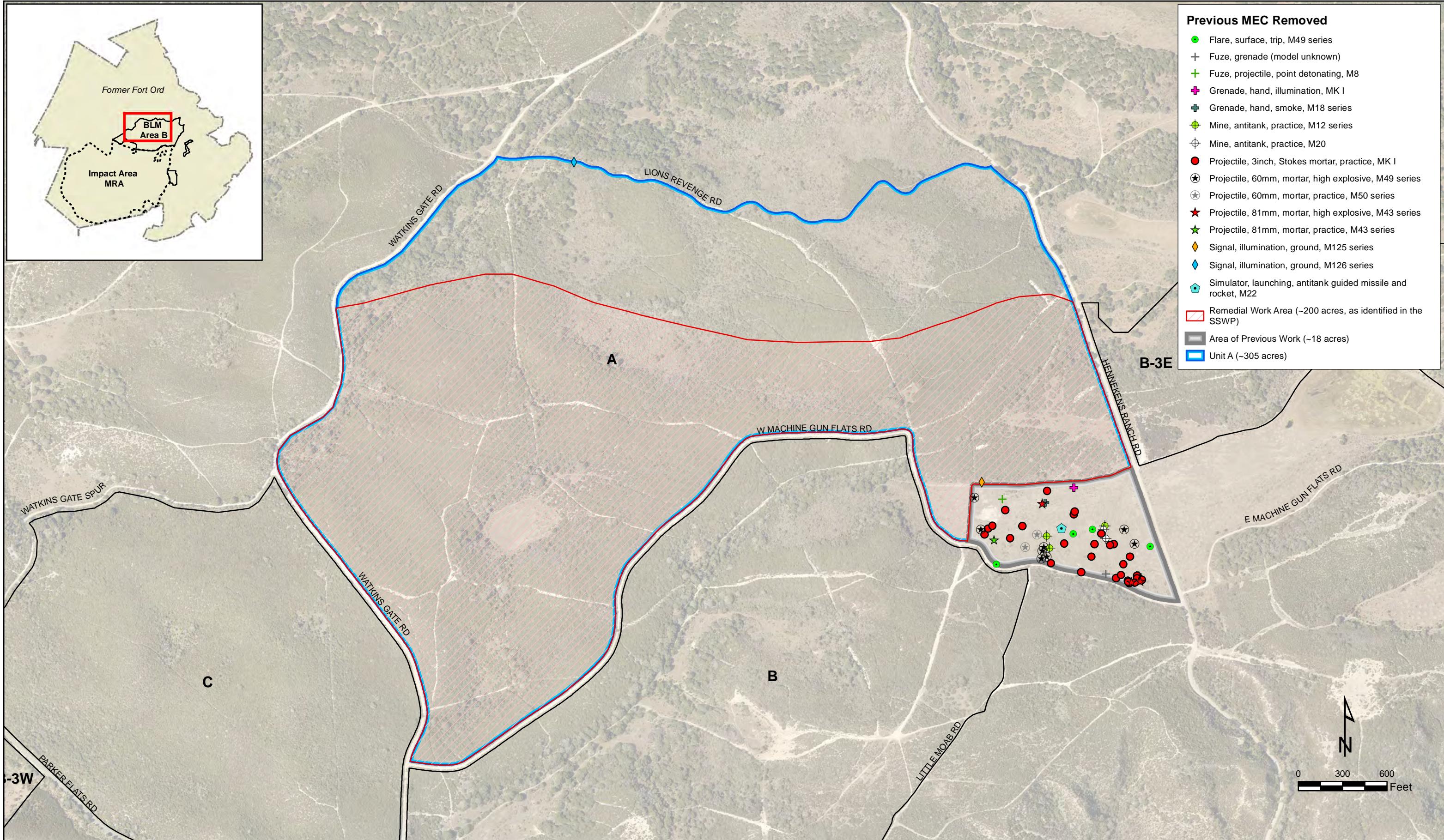


KEMRON
ENVIRONMENTAL SERVICES

Gilbane

BLM Area B - Unit A
MEC Remedial Action Technical Information Paper
Former Fort Ord, California

Figure 1
Location



BLM Area B - Unit A

MEC Remedial Action Technical Information Paper
Former Fort Ord, California

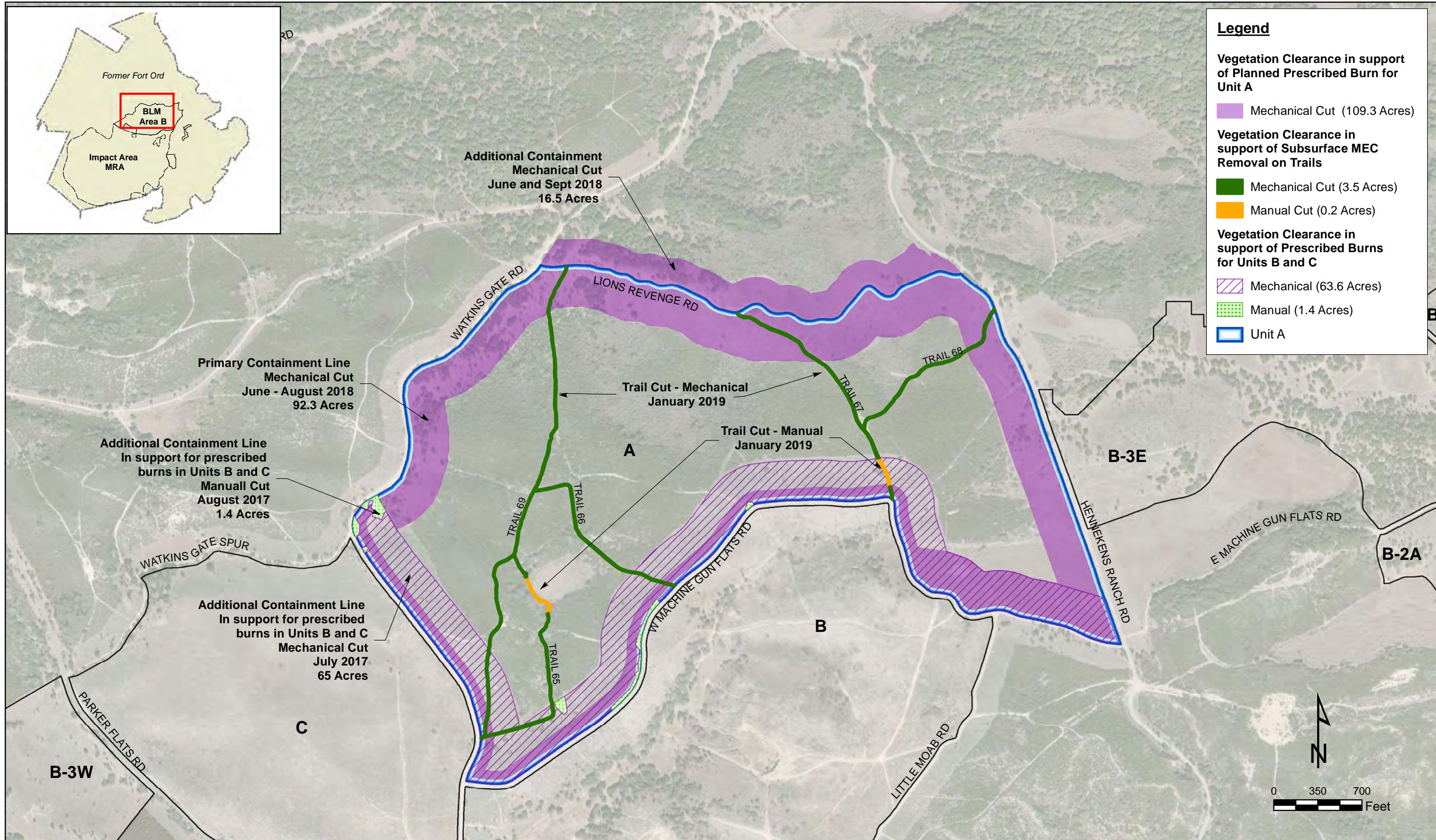
Figure 2

MEC Items Removed
Prior to Remedial Action



KEMRON
ENVIRONMENTAL SERVICES

Gibane



BLM Area B - Unit A
MEC Remedial Action Technical Information Paper
Former Fort Ord, California

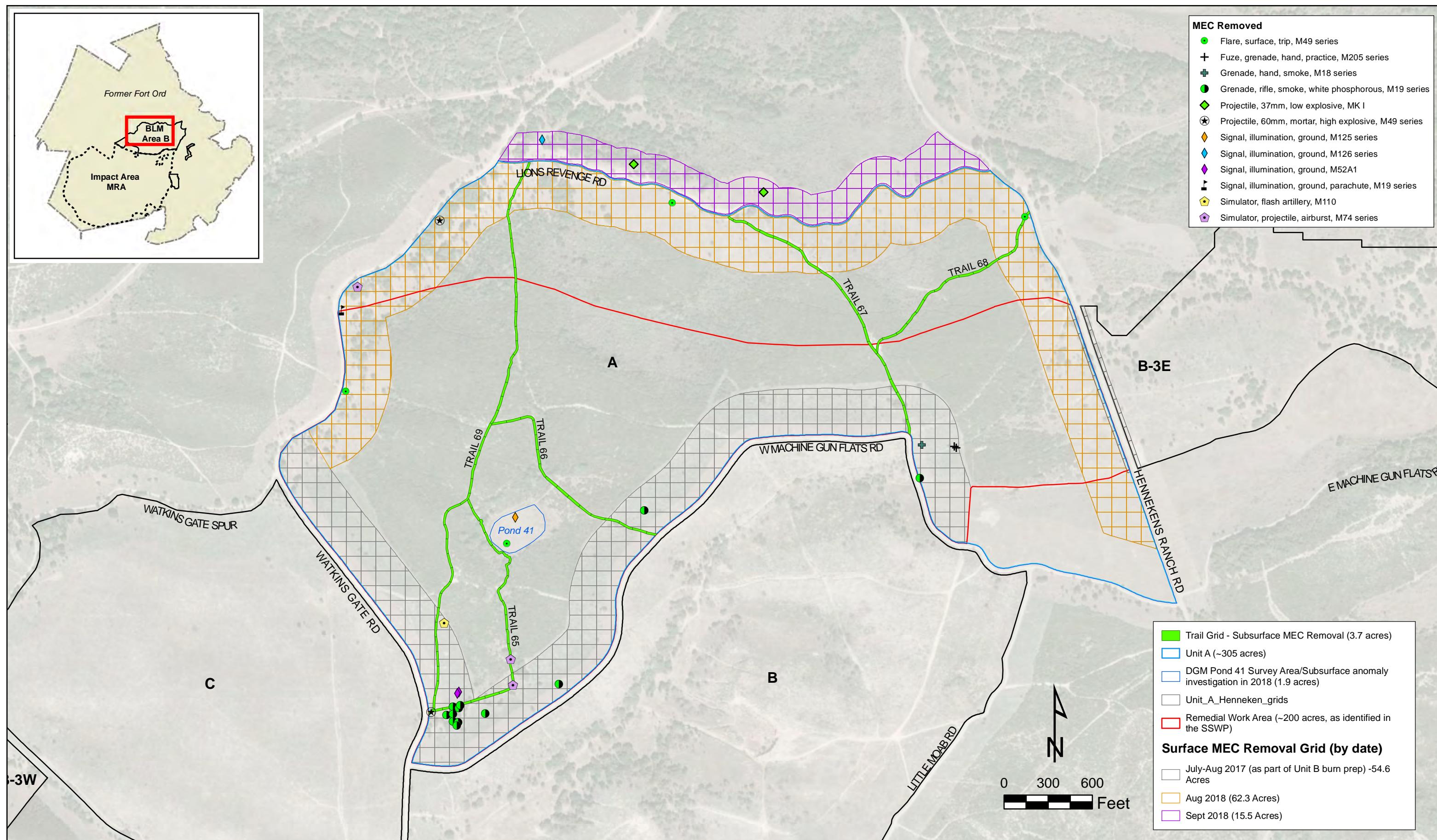
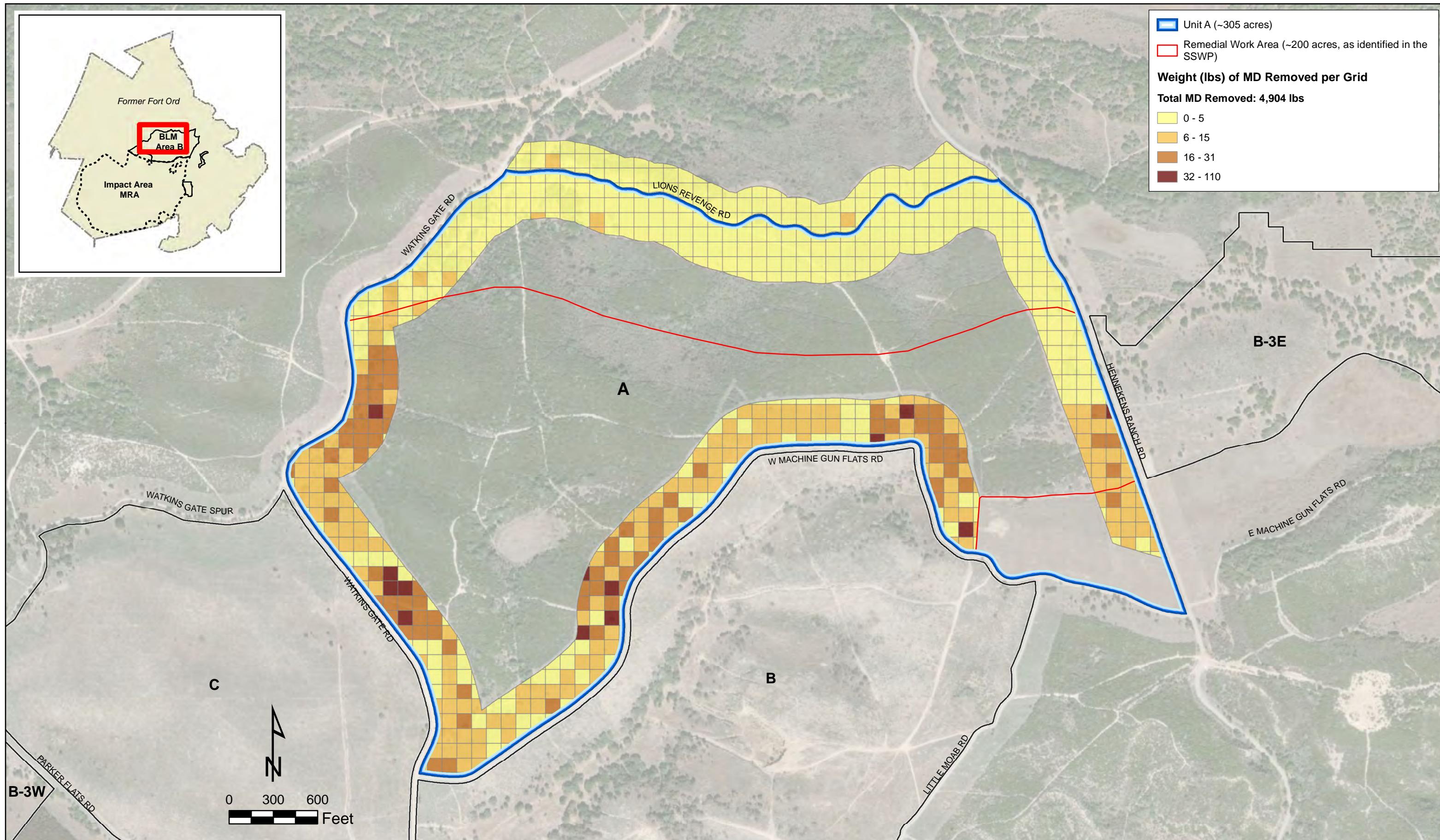


Figure 4

MEC Items Removed
During Remedial Action



BLM Area B - Unit A
MEC Remedial Action Technical Information Paper
Former Fort Ord, California

Figure 5

Munitions Debris Weight per Grid



KEMRON
ENVIRONMENTAL SERVICES

Gilbane

Appendix A

Unit A MEC Items Recovered Prior to Remedial Action

| Date Found | Contractor | Item Type | QTY | Description | Depth (inches) |
|------------|------------|-----------|-----|---|----------------|
| 2/23/1996 | CMS | ISD | 1 | Projectile, 81mm, mortar, high explosive, M43 series | 0 |
| 2/28/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 2/28/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 2/29/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 3/5/1996 | CMS | ISD | 1 | Projectile, 81mm, mortar, high explosive, M43 series | 0 |
| 3/6/1996 | CMS | ISD | 1 | Grenade, hand, smoke, M18 series | 0 |
| 3/6/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 3/6/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 3/7/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 3/14/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 3/21/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 3/28/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 4/11/1996 | CMS | ISD | 1 | Mine, antitank, practice, M12 series | 0 |
| 4/11/1996 | CMS | ISD | 1 | Mine, antitank, practice, M20 | 0 |
| 4/11/1996 | CMS | ISD | 1 | Mine, antitank, practice, M20 | 0 |
| 4/11/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 4/23/1996 | CMS | ISD | 1 | Signal, illumination, ground, M125 series | 0 |
| 5/16/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 5/20/1996 | CMS | ISD | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 0 |
| 5/21/1996 | CMS | ISD | 1 | Simulator, launching, antitank guided missile and rocket, M22 | 0 |
| 10/4/1999 | USACE | ISD | 1 | Signal, illumination, ground, M126 series | 0 |
| 12/9/1999 | USA | UXO | 1 | Grenade, hand, smoke, M18 series | 3 |
| 12/9/1999 | USA | UXO | 1 | Projectile, 81mm, mortar, high explosive, M43 series | 5 |
| 12/13/1999 | USA | UXO | 1 | Mine, antitank, practice, M12 series | 2 |
| 12/13/1999 | USA | UXO | 1 | Mine, antitank, practice, M12 series | 3 |
| 12/13/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 8 |
| 12/13/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 7 |
| 12/14/1999 | USA | UXO | 1 | Flare, surface, trip, M49 series | 1 |
| 12/14/1999 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 1 |
| 12/14/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 6 |
| 12/14/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 6 |
| 12/15/1999 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 6 |
| 12/15/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 10 |
| 12/16/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, practice, M50 series | 4 |
| 12/16/1999 | USA | UXO | 1 | Projectile, 60mm, mortar, practice, M50 series | 2 |
| 12/28/1999 | USA | UXO | 1 | Flare, surface, trip, M49 series | 2 |
| 12/29/1999 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 10 |
| 12/30/1999 | USA | UXO | 1 | Fuze, projectile, point detonating, M8 | 3 |
| 1/4/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 10 |
| 1/4/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 16 |
| 1/4/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 12 |
| 1/4/2000 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 10 |
| 1/4/2000 | USA | UXO | 1 | Projectile, 81mm, mortar, practice, M43 series | 6 |
| 1/5/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 8 |
| 1/5/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 2 |
| 1/5/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 6 |
| 1/6/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 3 |
| 1/6/2000 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 6 |
| 1/6/2000 | USA | UXO | 1 | Projectile, 60mm, mortar, high explosive, M49 series | 1 |
| 1/10/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 2 |
| 1/10/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 10 |
| 1/10/2000 | USA | UXO | 1 | Fuze, grenade (model unknown) | 2 |
| 1/11/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 6 |
| 1/13/2000 | USA | UXO | 1 | Flare, surface, trip, M49 series | 4 |
| 1/13/2000 | USA | UXO | 1 | Grenade, hand, illumination, MK I | 6 |

| Date Found | Contractor | Item Type | QTY | Description | Depth (inches) |
|-----------------------|------------|-----------|-----|--|----------------|
| 1/13/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 8 |
| 1/13/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 10 |
| 1/13/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 4 |
| 1/13/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 2 |
| 1/18/2000 | USA | UXO | 1 | Flare, surface, trip, M49 series | 6 |
| 1/18/2000 | USA | UXO | 1 | Projectile, 3inch, Stokes mortar, practice, MK I | 10 |
| Total Items Recovered | | 61 | | | |

Appendix B

Surface MEC Removal Quality Assurance and Quality Control Results

| Grid ID | Grid Type | Acreage | Analog Surface Op QC Team | Analog Surface Op QC Complete | Date Analog Surface Op QC Complete | Analog Surface Op QA Team | Analog Surface Op QA Complete | Date Analog Surface Op QA Complete |
|---------|--------------------------|---------|---------------------------|-------------------------------|------------------------------------|---------------------------|-------------------------------|------------------------------------|
| C3B4E0 | Containment Line | 0.01 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B4F0 | Containment Line | 0.09 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B4G0 | Containment Line | 0.01 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5E1 | Containment Line | 0.04 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5E2 | Containment Line | 0.06 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5E3 | Containment Line | 0.05 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5E4 | Containment Line | >0.01 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5F1 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5F2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5F3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5F4 | Containment Line | 0.17 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5F5 | Containment Line | 0.03 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5G1 | Containment Line | 0.21 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5G2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5G3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5G4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5G5 | Containment Line | 0.22 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5G6 | Containment Line | 0.08 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5G7 | Containment Line | >0.01 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5H1 | Containment Line | 0.12 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5H2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5H3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5H4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5H5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5H6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5H7 | Containment Line | 0.15 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5H8 | Containment Line | 0.02 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5I1 | Containment Line | 0.1 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5I2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5I3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5I4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5I5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5I6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5I7 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5I8 | Containment Line | 0.21 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5I9 | Containment Line | 0.07 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5J0 | Containment Line | 0.14 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5J1 | Containment Line | 0.14 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5J2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5J3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5J4 | Containment Line | 0.17 | UXO_QC_1 | Yes | 9/6/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| C3B5J5 | Containment Line | 0.18 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5J6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5J7 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5J8 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B5J9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/13/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3B6J1 | Containment Line | 0.01 | UXO_QC_1 | Yes | 7/19/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C0J1 | Primary Containment Line | >0.01 | UXO_QC_1 | Yes | 8/23/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3C4A0 | Containment Line | >0.01 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4B0 | Containment Line | 0.04 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4C0 | Containment Line | 0.14 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4D0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4D9 | Containment Line | 0.07 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4E0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4E8 | Containment Line | 0.03 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4E9 | Containment Line | 0.21 | UXO_QC_1 | Yes | 9/7/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4F0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4F7 | Containment Line | 0.01 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4F8 | Containment Line | 0.18 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4F9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4G0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4G7 | Containment Line | 0.14 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4G8 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4G9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4H0 | Containment Line | 0.15 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4H6 | Containment Line | 0.09 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4H7 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4H8 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4H9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4I0 | Containment Line | 0.01 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3C4I5 | Containment Line | 0.04 | UXO_QC_1 | Yes | 9/14/2017 | UXO_QA_1 | Yes | 9/19/2017 |

| Grid ID | Grid Type | Acreage | Analog Surface Op QC Team | Analog Surface Op QC Complete | Date Analog Surface Op QC Complete | Analog Surface Op QA Team | Analog Surface Op QA Complete | Date Analog Surface Op QA Complete |
|---------|--------------------------|---------|---------------------------|-------------------------------|------------------------------------|---------------------------|-------------------------------|------------------------------------|
| C3C6H1 | Containment Line | 0.14 | UXO_QC_1 | Yes | 7/31/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6H2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6H3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6H4 | Containment Line | 0.16 | UXO_QC_1 | Yes | 7/31/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6I1 | Containment Line | 0.07 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6I2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6I3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6I4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6I5 | Containment Line | 0.06 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6J1 | Containment Line | >0.01 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6J2 | Containment Line | 0.19 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6J3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6J4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6J5 | Containment Line | 0.22 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C6J6 | Containment Line | 0.05 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3C8J7 | Containment Line | 0.01 | UXO_QC_1 | Yes | 8/16/2017 | UXO_QA_1 | Yes | 9/12/2017 |
| C3C8J8 | Containment Line | >0.01 | UXO_QC_1 | Yes | 8/16/2017 | UXO_QA_1 | Yes | 9/12/2017 |
| C3C9J0 | Primary Containment Line | 0.08 | UXO_QC_1 | Yes | 8/23/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3C9J9 | Primary Containment Line | 0.02 | UXO_QC_1 | Yes | 8/23/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3D4A3 | Containment Line | >0.01 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4A4 | Containment Line | 0.17 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4A5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4A6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4A7 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4A8 | Containment Line | 0.07 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4B3 | Containment Line | 0.12 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4B4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4B5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4B6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4B7 | Containment Line | 0.12 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4C2 | Containment Line | 0.06 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4C3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4C4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4C5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4C6 | Containment Line | 0.16 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4C7 | Containment Line | >0.01 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4D1 | Containment Line | >0.01 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4D2 | Containment Line | 0.19 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4D3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4D4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4D5 | Containment Line | 0.2 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4D6 | Containment Line | 0.02 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4E1 | Containment Line | 0.09 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4E2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4E3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4E4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4E4 | Primary Containment Line | >0.01 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4E5 | Containment Line | 0.05 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4F1 | Containment Line | 0.12 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4F2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4F3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4F4 | Primary Containment Line | 0.1 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4F4 | Containment Line | 0.13 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4F5 | Primary Containment Line | 0.18 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4F6 | Primary Containment Line | 0.05 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4G1 | Containment Line | 0.03 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4G2 | Containment Line | 0.22 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4G3 | Primary Containment Line | 0.02 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4G3 | Containment Line | 0.22 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4G4 | Primary Containment Line | 0.21 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4G4 | Containment Line | 0.02 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4G5 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4G6 | Primary Containment Line | 0.22 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4G7 | Primary Containment Line | 0.06 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4H2 | Containment Line | 0.03 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4H3 | Primary Containment Line | 0.09 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4H3 | Containment Line | 0.08 | UXO_QC_1 | Yes | 9/18/2017 | UXO_QA_1 | Yes | 9/19/2017 |
| C3D4H4 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4H5 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4H6 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4H7 | Primary Containment Line | 0.21 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |

| Grid ID | Grid Type | Acreage | Analog Surface Op QC Team | Analog Surface Op QC Complete | Date Analog Surface Op QC Complete | Analog Surface Op QA Team | Analog Surface Op QA Complete | Date Analog Surface Op QA Complete |
|---------|--------------------------|---------|---------------------------|-------------------------------|------------------------------------|---------------------------|-------------------------------|------------------------------------|
| C3D4H8 | Primary Containment Line | 0.02 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4I4 | Primary Containment Line | 0.07 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4I5 | Primary Containment Line | 0.22 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4I6 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4I7 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4I8 | Primary Containment Line | 0.09 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4J5 | Primary Containment Line | 0.14 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4J6 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4J7 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D4J8 | Primary Containment Line | 0.17 | UXO_QC_1 | Yes | 7/31/2018 | UXO_QA_1 | Yes | 9/13/2018 |
| C3D6A2 | Containment Line | 0.05 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6A3 | Containment Line | 0.22 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6A4 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6A5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6A6 | Containment Line | 0.21 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6A7 | Containment Line | 0.04 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6B3 | Containment Line | 0.07 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6B4 | Containment Line | 0.22 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6B5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6B6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6B7 | Containment Line | 0.22 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6B8 | Containment Line | 0.08 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C0 | Containment Line | >0.01 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C4 | Containment Line | 0.08 | UXO_QC_1 | Yes | 8/23/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C5 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C6 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C7 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C8 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6C9 | Containment Line | 0.12 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6D0 | Containment Line | 0.11 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6D5 | Containment Line | 0.08 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6D6 | Containment Line | 0.22 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6D7 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6D8 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6D9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6E0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6E6 | Containment Line | 0.04 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6E7 | Containment Line | 0.2 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6E8 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6E9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6F0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6F7 | Containment Line | 0.02 | UXO_QC_1 | Yes | 8/22/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6F8 | Containment Line | 0.2 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6F9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6G0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6G8 | Containment Line | 0.05 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6G9 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6H0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6H9 | Containment Line | 0.11 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6I0 | Containment Line | 0.15 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6I9 | Containment Line | >0.01 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D6J0 | Containment Line | >0.01 | UXO_QC_1 | Yes | 8/15/2017 | UXO_QA_1 | Yes | 9/18/2017 |
| C3D7E1 | Containment Line | 0.06 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7F1 | Containment Line | 0.21 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7F2 | Containment Line | 0.02 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7G1 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7G2 | Containment Line | 0.18 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7G3 | Containment Line | 0.02 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H0 | Containment Line | 0.2 | UXO_QC_1 | Yes | 8/9/2017 | UXO_QA_1 | Yes | 9/12/2017 |
| C3D7H1 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H3 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H4 | Containment Line | 0.21 | UXO_QC_1 | Yes | 8/4/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H5 | Containment Line | 0.19 | UXO_QC_1 | Yes | 8/4/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H6 | Containment Line | 0.18 | UXO_QC_1 | Yes | 8/4/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H7 | Containment Line | 0.18 | UXO_QC_1 | Yes | 8/4/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H8 | Containment Line | 0.17 | UXO_QC_1 | Yes | 8/4/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7H9 | Containment Line | 0.18 | UXO_QC_1 | Yes | 8/4/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7I0 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/9/2017 | UXO_QA_1 | Yes | 9/12/2017 |
| C3D7I1 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |
| C3D7I2 | Containment Line | 0.23 | UXO_QC_1 | Yes | 8/1/2017 | UXO_QA_1 | Yes | 9/14/2017 |

| Grid ID | Grid Type | Acreage | Analog Surface Op QC Team | Analog Surface Op QC Complete | Date Analog Surface Op QC Complete | Analog Surface Op QA Team | Analog Surface Op QA Complete | Date Analog Surface Op QA Complete |
|---------|--------------------------|---------|---------------------------|-------------------------------|------------------------------------|---------------------------|-------------------------------|------------------------------------|
| C3F8E2 | Additional Mastication | 0.17 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8E2 | Primary Containment Line | 0.02 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8E3 | Additional Mastication | 0.23 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8E4 | Additional Mastication | 0.22 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8E4 | Primary Containment Line | >0.01 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8E5 | Additional Mastication | 0.12 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8E5 | Primary Containment Line | 0.07 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8E6 | Additional Mastication | 0.02 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8E6 | Primary Containment Line | 0.17 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8E7 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8E8 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8E9 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8F1 | Additional Mastication | 0.21 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F2 | Additional Mastication | 0.23 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F3 | Additional Mastication | 0.22 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F4 | Additional Mastication | 0.23 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F5 | Additional Mastication | 0.23 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F6 | Additional Mastication | 0.22 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F7 | Additional Mastication | 0.15 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F7 | Primary Containment Line | 0.04 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8F8 | Additional Mastication | 0.14 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F8 | Primary Containment Line | 0.06 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8F9 | Additional Mastication | 0.06 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8F9 | Primary Containment Line | 0.02 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F8G1 | Additional Mastication | 0.01 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G2 | Additional Mastication | 0.04 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G3 | Additional Mastication | 0.01 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G4 | Additional Mastication | 0.1 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G5 | Additional Mastication | 0.22 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G6 | Additional Mastication | 0.23 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G7 | Additional Mastication | 0.19 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8G8 | Additional Mastication | 0.07 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8H5 | Additional Mastication | 0.07 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8H6 | Additional Mastication | 0.13 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F8H7 | Additional Mastication | 0.01 | UXO_QC_1 | Yes | 10/1/2018 | UXO_QA_1 | Yes | 10/9/2018 |
| C3F9A1 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9A2 | Primary Containment Line | 0.22 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9A3 | Primary Containment Line | 0.01 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9B1 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9B2 | Primary Containment Line | 0.16 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9C1 | Primary Containment Line | 0.23 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9C2 | Primary Containment Line | 0.09 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9D1 | Primary Containment Line | 0.18 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9D2 | Primary Containment Line | 0.01 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| C3F9E1 | Primary Containment Line | >0.01 | UXO_QC_1 | Yes | 8/21/2018 | UXO_QA_1 | Yes | 9/26/2018 |
| HR011WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR012WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR013WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR014WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR015WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR016WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR017WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR018WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR019WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR020WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR021WS | Additional Mastication | 0.05 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |
| HR022WS | Additional Mastication | 0.06 | UXO_QC_1 | Yes | 9/12/2017 | UXO_QA_1 | Yes | 9/20/2017 |

ID Identification
Op Operation
QA Quality Assurance
QC Quality Control
UXO Unexploded Ordnance

Appendix C

Subsurface MEC Removal Quality Assurance and Quality Control Results

| Grid ID | Grid Type | Acreage | Analog Intrusive Op QC Team | Analog Intrusive Op QC Complete | Date Analog Intrusive Op QC Complete | Analog Intrusive Op QA Team | Analog Intrusive Op QA Complete | Date Analog Intrusive Op QA Complete |
|----------------|------------------|----------------|------------------------------------|--|---|------------------------------------|--|---|
| TR69-36 | Trail | 0.03 | UXO_QC_1 | Yes | 2/27/2019 | UXO_QA_1 | Yes | 3/20/2019 |
| TR69-37 | Trail | 0.03 | UXO_QC_1 | Yes | 2/27/2019 | UXO_QA_1 | Yes | 3/20/2019 |
| TR69-38 | Trail | 0.03 | UXO_QC_1 | Yes | 2/27/2019 | UXO_QA_1 | Yes | 3/20/2019 |
| TR69-39 | Trail | 0.03 | UXO_QC_1 | Yes | 2/27/2019 | UXO_QA_1 | Yes | 3/20/2019 |
| TR69-40 | Trail | 0.02 | UXO_QC_1 | Yes | 2/27/2019 | UXO_QA_1 | Yes | 3/20/2019 |

ID Identification

Op Operation

QA Quality Assurance

QC Quality Control

UXO Unexploded Ordnance