2017 Munitions and Explosives of Concern Inspection Report
Potrero Canyon (Lockheed Martin Beaumont Site 1)
Beaumont, California

Prepared for:

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2017 MUNITIONS AND EXPLOSIVES OF CONCERN INSPECTION REPORT
POTRERO CANYON (LOCKHEED MARTIN BEAUMONT SITE 1)
BEAUMONT, CALIFORNIA

Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

November 2017

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November 15, 2017

Mr. Daniel Zogaib
Department of Toxic Substances Control
Region 4
5796 Corporate Avenue
Cypress, CA 90630

Subject: Submittal of the *2017 Munitions and Explosives of Concern Inspection Report, Potrero Canyon (Lockheed Martin Beaumont Site 1), Beaumont California*

Dear Mr. Zogaib:

Please find enclosed one hard copy of the body of the report and two compact disks with the report body and appendices of the *2017 Munitions and Explosives of Concern Inspection Report, Potrero Canyon (Lockheed Martin Beaumont Site 1), Beaumont California* for your review and approval or comment.

If you have any questions regarding this submittal, please contact me at 301-548-2184 or jeff.s.thomas@lmco.com

Sincerely,

Jeff Thomas
Lockheed Martin
Beaumont 1 & 2 Project Lead

CC: Ms. Barbara Melcher, CDM Smith (electronic copy)
Mr. Tom Villeneuve, Tetra Tech (electronic copy)

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ABBREVIATIONS AND ACRONYMS

AOC	area of concern
LMC	Lockheed Martin Corporation
MEC	munitions and explosives of concern
MD	munitions debris
MPPEH	material potentially presenting an explosive hazard
site	Potrero Canyon (Lockheed Martin Beaumont Site 1)
TP	Tetra Tech, Inc.
TP	target practice round
TPLZ	terraced projectile landing zone
USFWS	United States Fish and Wildlife Service
UXO	unexploded ordnance

SECTION 1 INTRODUCTION

This Munitions and Explosives of Concern (MEC) Inspection Report has been prepared by Tetra Tech, Inc. on behalf of Lockheed Martin Corporation (LMC), and presents the results of the 2017 MEC inspection of Potrero Canyon (Lockheed Martin Beaumont Site 1). The site is located in an undeveloped area south of the City of Beaumont, Riverside County, California (Figure 1). Most of the site is within the Beaumont City limits. Currently, the site is inactive with the exception of remedial activities performed under Consent Order 88/89-034 and Operation and Maintenance Agreement 93/94-025 with the California Department of Toxic Substances Control. The State of California owns approximately 94% (8,552 acres) of Potrero Canyon. Title to the remaining 565 acres, referred to as the conservation easement parcel (reflecting a conservation easement granted by Lockheed Martin to the State of California), were retained by Lockheed Martin Corporation (Figure 2).

Investigations and removal of MEC at the site have been completed. While all reasonable steps to mitigate the risk have been taken, there is potential for residual MEC to be present. As a result, LMC has implemented a MEC inspection program. The inspection program is intended to check those areas where MEC were found or where inert projectiles are known to remain, and to assess whether any have been exposed or transported by erosion or other forces. If inert projectiles or MEC are found, they are removed and/or disposed of appropriately. Inspections have been conducted annually since 2011 to assess if MEC have been uncovered or exposed by various natural causes. The areas designated for inspection include: the streambeds in Area A (Eastern Aerojet Range), Area D (Lockheed Propulsion Company Ballistics Test Range), and Area G (Helicopter Weapons Test Area); the Phalanx Target berm located in Area B (Rocket Motor Production Area); the berm at the base of the terraced projectile landing zone (TPLZ) located in Area D; and the landfill located in Area H (Sanitary Landfill) (Figures 3 through 7). The locations for inspection are based on recommendations from the *Munitions and Explosives of Concern Awareness Training Plan* (Tetra Tech, 2011).

The 2017 inspection followed the biennial inspection schedule presented in Table 1. The inspection methodology was completed in compliance with the *Post Removal Action Residual Munitions and Explosives of Concern Work Plan* (Tetra Tech 2016).

Additional modifications to the inspection schedule will be proposed based on the findings from future inspections. All proposed modifications to the inspection schedule will require the approval of California Department of Toxic Substances Control.

The objectives of this report are to:

- Briefly summarize the site history.
- Report findings and disposal activities.

This Report is organized into the following sections: 1) Introduction, 2) Summary of Inspection Results, 3) Conclusions and Recommendations, and 4) References. Tables and figures are numbered sequentially in the order of their appearance in the document, and are presented at the end of the report body following Section 4.

1.1 SITE HISTORY

Historically, the site was used primarily for ranching. Between 1960 and 1963, the various parcels that make up the site were purchased by either Grand Central Rocket or Lockheed Propulsion Company. In the early 1960s Grand Central Rocket was acquired by the Lockheed Propulsion Company. The property was developed and used as a remote test facility for early space and defense programs. During the active industrial life of the site from 1960 until 1974, Lockheed Propulsion Company used the facility for solid propellant mixing, testing, and disposal, as well as for ballistics testing. Explosives were used in its work; however, most munitions used on-site were reportedly practice rounds that did not contain high explosives. After 1974, the site was vacant except for occasional use by third-party lessees. All activity ceased at the site in 1991, except for ongoing environmental activities.

Based on historical data, the site has been divided into nine Operational Areas reflecting the types of activities known to have occurred on-site. Munitions and explosives of concern-related activities were conducted in eight of the Operational Areas, as follows:

Area A - Eastern Aerojet Range

Area B - Rocket Motor Production Area

Area C - Burn Pit Area

Area D - Lockheed Propulsion Company Ballistics Test Range

Area F - Lockheed Propulsion Company Test Services Area

Area G - Helicopter Weapons Test Area

Area H - Sanitary Landfill

Area I – Western Aerojet Range

Figure 2 shows the eight Operational Areas included in the munitions investigations and the areas of concern that were investigated.

1.2 SUMMARY OF PREVIOUS MUNITIONS AND EXPLOSIVES OF CONCERN EVALUATIONS AND REMOVALS

Munitions and explosives of concern investigations were initiated in 2005 when two small belts of 20mm linked practice ammunition were found during the repair of a stream crossing in Area D. In November 2006, all munitions debris (MD) collected during the investigations conducted to that point were radiologically tested and no depleted uranium was identified. Removal actions were performed in 2006 and 2007. Supplemental investigations were performed in 2009 and 2010. Munitions and explosives of concern investigations or removal actions have been performed at 28 areas of concern (Figure 2). A Site-Specific Explosives Safety Hazard Assessment was completed (Tetra Tech 2012) and no further investigations or removals were proposed; but post removal action inspections were proposed for six areas of concern found in Areas A, B, D, G, and H. Routine post removal action inspections were initiated in 2011 and are discussed in Section 1.3.

All MD items found during the investigations were dual inspected, certified safe, and disposed of by a certified recycler. All MEC items found during the investigation were treated on-site with donor explosives. A summary of what has been found to date during the MEC investigations and removal actions in the six operational areas proposed for inspections is presented below.

Aerojet conducted ballistics testing in Area A. MEC investigations and the removal action resulted in the discovery and removal of inert 27.5mm and 30mm projectiles, inert 16mm tungsten penetrators and an inert 76mm rocket. Fragments from high explosive 30mm projectiles and several unexploded 30mm projectiles were also found.

General Dynamics reportedly tested Phalanx Gatling guns and 2.75-inch Viper Bazookas in Area B. The bazooka rockets reportedly carried explosive and shaped charges. The Gatling guns fired inert 20mm and 30mm rounds. Munitions and explosives of concern investigations resulted in the

discovery and removal of MD only, inert 20mm and 30mm projectiles, in the Phalanx gun target berm and possible munitions fragments from the rockets. No MEC were found during the investigation. It was determined that a removal action was not warranted at the Area B areas of concern and 20mm and 30mm projectiles (presumed to be inert) are still present in the Phalanx Target Berm.

Lockheed Martin Corporation tested several weapons platforms in Area D including a Navy five-inch gun, an Army 155mm gun, 40mm and 37mm guns, land mines, and incendiary bombs. During MEC investigations inert projectiles and some munitions fragments were found. Unfired large caliber burster tubes and 20mm practice rounds were also found along the streambed. These unfired items were classified as MEC because the propellant in them represented a potential explosive hazard. A removal was conducted in the area of the streambed.

Lockheed Martin Corporation performed helicopter weapons testing in Area G. Various calibers of weapons were tested (40mm grenade launcher, 30mm cannon, and 7.62mm machine gun). All munitions fired were reportedly inert or practice rounds. The areas of concern at this testing site were investigated and all of the projectiles recovered during the investigation were inert. No MEC were found during the investigation. It was determined that a removal action was not warranted at the Area G areas of concern and projectiles (presumed to be inert) are still present.

No munitions testing was reported to have been conducted in Area H. Investigations did not result in the discovery of any munitions-related items on the surface of the landfill, but belted 7.62mm machine gun ammunition used in Area G was reportedly disposed of in the landfill. No MEC were found.

1.3 POST REMOVAL ACTION ROUTINE INSPECTION AREAS

As discussed above, while all reasonable steps to mitigate the risk have been taken, potential for residual MEC remains. The majority of the MEC uncovered to date were found near the ground surface but MEC detection equipment has depth limitations based on the size and orientation of the object and the soil type. In general, objects can be detected up 14 inches below the ground surface. Therefore, erosion could expose errant or buried MEC. The inspection program is intended to check those areas where MEC were found or where inert projectiles are known to remain or transported to by erosion or other forces, and to assess whether any have been exposed and pose a threat. Erosion

in the various areas to be inspected will vary. The target berms located in flat open areas will be subject to erosion from wind and sheet flow during storm events. Erosion is anticipated to be low in these areas. The landfill is located in hilly terrain and near several drainage features. Erosion here could result from wind, sheet flow and channelized flow during storm events. Erosion is anticipated to be low to moderate in these areas. The banks of the streambeds will be subject to erosion from surface water flow in the streambeds. The streambeds generally only flow during and shortly after storm events and flows increase as the intensity of the storms increase. Erosion in these areas is anticipated to be low to high depending on the storm event. During the course of previous investigations, eight of the 28 areas investigated were found to contain munitions and explosives of concern, inert projectiles, or remnants of potential munitions and explosives of concern. Six of these areas of concern are included in a routine inspection program intended to look for and continue to evaluate the potential for residual munitions and explosives of concern. The remaining two AOCs (Area G Fixed Target Zone and the Upper Range Area) are in an area known to have inert projectiles but the relatively thick shrubs and/or the steep terrain make inspections difficult. Therefore, they was not included in the inspection program. In the other 20 areas, there is no evidence supporting the presence of potential MEC so these areas are not included in the annual inspection program. The six areas of concern chosen for inspection are described below:

Area A Streambed – There are four areas of concern in Area (AOC) A but only the streambed is a concern with respect to erosion. Potrero Creek runs adjacent to the Target Impact Area AOC and over the years the erosion has advanced into the Target Impact Area AOC. No MEC were found in the Area A Streambed (AOC) during the original investigation and cleanup but they were found in the Target Impact Area, (AOC). The banks of the streambed continue to erode material from the former Target Impact Area (AOC). Further, secondary erosion features that drain into Potrero Creek have also developed. Some of these secondary features have developed in the Target Impact Area (AOC), as well. As a result, the Area A Streambed (AOC) and the secondary erosion features have been included in the MEC inspection program. The (AOC) is presented in Figure 3.

Area B Phalanx Target Berm – The Phalanx Gatling Gun is a high volume or rapid fire gun. A large number of metallic objects were detected below the surface of the target berm. During the previous MEC investigations, projectiles were removed and examined from five different locations in the face of the berm. It was reported that only inert practice rounds were used during the testing of the

Phalanx Gun. Inert 20mm and 30mm projectiles were recovered from the berm. No MEC were recovered from the berm. The berm is steeply sloped and somewhat prone to erosion. Inert items resembling much more hazardous live munitions may erode out of the berm and collect near the base where they may be found by site users. As a result, the Phalanx Target Berm AOC has been included in the MEC inspection program to allow removal of the inert practice projectiles as they erode out of the berm. The AOC is presented in Figure 4.

Area D Berm at the base of the (TPLZ) – While no explosive projectiles were reported to have been tested at this range, fragments were found near a presumed target located up range of the berm and appeared to have been generated by explosive, not mechanical, means. The berm was investigated and detected items were removed. No MEC were found, but the detection equipment has depth limitations. The berm is steeply sloped and somewhat prone to erosion. With time, undetected objects deeper in the berm could be exposed by erosion. As a result, the berm at the base of the TPLZ has been included in the MEC inspection program. The AOC is presented in Figure 5.

Area D Streambed – Bedsprings Creek bisects Area D. While no known MEC activities were conducted in the drainage it appears some munitions-related items were discarded here. Several unfired burster tubes and 20 mm dummy practice ammunition were found in the streambed. These items are considered MEC. A 100% survey/removal was conducted in the accessible area of the streambed. With time, undetected objects buried in the area could be exposed by erosion. As a result, the Area D streambed AOC has been included in the MEC inspection program. The AOC is presented in Figure 5.

Area G Streambed – Potrero Creek meanders through the Helicopter Weapons Test Area. The streambed is located between the firing point and the range. It was reported that weapons were checked prior to testing by firing them into the southern bank of the streambed. It was also reported that only inert practice rounds were used during the testing. Investigations in Area G resulted in the recovery of small arms brass, mechanically generated 30mm fragments, and inert 40mm projectiles. No MEC were found in the Area G Streambed. Due to erosion of the stream bank, inert items resembling much more hazardous live munitions may erode out and collect in the streambed where they may be found by site users. As a result, the Area G Streambed AOC has been included in the MEC inspection program to allow the removal of the inert practice projectiles if they erode out of the stream bank. The AOC is presented in Figure 6.

Area H Sanitary Landfill – The landfill is closed and covered; however, there is anecdotal information that small arms ammunition (7.62mm) was placed in the landfill. While temporary erosion protection measures are in place, the surface of the landfill is sloped at approximately six percent and has been subject to some erosion in the past. With time erosion could expose the contents of the landfill. As a result, the Area H Sanitary Landfill AOC has been included in the MEC inspection program. Temporary erosion control measures as well as quarterly inspection will continue to be utilized until a final solution is in place. The AOC is presented in Figure 7. The landfill is scheduled to be covered with an engineered cap in 2018 and drainage in the area improved to better protect the landfill.

Table 2 contains a summary of the six AOCs that have been included in the inspections, an evaluation of the types of munitions/ammunition that may have been used in each area and may potentially be present, and a summary of what has been discovered during prior routine inspections. The inspections have been conducted annually since 2011. During the first two years' inspections, only anomalies proud of the surface were inspected. Subsurface inspections were added in 2013.

SECTION 2 SUMMARY OF INSPECTION RESULTS

The annual inspection for MEC was performed in August 2017. Section 2.1 describes the results of the instrument-aided surface survey and any associated subsurface investigations.

2.1 ANNUAL INSPECTION RESULTS

The MEC inspection are conducted routinely. The frequency is based on the nature of the munitions related items found at each AOC, the frequency that munitions related items have been discovered, and the anticipated degree of erosion or exposure. The annual event includes only the streambed AOCs in Area A and Area D. The biennial event occurs in odd numbered years and adds the inspection of the four additional AOCs listed in Table 1.

Instrument-aided surface surveys were conducted at all six AOCs between 16 August 2017 and 20 August 2017. Subsurface anomalies were also investigated in Areas A and D during this time period. Each morning prior to initiating the surveys, the magnetometers were tested (Appendix B-Photo 1). The blanket tests confirmed that all of the instruments were performing correctly, with documentation for this provided in Appendix A.

Two surface anomalies and four subsurface anomalies were investigated in Area A (Figure 8). All were determined to be scrap metal and were removed for offsite disposal (Appendix B-Photo 2 through 8). No MEC or munitions related material were discovered in Area A.

Six surface anomalies were investigated in Area B (Figure 8). All six surface anomalies recovered in Area B were determined to be munitions related. Four of the surface anomalies located in Area B were determined to be MD, 20mm target practice (TP) projectiles (Appendix B-Photos 9 through 14). Due to the weathered condition of the two remaining anomalies, complete 20mm projectiles, a determination could not be made whether they were TP rounds or high explosive rounds; therefore, the Riverside County Sheriff's Hazardous Devices Team was notified of the presence of these potentially hazardous items, and they treated them in-place using donor explosive (Appendix B-Photos 15 through 18). The two projectiles were determined to be inert and were reclassified as MD. Additionally, two subsurface anomalies were recorded but not excavated in Area B. Due to the high

concentration of Stephens' kangaroo rats in Area B subsurface excavations are not performed. Previous investigations support that only inert projectiles were fired at this AOC.

Three surface anomalies and one subsurface anomalies were investigated in the Area D streambed (Figure 8). Two of the three surface anomalies were determined to be scrap metal and were removed for offsite disposal. The remaining two anomalies, one surface and one subsurface, recovered in Area D streambed were determined to be munitions related. The surface anomaly located in Area D was determined to be MD, an ammo belt link (Appendix B-Photos 19 through 22). The subsurface anomaly, a complete unfired 20mm TP cartridge, was determined to be material potentially presenting an explosive hazard (MPPEH). The Riverside County Sheriff's Hazardous Devices Team was notified of the presence of the potentially hazardous item, and they responded to treat them on-site using donor explosives. The MPPEH and MD items were located in the streambed near the road crossing within the Area D riverbed.

Two surface anomalies were investigated in the Area D Berm at the base of the TPLZ (Figure 8). The two surface anomalies were determined to be scrap metal and were removed for offsite disposal.

A summary of the findings can be found in Table 3. A detailed summary of the subsurface anomalies discovered during the inspection including coordinates and excavation details can be found on the Manual Target Excavation Results Dig Sheet (Appendix A).

2.2 HABITAT CONSERVATION

A nesting bird survey was performed by a biologist within the MEC inspection areas before any activities were started (Appendix B-Photos 23 through 24). Locations within the inspection areas identified as potential nesting locations were flagged and a 400 foot buffer zone was set up around each nest site. Inspections could be conducted closer to the nests but the use of donor explosives requires the larger buffer. Because of the width and proximity of the streambed to the nests and the distribution of the nests approximately 3,000 feet of streambed in Area A could not be surveyed. Areas that were unable to be surveyed due to nesting birds are identified on Figure 8. An attempt was made to identify the species of the nesting bird (Figure 9 and Table 4). Based on observation of nest type and location and the species of birds seen in the vicinity of the nests, the species of nesting birds identified in the survey include:

- Four barn owl nests
- One Mourning dove nest

MEC inspection activities were not performed within the 400 foot buffer zone around the nests. A complete listing of all bird species observed during the nesting bird survey can be found in Table 5. Prior to any excavation of subsurface anomalies the area is inspected by a biologist to ensure that there were no impacts to Stephens' kangaroo rats. Based on this inspection all identified subsurface anomalies were able to be excavated.

2.3 OTHER MUNITIONS RELATED FINDINGS

A fire (Manzanita Fire) burned across the site in late June of this year. Cal Fire indicated that they appreciated the MEC warning signs placed around the six AOCs. The signs defined the areas of concern and provided the response procedures to follow if potential MEC was discovered. Four 40mm grenades were uncovered by heavy equipment used to fight the fire. As indicated on the warning signs, Cal Fire contacted the Beaumont Police Department who in turn contacted the Riverside County Sheriff and the Riverside County Sheriff's Hazardous Devices Team responded to the site. The grenades were determined to be inert and picked up and removed by the Hazardous Devices Team.

SECTION 3 CONCLUSIONS AND RECOMMENDATIONS

All six MEC areas were examined for surface anomalies during the 2017 MEC inspection. Subsurface anomalies were also investigated in the streambeds in Operational Areas A and D where MEC were removed during the assessment and removal work previously conducted. A total of 12 surface and six subsurface anomalies were recorded, as follows:

- Area A streambed had two surface and four subsurface anomalies:
  - The two surface anomalies were identified as scrap metal.
  - The four subsurface anomalies were identified as scrap metal.
- Area B Phalanx Target Berm had six surface anomalies and two subsurface anomalies:
  - Four surface anomalies were identified as 20mm TP projectiles –MD.
  - Two surface anomalies were unable to be positively identified as 20mm TP projectiles so they were treated as MPPEH.
  - Two subsurface anomalies were recorded but not excavated.
- Area D streambed had two surface and two subsurface anomalies:
  - The two surface anomalies were identified as scrap metal.
  - One subsurface anomaly was identified as an ammo belt link –MD.
  - One subsurface anomaly was identified as a complete unfired 20mm TP cartridge - MPPEH.
- Area D Berm at the base of the TPLZ had two surface anomalies:
  - The two surface anomalies were identified as scrap metal.

The two 20mm projectiles that were recovered in Area B that could not be positively identified as TP projectiles and the 20mm complete cartridge recovered in the Area D streambed were treated by detonation by the Riverside County Sheriff's Hazardous Devices Team. All three items were determined to be inert. Five MD items were dual inspected and certified as free of an explosive hazard. The MD that was collected from the site was delivered to the Combat Center EOD at 29

Palms by the Riverside County Sheriff's Department, Hazardous Device Team, where it was demilitarized and recycled. All scrap metal was disposed of offsite.

The discovery of subsurface metallic anomalies in the inspection areas is not unanticipated since metallic anomalies, some related to MEC, were found in these areas during the assessment and removal work previously conducted. In those areas that were surveyed for assessment purposes only and a removal action was not required, only a small portion of the AOC was surveyed. Regardless of the level of survey performed, finding metallic anomalies in these areas is not unanticipated. It is possible that metallic debris was present at depths below the detection capabilities of the geophysical instrumentation used for the assessments and that natural erosion processes may be moving this debris closer to the surface. It is also possible that metallic objects were transported into the area. Therefore, the presence of subsurface metallic anomalies is not necessarily indicative of munitions-related material.

Instrument-aided surface inspections have been conducted for seven years, and this is the fifth year subsurface investigations were performed as well. Prior to the 2014 inspection, these inspections and investigations had yielded no MEC in the six areas of concern evaluated. This includes the two areas of concern in Area A and Area D where previous MEC removal activities were conducted. This year MD were found at the Area B Phalanx Target Berm and in the streambed in Area D.

The goal of the routine inspections is the discovery and removal of potentially hazardous munitions which may become exposed over time. Based on site history and the findings from the seven routine inspections conducted to date, it is recommended that the inspection schedule presented in Table 1 be followed for the 2018 inspection with the following proposed changes as noted in Table 6:

- Area D Berm at the base of the TPLZ – No munitions related items have been recovered from the Area D Berm and erosion of the berm has been limited. Based on these findings it is proposed to change the frequency of the Area D Berm inspections from biennial to every five years. To allow for removal of this AOC from the inspection program flattening of the berm should be considered. The berm is not very large, if biological concerns can be managed, flattening the berm with a backhoe and completing the investigation of the berm would eliminate the need for routine inspections. The

completion of the investigation could be conducted along with the other routine inspections.

- Area G Range – It was reported that various calibers of weapons were tested (40mm grenade launcher, 30mm cannon, and 7.62mm machine gun) on the range. The weapons were fired from the fixed firing point and a hovering helicopter. The range is comprised of two pieces: the Fixed Target Zone and the Upper Range Area. The weapons were fired into the sloping valley floor and the face of the mountain south of the firing point. Inert 40mm grenades were found during the investigation of the range. Subsequent to the investigation several fires have burned through the area and during and after each event several 40mm grenades have been found and removed. As a result, the Area G Range has been added to the MEC inspection program to allow the removal of the inert practice projectiles that may be exposed after fire. The inspection will include a ½ day meandering instrument aided survey of the AOC. Only the Fixed Target Zone will be included in the inspection program. The steepness of the Upper Range Area makes it dangerous to access. The AOC is presented in Figure 6.

- Area G Streambed - 20mm TP rounds; 20mm TP projectiles, and live primers/igniters were found during the 2005 through 2010 MEC investigation and removals. Although inert 40mm grenades continue to be recovered in the Area G target areas located above the streambed, no MEC or MD have been discovered in the Area G Streambed since the implementation of the MEC inspection program. The target areas will continue to be inspected annually during the annual inspection and maintenance of the MEC warning signs which are placed on the perimeter of the Area G target areas. Based on these findings it is proposed to change the frequency of the Area G Streambed inspections from biennial to every five years.

- Area H Sanitary Landfill - A landfill cap will be installed over the waste cells of the Area H Sanitary Landfill in 2018. As part of the cap system, storm water controls will be included to protect the landfill cap from storm water run-on from upgradient sources and to provide storm water management for precipitation that falls on the landfill. Maintenance of the landfill cap to prevent future erosion will be performed as part of the long term landfill operation and maintenance. Based on these improvements it is

proposed that biennial MEC inspections of the Area H Landfill be eliminated from future MEC inspections.

Additionally, new technologies and inspection procedures will be evaluated to increase the efficiency and effectiveness of the MEC inspections at Site 1.

The inspections prior to the 2017 inspection were performed in the Spring following the rainy season to try and locate MEC that may have been exposed due to erosion as early in the year as possible. Unfortunately, this time frame also coincides with the nesting bird season. As a result, those portions of the site proposed for inspection that had nesting birds were unable to be inspected. The 2017 inspection was performed in August in an attempt to avoid the nesting birds season. Unfortunately, a few active nest were still observed in the upper portion of the Area A streambed so that area was unable to be inspected (Figure 9).

It is recommended that the 2018 inspection be moved to late September in an attempt to avoid nesting birds and to allow the inspection of the entire Area A streambed.

SECTION 4 REFERENCES

1. Lockheed Martin Corporation (LMC), 2006a. *Clarification of Effects on Stephens' Kangaroo Rat from Characterization Activities at Beaumont Site 1 (Potrero Creek) and Site 2 (Laborde Canyon).* August 3, 2006.

2. Lockheed Martin Corporation, 2006b. *Clarification Concerning Treatment of Unexploded Ordinance (UXO) Discovered During Munitions and Explosives of Concern (MEC) Characterization at Beaumont Site 1 (Potrero Creek) and at the Immediately Adjacent Metropolitan Water District (MWD) Parcel, Riverside County, California; and Analysis of Effects of Treatment Activities for the Federally-Endangered Stephens' Kangaroo Rat (SKR).* August 3, 2006.

3. Lockheed Martin Corporation, 2006c. *Clarification of Mapping Activities Proposed under the Low-Effect Habitat Conservation Plan for the Federally-Endangered Stephens' Kangaroo Rat at Beaumont Site 1 (Potrero Creek) and Site 2 (Laborde Canyon) Riverside County, California* (mapping methodology included). December 8, 2006.

4. Tetra Tech, 2011. *Munitions and Explosives of Concern (MEC) Awareness Training Plan, Former Beaumont Site 1, Beaumont, California*, March

5. Tetra Tech, 2016. *Post Removal Action Residual Munitions and Explosives of Concern Work Plan Potrero Canyon (Lockheed Martin Beaumont Site 1), Beaumont, California*, May 2016

6. Tetra Tech, 2016. *2016 Munitions and Explosives of Concern Inspection Report Potrero Canyon (Lockheed Martin Beaumont Site 1), Beaumont, California,* August 2016

7. United States Fish and Wildlife Service (USFWS), 2005. *Endangered Species Act Incidental Take Permit for Potrero Creek and Laborde Canyon Properties Habitat Conservation Plan*. October 14, 2005.

TABLES

Table 1
Munitions and Explosives of Concern Inspection Schedule

Operational Area	Inspection Area	Inspection Schedule	Inspection Rationale
A	Streambed and Secondary Erosion Features	Annual instrument (all metals) aided surface inspections. Subsurface investigation of up to 20 of metallic anomalies detected during the inspection.	Because unexploded ordnance was found in this Operational Area during the munitions and explosives of concern investigation and removal phases, inspections should continue more frequently.
B	Phalanx Target Berm	Biennial instrument (all metals) aided surface inspections.	Investigations support that only inert projectiles were fired at this area of concern. Inert projectiles are still present but exposure by natural causes appears to be limited.
D	Berm at the Base of the Terraced Projectile Landing Zone	Biennial instrument (all metals) aided surface inspections.	No munitions-related items have been recovered from this berm and erosion of the berm appears to be limited.
D	Streambed and Secondary Erosion Features	Annual instrument (all metals) aided surface inspections. Subsurface investigation of up to 20 of metallic anomalies detected during the inspection.	Because material potentially presenting an explosive hazard was found in this Operational Area during the munitions and explosives of concern investigation and removal phases, the munitions and explosives of concern inspections should continue more frequently.
G	Streambed and Secondary Erosion Features	Biennial instrument (all metals) aided surface inspections.	Investigations support that only inert projectiles were fired at this area of concern. Inert projectiles are still present but exposure by natural causes appears to be limited.
H	Landfill	Continue routine inspections to ensure the landfill cap is not being compromised and waste is not being exposed. Biennial instrument (all metals) aided surface inspections.	Small arms munitions are reported to have been buried in the landfill but no munitions-related items have been recovered from the landfill and erosion of the interim cap appears to be limited.

Note: Up to 20 anomalies from the annual inspection areas of concern in Operational Areas A and D will be excavated during subsurface investigations.

Table 2
Summary of Historical Use and Munitions and Explosives of Concern Evaluation by Area of Concern

Operational Area	Inspection Area	Documented Historical Use	MEC Related Finds During the Investigations or Removals (2005 through 2010)	Potential Residual MEC/MD	Inspection Results					
					2011	2012	2013	2014	2015	2016
A	Streambed and Secondary Erosion Features	None known (the streambed is immediately adjacent to the Target Impact Area and erosion has advanced into the Target Impact Area)	None (726 targets dug)	30mm high explosive projectiles and MD from adjacent range/target area	MD - none MEC - none	MD - none MEC - none	MD - none MEC - none	MD - one 30mm projectile base MEC - none	MD - none MEC - none	MD - none MEC - none
B	Phalanx Target Berm	Impact area for Phalanx gun tests	Inert 20mm & 30mm TP projectiles; mechanical frag	Inert 20mm & 30mm projectiles and fragments	MD - none MEC - none	MD - none MEC - none	MD - none MEC - none	Not Inspected	MD - none MEC - none	Not Inspected
D	Berm at the Base of the TPLZ	TPLZ impact area (gun range)	None found	20mm, 37mm, 40mm, 155mm, and 5 inch TP projectiles and MD	MD - none MEC - none	MD - none MEC - none	MD - none MEC - none	Not Inspected	MD - none MEC - none	Not Inspected
D	Streambed and Secondary Erosion Features	None known (potential disposal)	20mm TP rounds; 20mm TP projectiles, & live Primers/Igniters	20mm TP rounds, 20mm TP projectiles, & live Primers/Igniters	MD - none MEC - none	MD - none MEC - none	MD - One inert 20mm cartridge MEC - none	MD - one 30mm projectile base and one unknown munition item MEC - One 20 mm cartridge and two 20mm linked cartridges	MD - one 20mm cartridge base MEC - one 20 mm cartridge	MD - one 20mm TP projectile MEC - one complete unfired 20mm TP cartridge
G	Streambed and Secondary Erosion Features	40mm grenades, 30mm cannon projectiles, and 7.62mm machine gun bullets platform mounted guns test fired into stream bank	30mm & 40mm TP projectiles	30mm & 40mm TP projectiles	MD - none MEC - none	MD - none MEC - none	MD - none MEC - none	Not Inspected	MD - none MEC - none	Not Inspected
H	Landfill	Sanitary landfill; anecdotal info that small arms rounds were buried here	None found	7.62mm belted ammunition	MD - none MEC - none	MD - none MEC - none	MD - none MEC - none	Not Inspected	MD - none MEC - none	Not Inspected

Notes:

MEC - Munitions and explosives of concern
MD - Munitions debris
TLPZ - Terraced Projectile Landing Zone
TP - Target practice round

Table 3
Summary of Anomalies Discovered During the 2017 Routine MEC Inspection

Operational Area	Number of Surface Anomalies Recovered	Number of Subsurface Anomalies Recovered	Types of Items Recovered
Area A - Eastern Aerojet Range	2	4	Scrap metal Two locations (surface) Four locations (subsurface)
Area B - Phalanx Target Berm	6	0	MD Six 20mm TP projectile (surface)
Area D - LPC Ballistics Test Range – Berm at the Base of the Terraced Projectile Landing Zone	2	0	Scrap metal Two locations (surface)
Area D - LPC Ballistics Test Range – Steam Bed	3	1	Scrap metal Two locations (surface) MD One ammo belt link (surface) MEC one complete unfired 20mm TP cartridge (subsurface)

Notes:

LPC - Lockheed Propulsion Company
MEC - Munitions and explosives of concern
MD - Munitions debris
TP - Target practice round

Table 4
Nesting Bird Survey Summary

Nest ID	Species	Status/Observation
1	Barn Owl	One juvenile observed
2	Barn Owl	One juvenile observed
3	Mourning Dove	Unknown status, adult sitting on nest
4	Barn Owl	One juvenile observed
5	Barn Owl	One juvenile observed

Table 5
Observed Bird Species

Species	Count
California Quail (Callipepla californica)	25
Cooper's Hawk (Accipiter cooperii)	1
Red-tailed Hawk (Buteo jamaicensis)	4
Mourning Dove (Zenaida macroura)	25
Greater Roadrunner (Geococcyx californianus)	1
Barn Owl (Tyto alba)	7
Great Horned Owl (Bubo virginianus)	1
White-throated Swift (Aeronautes saxatalis)	2
Anna's Hummingbird (Calypte anna)	10
Nuttall's Woodpecker (Picoides nuttallii)	2
Downy Woodpecker (Picoides pubescens)	1
American Kestrel (Falco sparverius)	4
Say's Phoebe (Sayornis saya)	1
Western Kingbird (Tyrannus verticalis)	2
Loggerhead Shrike (Lanius ludovicianus)	1
American Crow (Corvus brachyrhynchos)	1
Common Raven (Corvus corax)	20
Bushtit (Psaltriparus minimus)	15
Rock Wren (Salpinctes obsoletus)	2
House Wren (Troglodytes aedon)	2
Bewick's Wren (Thryomanes bewickii)	5
Northern Mockingbird (Mimus polyglottos)	1
Lark Sparrow (Chondestes grammacus)	1
California Towhee (Melozone crissalis)	20
Rufous-crowned Sparrow (Aimophila ruficeps)	1
House Finch (Haemorhous mexicanus)	15
Lesser Goldfinch (Spinus psaltria)	4

Table 6
Summary of Historical Use and Anomalies Discovered with Proposed Changes

Operational Area	Inspection Area	Documented Historical Use	MEC Related Finds During the Investigations or Removals (2005 through 2010)	Inspection Results 2011 - 2017	Current Inspection Schedule (2017)	Proposed Inspection Schedule (2018 and beyond)	Comments
A	Streambed and Secondary Erosion Features	**Area A Target Impact Area** - R & D experimentation with long-range 30mm weapons system. A 27.5mm Bushmaster was also test fired. **Area A Streambed** - None known (the streambed is immediately adjacent to the Target Impact Area and erosion has advanced into the Target Impact Area)	**Area A Target Area** - inert 27.5mm and 30mm projectiles, inert 16mm tungsten penetrators and an inert 76mm rocket. Fragments from high explosive 30mm projectiles and several unexploded high explosive 30mm projectiles **Area A Streambed** - None (726 targets dug)	MD - one 30mm projectile base MEC - none	Annual instrument (all metals) aided surface inspections. Subsurface investigation of up to 20% of metallic anomalies detected during the inspection.	No Change	No changes recommended at this time
B	Phalanx Target Berm	Impact area for Phalanx gun tests	Inert 20mm & 30mm TP projectiles; mechanical frag	MD - none MEC - Six 20mm TP projectile	Biennial instrument (all metals) aided surface inspections.	No Change	No changes recommended at this time
D	Berm at the Base of the TPLZ	TPLZ impact area (gun range)	None found	MD - none MEC - none	Biennial instrument (all metals) aided surface inspections.	Every five years or more frequently if there is significant erosion	No munitions related items have been recovered from the Area D Berm and erosion of the berm has been limited therefore it is proposed to change the frequency of the Area D Berm inspections from biennial to every five years If bilogical concerns allow, flattening and completing the inspection of the berm should be considered. This would eliminate the need for ongoing inspections of the berm.
D	Streambed and Secondary Erosion Features	**Area D Ballistics Test Range** - Ballistics testing with Navy 5"/38 and Army 37mm, 40mm and 155mm guns. One incendiary bomb and several tests involving landmines. Three magazines in this area were used for the storage of class 1.1 explosives. **Area D Streambed** - None known (potential disposal)	**Area D Ballistics Test Range** - 20mm TP rounds, frag and copious metal debris; consistent with bomb test and potential mine tests, parts of a Light Anti-Tank Weapon rocket launcher **Area D Streambed** - 20mm TP rounds; 20mm TP projectiles, & live Primers/Igniters	MD - One 20mm TP projectile, one 20mm cartridge base, one inert 20mm cartridge, one 30mm projectile base, one ammo belt link, and one unknown munition item MEC - Two 20 mm cartridge, two 20mm linked cartridges, two complete unfired 20mm TP cartridge	Annual instrument (all metals) aided surface inspections. Subsurface investigation of up to 20% of metallic anomalies detected during the inspection.	No Change	No changes recommended at this time
G	Streambed and Secondary Erosion Features	40mm grenades, 30mm cannon projectiles, and 7.62mm machine gun bullets platform mounted guns test fired into stream bank	30mm & 40mm TP projectiles	MD - none MEC - none	Biennial instrument (all metals) aided surface inspections.	Every five years or more frequently if there is significant streambed erosion	No MEC or MD have been discovered in the Area G Streambed since the implementation of the MEC inspection program therefore it is proposed to change the frequency of the Area G Streambed inspections from biennial to every five years.
G	Target Area	Stationary and helicopter mockup mounted guns were used to fire 7.62 NATO rounds into the hillside opposite the firing point and at targets suspended between two towers across the creek. Additional testing on the propellant portion of 30mm shaped charges and inert 40mm grenade	Inert 40mm grenades	None, the Area G Target Area is not included in the annual MEC inspection. Inert 40mm grenades are periodically located after heavy storms or fires.	Incidental to other site activities.	If wild fire occurs on the former range, the area will be inspected utilizing a instrument aided meadering survey.	Inert 40mm grenades continue to be found in the Area G target areas located above the streambed. These areas will continue to be checked during the annual inspection and maintenance of the munitions and explosives of concern warning signs which are placed on the perimeter of the Area G target areas. Further, the area will be included in the routine inspection program if wild fire occurs on the range. During a year when a fire occurs on the range the area will be inspected.
H	Landfill	Sanitary landfill; anecdotal info that small arms rounds were buried here	None found	MD - none MEC - none	Continue routine inspections to ensure the landfill cover is not being compromised and waste is not being exposed. Biennial instrument (all metals) aided surface inspections.	Discontinue future MEC inspections (2017 was the last inspection)	A landfill cap will be installed over the waste cells of the Area H Sanitary Landfill in 2018. As part of the cap system, storm water controls will be included to protect the landfill cap from storm water run-on from upgradient sources and to provide storm water management for precipitation that falls on the landfill. Maintenance of the landfill cap to prevent future erosion will be performed as part of the long term landfill operation and maintenance therefore it is proposed that biennial MEC inspections of the Area H Landfill be eliminated from future MEC inspections.

Notes:

MEC - Munitions and explosives of concern
MD - Munitions debris
TLPZ - Terraced Projectile Landing Zone
TP - Target practice round

FIGURES

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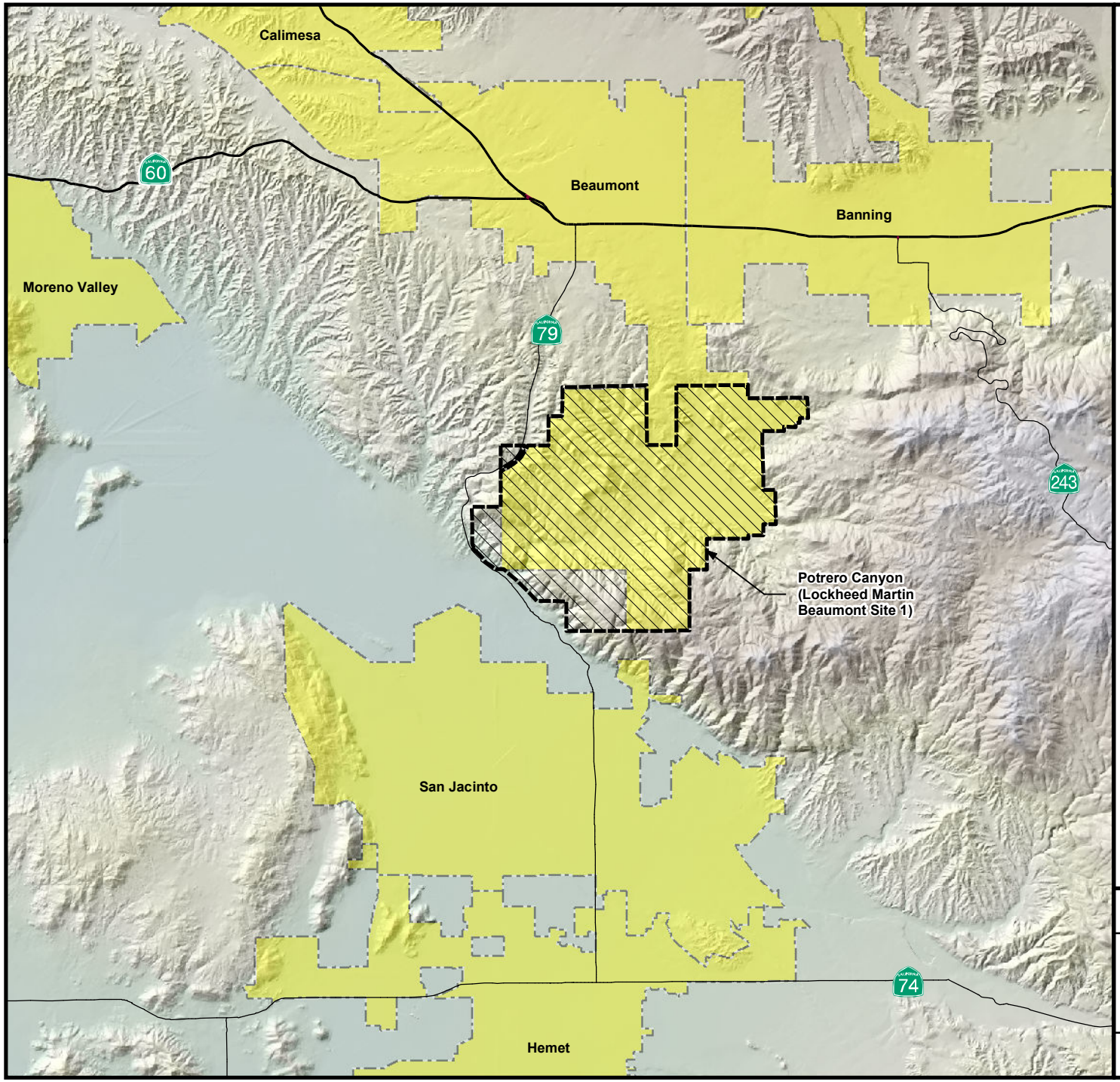

N

0 2 Miles

Adapted from:

U.S. Census Bureau TIGER line data, 2000.

LEGEND

- Interstate/Freeway
- State Highway
- County Boundary
- Potrero Canyon Property Boundary (Lockheed Martin Beaumont Site 1)
- City/Municipality

Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 1
Regional Location of
Potrero Canyon
(Beaumont Site 1)

TETRA TECH

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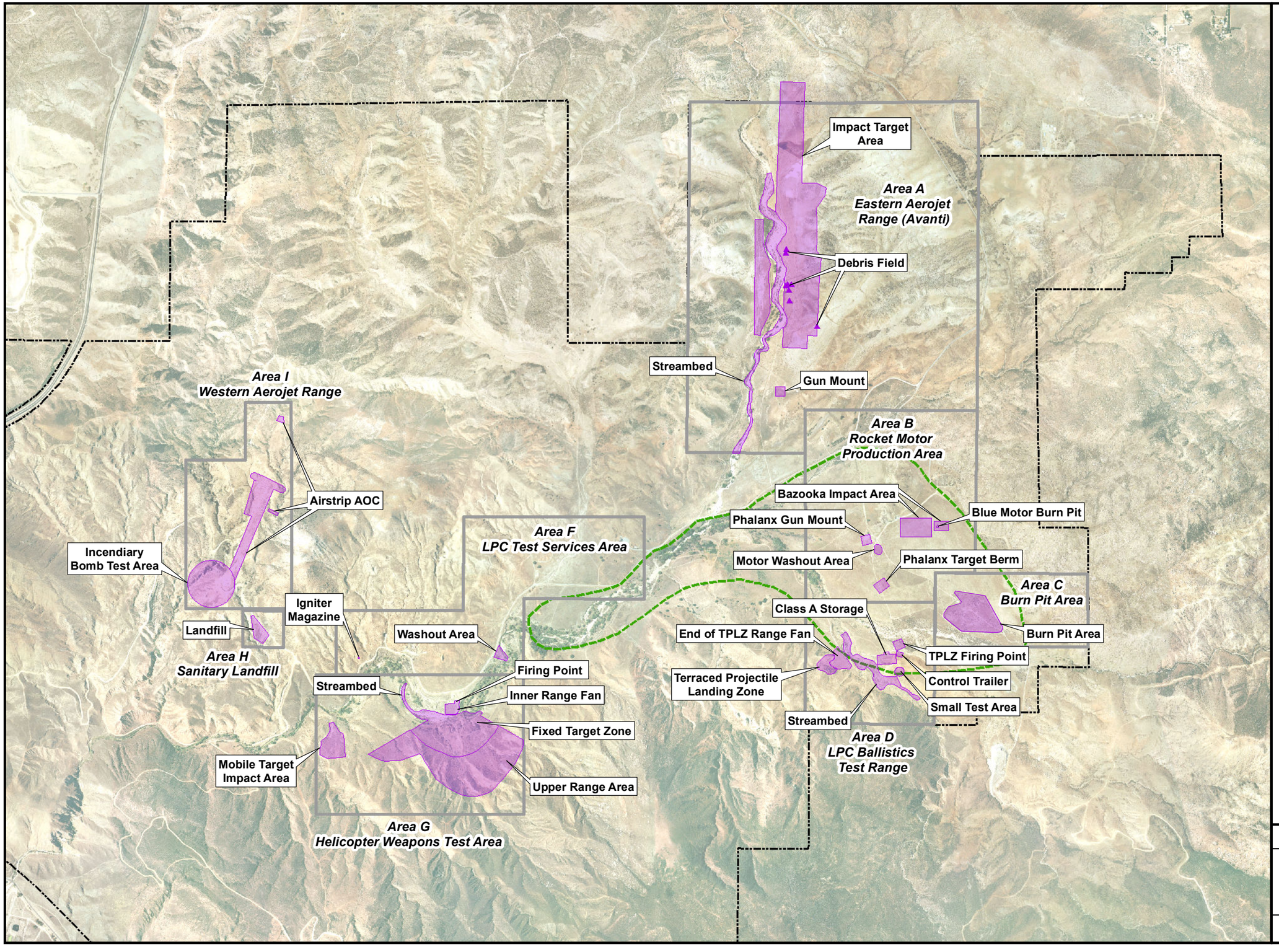

0 1,000 2,000 Feet

Adapted from:

April 2007 aerial photograph.

LEGEND

- Munition and Explosives of Concern Areas of Concern
- Historical Operational Area Boundary
- Potrero Canyon Property Boundary (Lockheed Martin Beaumont Site 1)
- Conservation Easement Boundary

Note: AOC - Area of Concern

Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 2

Historical Operational Areas Munition and Explosives of Concern Areas of Concern

TETRA TECH

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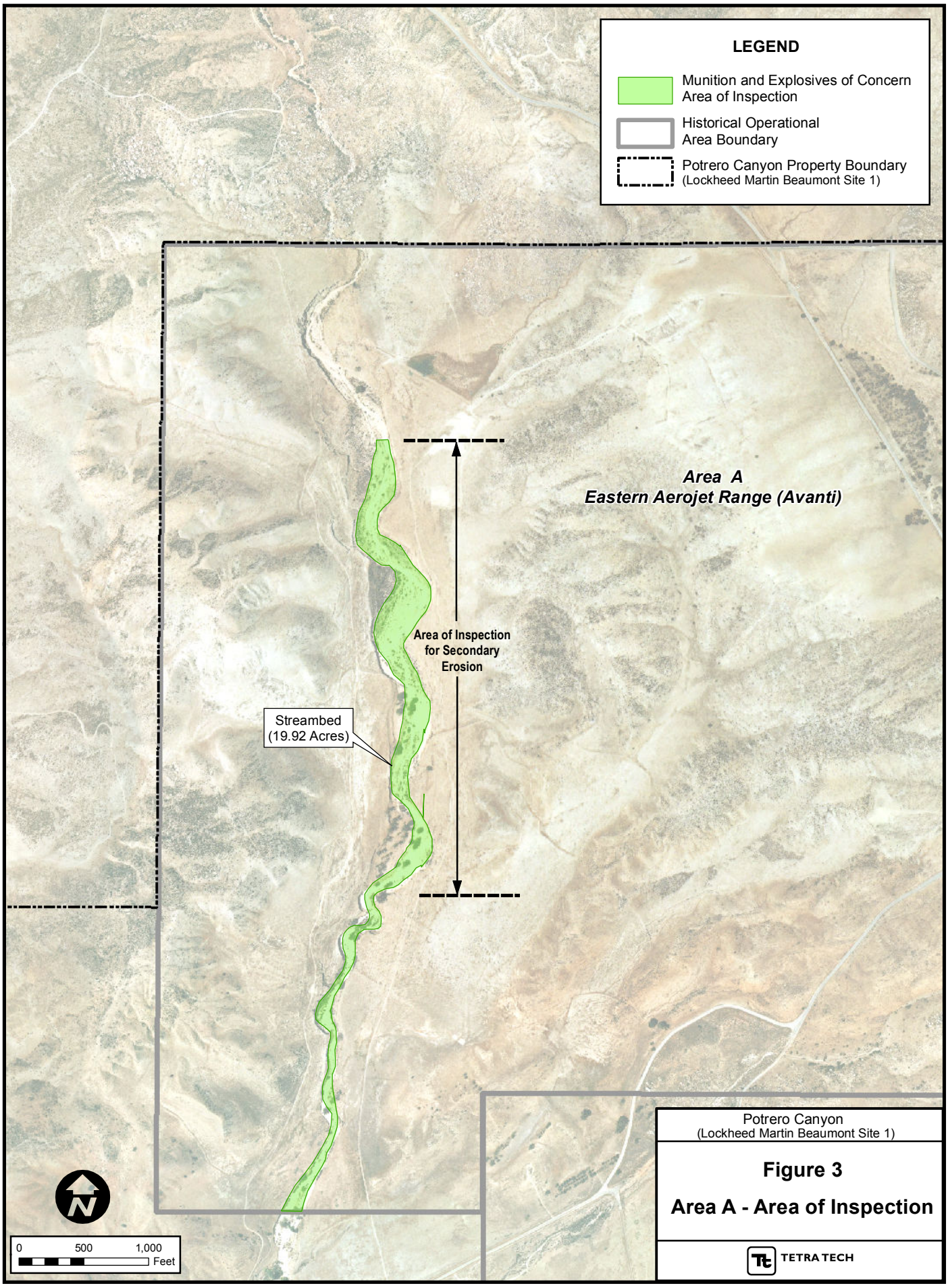

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Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 4

Area B - Area of Inspection

TETRA TECH

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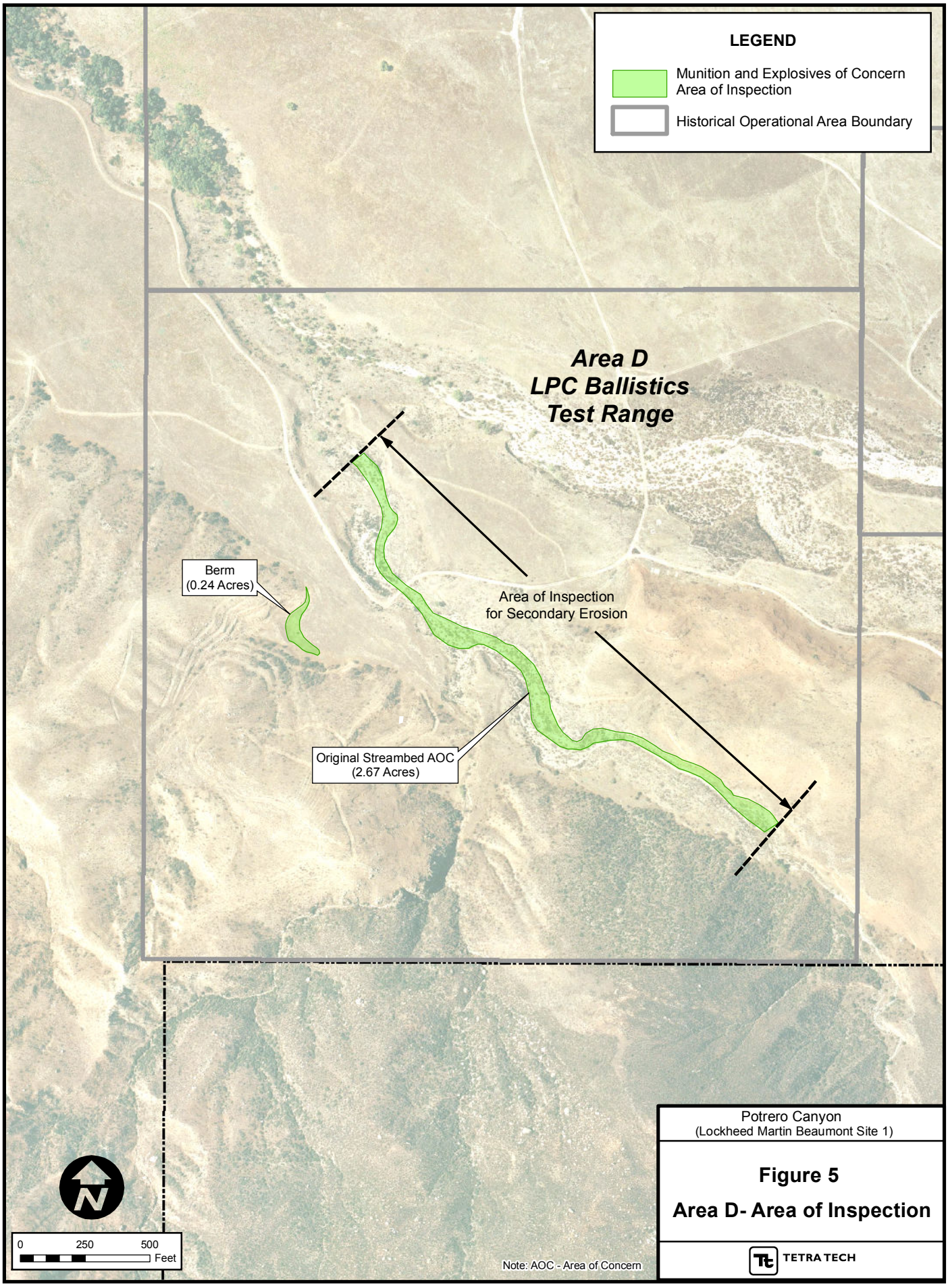

Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 5

Area D- Area of Inspection

TETRA TECH

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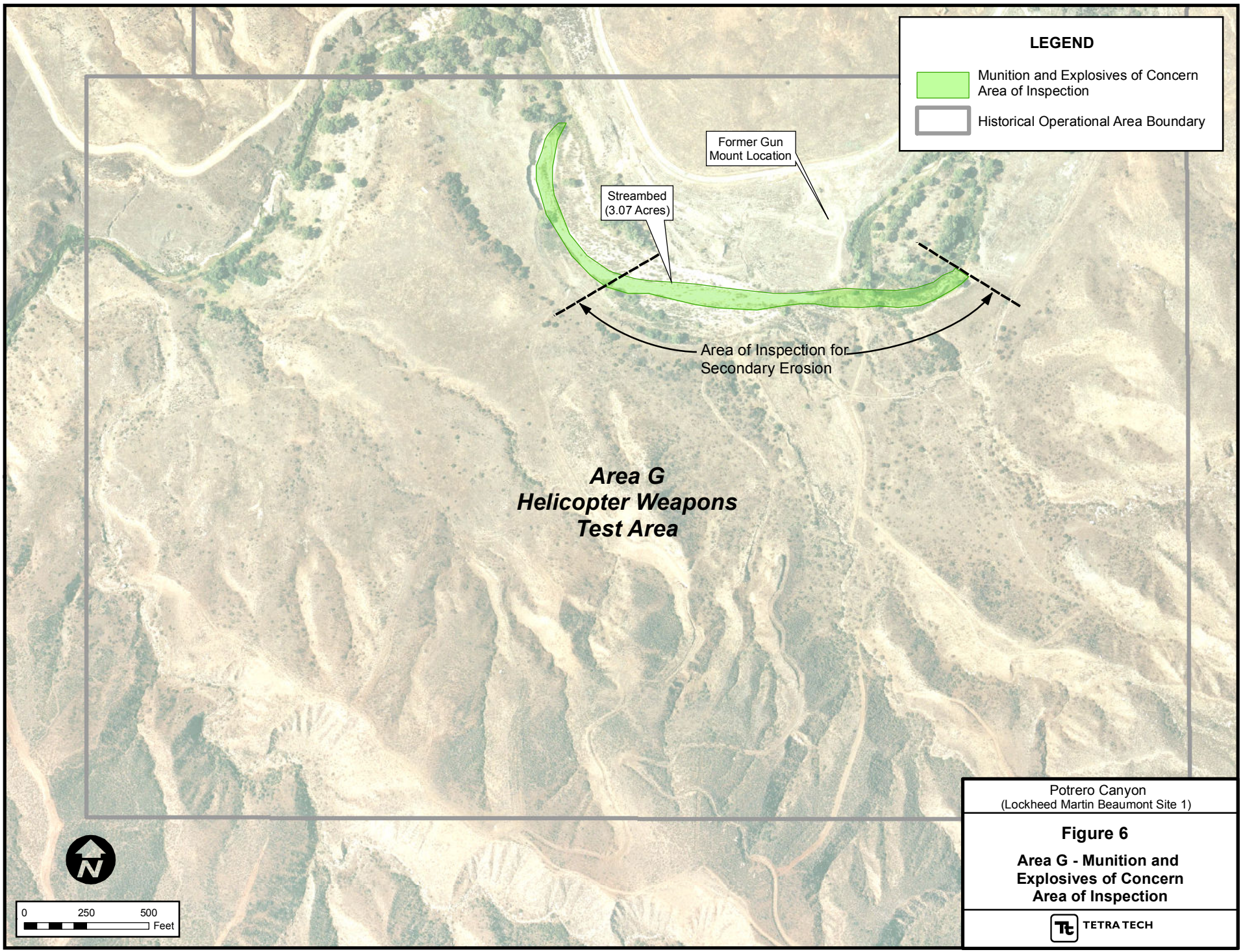

Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 6

Area G - Munition and Explosives of Concern Area of Inspection

TETRA TECH

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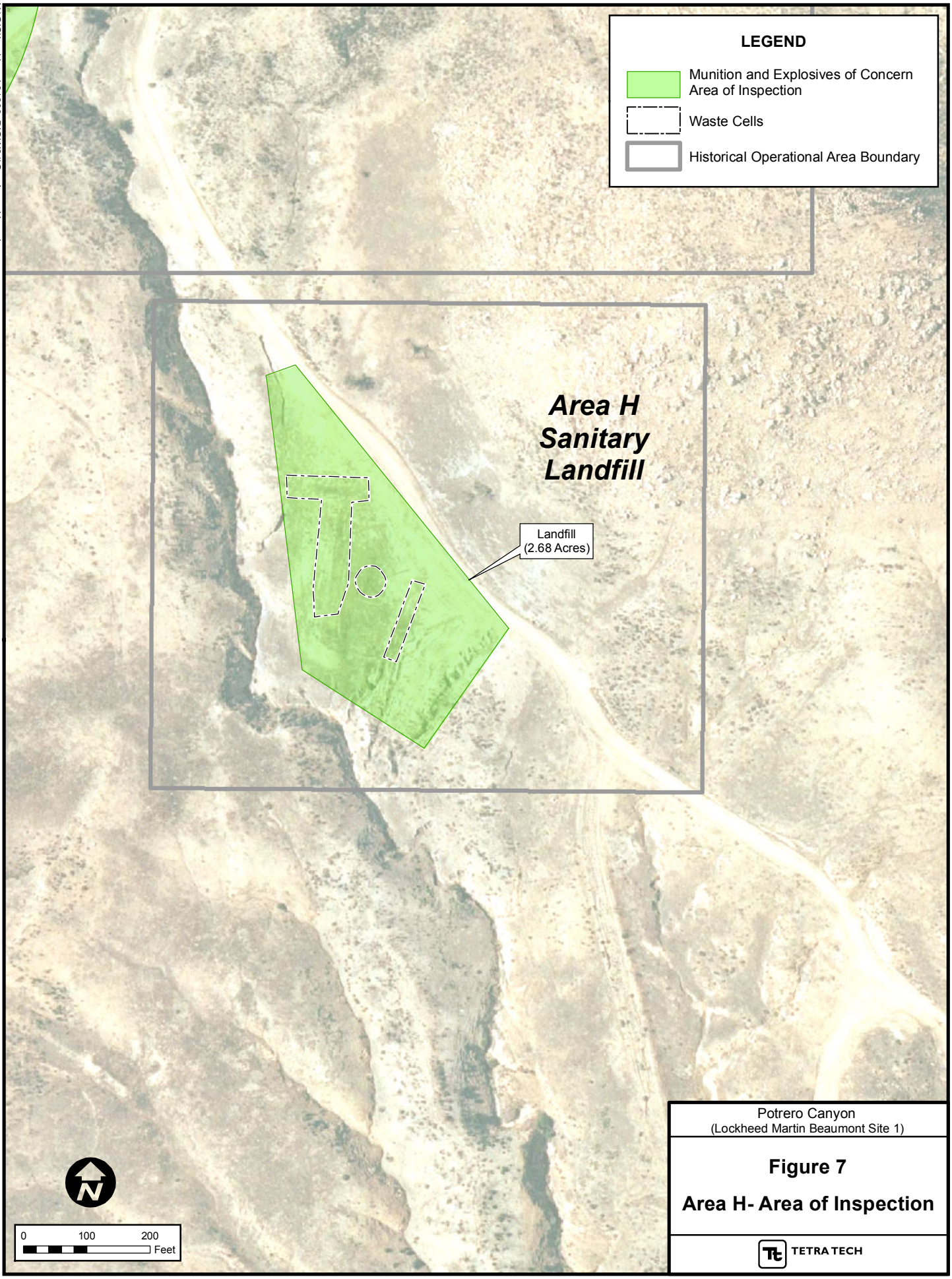

Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 7

Area H- Area of Inspection

TETRA TECH

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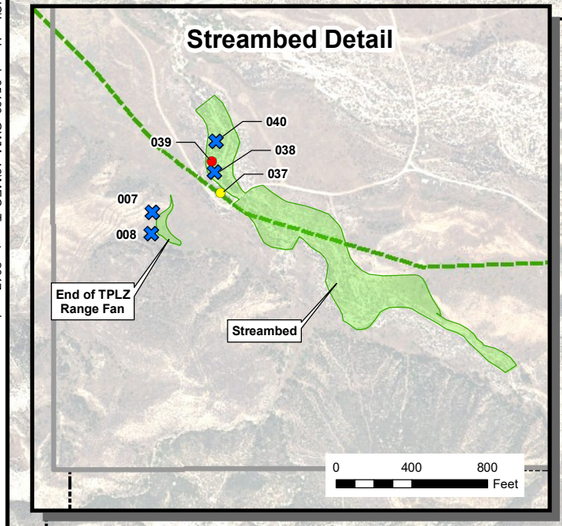

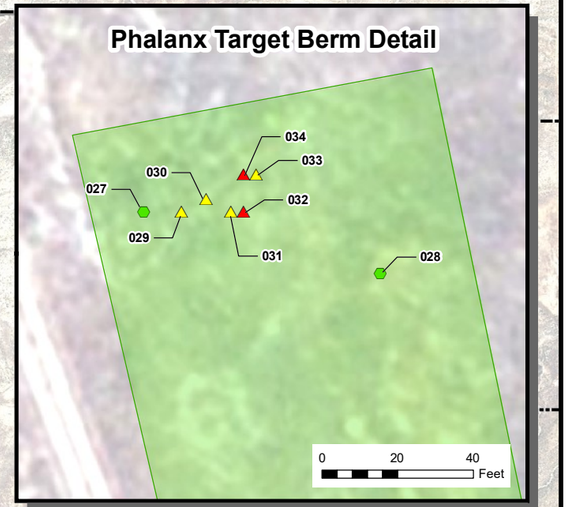

Area A
Eastern Aerojet
Range (Avanti)

Streambed

025

026

021

024

022

023

Area B
Rocket Motor Production Area

Area Retained by Lockheed for Remediation

033
034
027
029
030
031
032
028

See Phalanx Target Berm Detail Inset

Phalanx Target Berm

Area I
Western Aerojet
Range

Area F
LPC Test Services Area

Area C Burn Pit Area

Landfill

Area H
Sanitary
Landfill

040
039
038
037
007
008
Streambed

See Streambed Detail Inset

End of TPLZ Range Fan

Area D
LPC Ballistics
Test Range

Streambed

Dummy Grenade

Area G
Helicopter Weapons Test Area

N

0 1,500 Feet

- Surface MEC
- Surface MD
- Surface Scrap
- Subsurface MEC
- Subsurface MD
- Subsurface Scrap
- Subsurface Unknown
- Dummy Grenade Located by Cal Fire During Manzanita Fire
- Nesting Bird Exclusion Area
- Munition and Explosives of Concern Area of Inspection
- Historical Operational Area Boundary
- Conservation Easement Boundary (LMC Property Retained for Remediation - Not Open to the Public)
- Potrero Canyon Site Boundary (Lockheed Martin Beaumont Site 1)

Notes:
MEC - Munition and Explosives of Concern

MD - Munition Debris

AOC - Area of Concern

Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 8

Surface and Subsurface Anomaly Locations

TETRA TECH

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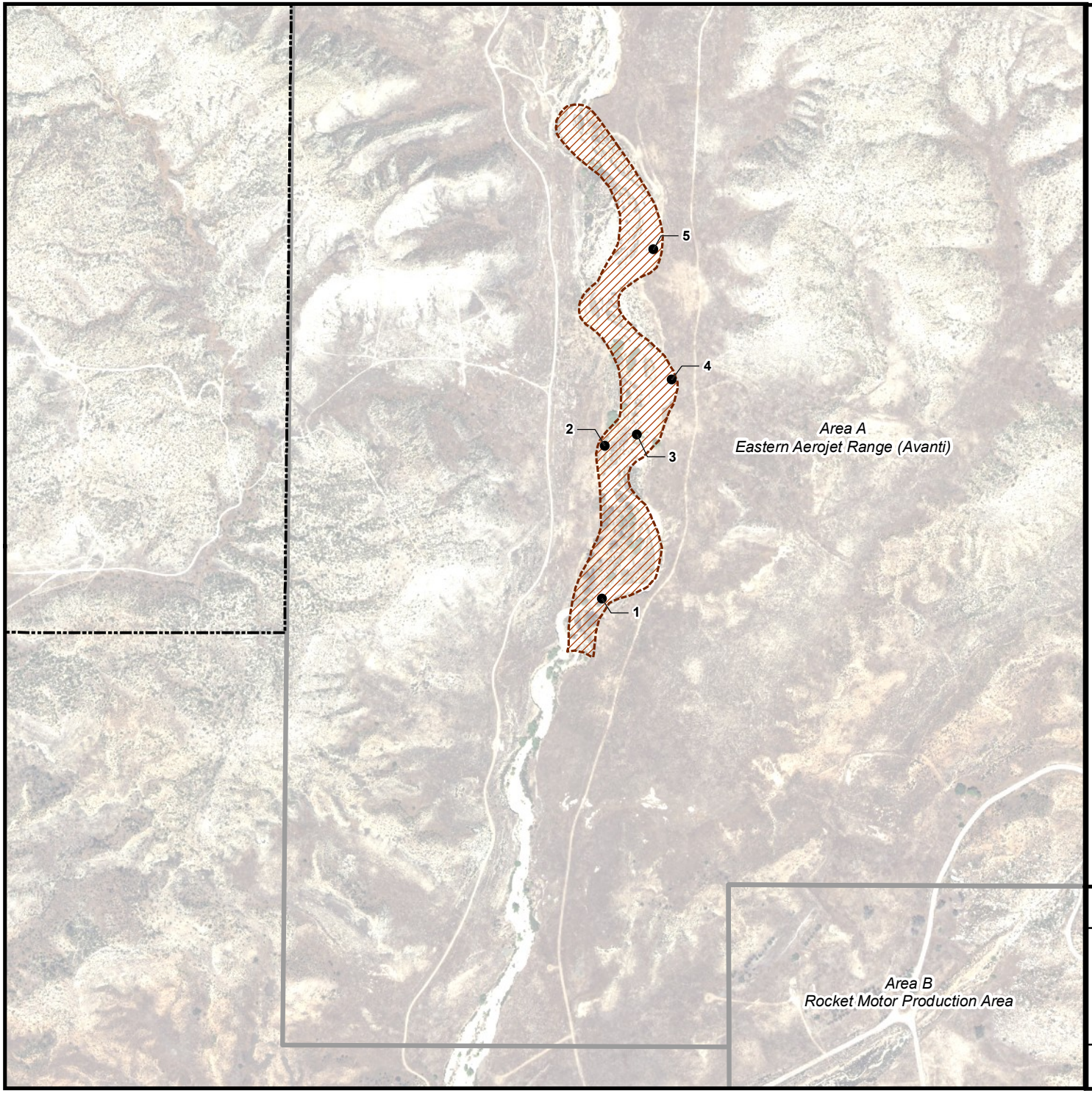
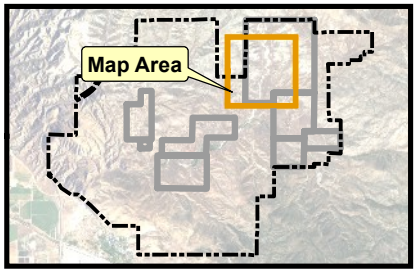


N

0 400 800
Feet

- Bird Nest Locations
- Nesting Bird Exclusion Area
- Historical Operational Area Boundary
- Potrero Canyon Site Boundary (Lockheed Martin Beaumont Site 1)

Nest ID	Species
1	Barn Owl
2	Barn Owl
3	Mourning Dove
4	Barn Owl
5	Barn Owl



Potrero Canyon
(Lockheed Martin Beaumont Site 1)

Figure 9

Bird Nest Locations
August 2017

TETRA TECH

Appendix A – Daily Reports

HEALTH AND SAFETY LOGS

TETRA TECH
MRP FF.21
DAILY SAFETY LOG

Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

FIELD ACTIVITY SUBJECT: UXO Investigation	**Date**	08/17/2017
PROJECT NO.: 112IC08358	**TASK CODES**: B1GWOM.36	
SUMMARY OF DAILY ACTIVITIES AND EVENTS: Safety brief which included Fire Safety and equipment, Slips, trips, and Falls, Falling objects, Smoking policy, Heat Stress and heat stroke warning signs including steps to cool the body, drink plenty of water and take needed breaks. Reviewed potential ordnance and associated hazards. No deficiencies noted.		
VISITORS ON SITE (indicate if received Site-Specific Training)**:** N/A		
CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: None		
WEATHER CONDITIONS: (temp, wind, humidity, precipitation) Mostly sunny, high 87-92, Low 65, light winds increasing in the afternoon 15 mph.	**IMPORTANT TELEPHONE CALLS**: N/A	
PERSONNEL ON SITE: See Tailgate Safety Brief		
SIGNATURE:	**DATE**: 08/17/2017	

TETRA TECH

MRP FF.22

DAILY TAILGATE SAFETY BRIEFING/TRAINING RECORD

Facility/Location: Beaumont, CA/Lockheed Site

	Name	Signature	Position
1. Briefing(s) Given By:	Ronald L. Stum Jr.		SAFETY/QC
Date: 08/17/2017	Time: 0700	Team #: N/A	

2. Reason for Briefing:

___ Initial Safety Briefing	___ New Site Procedure:_____
_X_ Daily Safety Briefing	___ New Site Information:_____
___ New Task Briefing:_____	___ Review of Site Information
___ Periodic Safety Meeting	___ Other: (Specify)_____

3. List Today's Project Tasks (reference definable features of work – See Worksheet 12.): Area A streambed and Area B Phalanx target berm, 3 D-Stream Bed

4. Safety Topics: (Check All That Apply – per AHA or Work Permit)

__ Site Safety Personnel	___ Decontamination Procedures
__ Site/Work Area Description	__X Emergency Response/Equipment
__X Physical Hazards	___ On-Site Injuries/Illness
___ Chemical/Biological Hazards	___ Reporting Procedures
__X Heat/Cold Stress	___ Directions to Medical Facility
___ Work/Support Zones	___ Drug and Alcohol Policies
__X PPE	___ Medical Monitoring
__X Safe Work Practices	__X Evacuation/Egress Procedures
___ Air Monitoring	__X Communications
___ Task Training	___ Confined Spaces
___ OE Precautions	__X Other: Environmental Hazards and Safety

5. Remarks: None

6. Personnel Attending

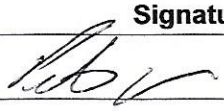
Name	Signature	Position
Syd Rodgers		SUXOS
Tye Turner		UXO Tech
Shaun Woods		UXO Tech

TETRA TECH

MRP FF.22

DAILY TAILGATE SAFETY BRIEFING/TRAINING RECORD

Facility/Location: Beaumont, CA/Lockheed Site

Name	Signature	Position
Peter Jimenez		Biologist

TETRA TECH
MRP FF.21
DAILY SAFETY LOG

Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

FIELD ACTIVITY SUBJECT: UXO Investigation	**Date**	08/18/2017
PROJECT NO.: 112IC08358	**TASK CODES**: B1GWOM.36	

SUMMARY OF DAILY ACTIVITIES AND EVENTS: Safety brief which included general safety precautions (slip, trips, and falls, PPE, etc.), Sun (ultraviolet rays), dangers of plants and wildlife, snakes, chemicals of potential concern (COPC) and site conduct. Reminded team to hydrate as necessary. Observed technician with safety glasses on head in morning. Provided clear safety glasses to technician to wear switch when dark safety glasses inhibited vision.

VISITORS ON SITE (indicate if received Site-Specific Training)**:** Sheriff Hazardous Device Team was given a site safety briefing.

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: None

WEATHER CONDITIONS: (temp, wind, humidity, precipitation) Mostly sunny, high 89-94, Low 59-64, light winds increasing in the afternoon W15 mph. 0 Precip,	**IMPORTANT TELEPHONE CALLS**: Beaumont Police Dept.

PERSONNEL ON SITE: See Tailgate Safety Brief

SIGNATURE: **DATE**: 08/18/2017

TETRA TECH

MRP FF.22
DAILY TAILGATE SAFETY BRIEFING/TRAINING RECORD

Facility/Location: Beaumont, CA/Lockheed Site

1. Briefing(s) Given By:	Name	Signature	Position
	Ronald L. Stum Jr.		Safety/QC
Date: 08/18/2017	Time: 0700	Team #: N/A	

2. Reason for Briefing:

___ Initial Safety Briefing	___ New Site Procedure:_____
_X_ Daily Safety Briefing	___ New Site Information:_____
___ New Task Briefing:_____	___ Review of Site Information
___ Periodic Safety Meeting	___ Other: (Specify)_____

3. List Today's Project Tasks (reference definable features of work – See Worksheet 12.): Area D-Berm and G-Streambed, Area A, & B

4. Safety Topics: (Check All That Apply – per AHA or Work Permit)

__ Site Safety Personnel	___ Decontamination Procedures
__ Site/Work Area Description	__X Emergency Response/Equipment
__X Physical Hazards	___ On-Site Injuries/Illness
___ Chemical/Biological Hazards	___ Reporting Procedures
__X Heat/Cold Stress	___ Directions to Medical Facility
___ Work/Support Zones	___ Drug and Alcohol Policies
__X PPE	___ Medical Monitoring
__X Safe Work Practices	__X Evacuation/Egress Procedures
___ Air Monitoring	__X Communications
___ Task Training	___ Confined Spaces
___ OE Precautions	__X Other: Chemicals of Potential Concern (COPC)

5. Remarks: None

6. Personnel Attending

Name	Signature	Position
Syd Rodgers		SUXOS
Tye Turner		UXO Tech
Shaun Woods		UXO Tech

TETRA TECH
MRP FF.21
DAILY SAFETY LOG

Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

FIELD ACTIVITY SUBJECT: UXO Investigation	**Date**	08/19/2017
PROJECT NO.: 112IC08358	**TASK CODES**: B1GWOM.36	
SUMMARY OF DAILY ACTIVITIES AND EVENTS: Safety brief which included general safety precautions (slip, trips, and falls, PPE, etc.), Sun (ultraviolet rays), emergency response and first aid. Riverside County Sheriffs HDT arrived and a safety briefing was conducted prior to the team proceeding with the demolition operation. No deficiencies noted.		
VISITORS ON SITE (indicate if received Site-Specific Training)**:** N/A		
CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: None		
WEATHER CONDITIONS: (temp, wind, humidity, precipitation) Mostly sunny, high 87-92, Low 65, light winds increasing in the afternoon 15 mph.	**IMPORTANT TELEPHONE CALLS**: N/A	
PERSONNEL ON SITE: See Tailgate Safety Brief		
SIGNATURE:	**DATE**: 08/19/2017	

TETRA TECH

MRP FF.22
DAILY TAILGATE SAFETY BRIEFING/TRAINING RECORD

Facility/Location: Beaumont, CA/Lockheed Site

1. Briefing(s) Given By:	Name	Signature	Position
	Ronald L. Stum Jr.		Safety/QC
Date: 08/19/2017	Time: 0700	Team #: N/A	

2. Reason for Briefing:

___ Initial Safety Briefing	___ New Site Procedure:_____
_X_ Daily Safety Briefing	___ New Site Information:_____
___ New Task Briefing:_____	___ Review of Site Information
___ Periodic Safety Meeting	___ Other: (Specify)_____

3. List Today's Project Tasks (reference definable features of work – See Worksheet 12.): Area D-Berm and Streambed

4. Safety Topics: (Check All That Apply – per AHA or Work Permit)

__ Site Safety Personnel	___ Decontamination Procedures
__ Site/Work Area Description	___ Emergency Response/Equipment
__X Physical Hazards	___ On-Site Injuries/Illness
___ Chemical/Biological Hazards	___ Reporting Procedures
__X Heat/Cold Stress	___ Directions to Medical Facility
___ Work/Support Zones	___ Drug and Alcohol Policies
__X PPE	___ Medical Monitoring
__X Safe Work Practices	___ Evacuation/Egress Procedures
___ Air Monitoring	___ Communications
___ Task Training	___ Confined Spaces
___ OE Precautions	___ Other:

5. Remarks: None

6. Personnel Attending

Name	Signature	Position
Syd Rodgers		SUXOS
Tye Turner		UXO Tech
Shaun Woods		UXO Tech

TETRA TECH

MRP FF.4
VISITOR'S LOG

Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H

DATE	Time		PRINT NAME	SIGNATURE	ORGANIZATION	PHONE #	RAC
	In	Out					
8/18/17	1600	16:50	RAFAEL LOZANO		RSO HDT	955 6628	
8/18/17	1600	16:50	ROB ANDERSEN		RSO HDT	712 3562	
8/18/17	1600	16:50	CURT BRIGHT		RSO AVIATION	909 3745	
8/19/17	1415	16:00	CUEVAS RAFAEL		RSO HDT	955 6628	
8/19/17	1415	16:00	CURT BRIGHT		RSO AVIATION	909 3745	
8/19/17	1415	16:00	TAVARES, Robert		RSO HDT	909-434-5034	
8/19/17	1415	16:00	LARSEN, SCOTT		RSO HDT	951-445-7712	

TETRA TECH
MRP FF.21
DAILY SAFETY LOG

Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

FIELD ACTIVITY SUBJECT: UXO Investigation	**Date**	08/20/2017
PROJECT NO.: 112IC08358	**TASK CODES**: B1GWOM.36	
SUMMARY OF DAILY ACTIVITIES AND EVENTS: Safety brief which included general safety precautions (slip, trips, and falls, PPE, etc.), Sun (ultraviolet rays). Observed the field team performing detector aided surveys in a safe manner. Observed team wearing proper PPE and hydrating as necessary. No deficiencies noted.		
VISITORS ON SITE (indicate if received Site-Specific Training)**:** N/A		
CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: None		
WEATHER CONDITIONS: (temp, wind, humidity, precipitation) Mostly sunny, high 89, Low 65, light winds W 15 mph, partly cloudy, patchy fog, 0 Precip,	**IMPORTANT TELEPHONE CALLS**: N/A	
PERSONNEL ON SITE: See Tailgate Safety Brief		
SIGNATURE:	**DATE**: 08/20/2017	

TETRA TECH

MRP FF.22
DAILY TAILGATE SAFETY BRIEFING/TRAINING RECORD

Facility/Location: Beaumont, CA/Lockheed Site

1. Briefing(s) Given By:	Name	Signature	Position
	Ronald L. Stum Jr.		Safety/QC
Date: 08/20/2017	Time: 0700	Team #: N/A	

2. Reason for Briefing:

___ Initial Safety Briefing	___ New Site Procedure:_____
_X_ Daily Safety Briefing	___ New Site Information:_____
___ New Task Briefing:_____	___ Review of Site Information
___ Periodic Safety Meeting	___ Other: (Specify)_____

3. List Today's Project Tasks (reference definable features of work – See Worksheet 12.): Area H, Sanitary Landfill

4. Safety Topics: (Check All That Apply – per AHA or Work Permit)

__ Site Safety Personnel	___ Decontamination Procedures
__ Site/Work Area Description	___ Emergency Response/Equipment
__X Physical Hazards	___ On-Site Injuries/Illness
___ Chemical/Biological Hazards	___ Reporting Procedures
__X Heat/Cold Stress	___ Directions to Medical Facility
___ Work/Support Zones	___ Drug and Alcohol Policies
__X PPE	___ Medical Monitoring
__X Safe Work Practices	___ Evacuation/Egress Procedures
___ Air Monitoring	___ Communications
___ Task Training	___ Confined Spaces
___ OE Precautions	___ Other:

5. Remarks: None

6. Personnel Attending

Name	Signature	Position
Syd Rodgers		SUXOS
Tye Turner		UXO Tech
Shaun Woods		UXO Tech

QC REPORT

PREPARATORY PHASE INSPECTION REPORT

Project Name:	Potrero Canyon	Project No:	112IC08358	Report No:	001
UXO Team:	Tetra Tech	Location:	Beaumont, CA/Lockheed Site	Date:	08/16/17

I. Definable Feature of Work (see SAP Worksheet No. 12 and revise list as needed)

- ☐ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☐ MEC/MPPEH Management
- ☒ Demobilization
- ☐ Other

II. References (DOD Inst., Corporate references, SOPs, etc.):

III. Personnel Present (employees performing the work) Attach supplemental sheet if necessary

Name	Position	Company
Syd Rodgers	SUXOS	Tetra Tech
Ron Stum	UXOSO/QCS	Tetra Tech
Tye Turner	Tech II	Tetra Tech
Shaun Woods	Tech I	Tetra Tech

IV. Submittals Reviewed (Work Plan, EHSP, Permits, etc.) Attach supplemental sheet if necessary

Submittals Reviewed.	Item No.	Date	Approval Authority
Work Plan	1	2016	Tetra Tech
HASP	2	2011	Tetra Tech

Have all submittals been approved?	☒ Yes	☐ No
If No, what items have not been submitted/ approved?		
Are all submittals on hand?	☒ Yes	☐ No
If No, what items are missing?		
Check approved submittals against delivered material. (This should be done as material arrives.)		

Comments: None

V. Resources (Personnel & Equipment)

Are adequate resources on hand to effectively conduct work?	☒ Yes	☐ No
If No, what action will be taken?		

PREPARATORY PHASE INSPECTION REPORT

Project Name:	Potrero Canyon	Project No:	112IC08358	Report No:	001
UXO Team:	Tetra Tech	Location:	Beaumont, CA/Lockheed Site	Date:	08/16/17

VI. Procedures (Project Manger should be involved in this stage of the inspection)

Review contract specifications. (List special requirements such as location accuracy, format for deliverables, etc.)

None

Discuss procedure for accomplishing the work (Reference WP Section or SOP).

Completed

Clarify any differences (revisions needed).

None

VII. Resolve Differences (What did you do to resolve outstanding issues/problems)

Comments:

None

VIII. Testing/ Surveillance

Identify Tests/ Surveillance to be performed, frequency, and by whom.

UXO Team will perform blanket test daily at the start of work, at the end and when equipment is serviced.

Where will the testing to take place (in the test bed, at a selected monument, etc.)?

IVS

Is the Testing/ Surveillance Plan Adequate?

Yes

IX. Safety

Review applicable portion of the Health and Safety Plan.

Has the Activity Hazard Analysis been approved?	☒ Yes	☐ No

X. Results of Inspection

☒ Acceptable ☐ Unacceptable		NCR #:
Name: Ronald L. Stum Jr.	Signature:	Date: 08/16/17

QCM Comments

QCM Review

☒ Concur	☐ Non-Concur	Signature:	Date 08/16/17

XI. Distribution

☐ PM ☒ UXO Project MGR ☒ UXOSO/QC ☒ SUXOS ☐ CLIENT REP

MRP FF.17
Facility/Location: Beaumont, CA/Lockheed Site
Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

INITIAL PHASE INSPECTION REPORT

Project Name: Site Survey of areas | Report No: 001

Project No: 112IC08358 | Location: Beaumont CA/Lockheed Martin Site | Date: 08/16/17

I. Definable Feature of Work (See Worksheet No. 12 and update list)

- ☒ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☒ MEC/MPPEH Management
- ☐ Demobilization
- ☐ Other

II. References (DOD Inst, Corporate references, SOPs, etc.):

Beaumont Site 1 and 2 Work Plan 2016, Health and Safety Plan Revision 2.1 updated 03/2011

III. Personnel Present (employees performing the work**)** Attach supplemental sheet if necessary

Name	Position	Company
Syd Rodgers	SUXOS	Tetra Tech
Ron Stum	UXOSO/QCS	Tetra Tech
Tye Turner	Tech II	Tetra Tech
Shaun Woods	Tech I	Tetra Tech

IV. Preparatory Work (equipment set up & testing, EZ set up, logbook entries, etc.)

Is preliminary work complete and correct?	☒ Yes	☐ No
If No, what action(s) will be taken?		
N/A		

V. Task Execution

Is work being completed in accordance with plans and specifications?	☒ Yes	☐ No
If No, what corrective action(s) will be taken?		
N/A		
Is workmanship acceptable?	☒ Yes	☐ No
If No, what action(s) will be taken?		

INITIAL PHASE INSPECTION REPORT

Project Name: Site Survey of areas | Report No: 001

Project No: 112IC08358 | Location: Beaumont CA/Lockheed Martin Site | Date: 08/16/17

N/A

V. Resolve Differences

Comments: None

VI. Safety (Review work conditions using HASP and AHAs)

Comments: We reviewed the Health and Safety Plan and discussed the site specific wild life concerns.

VII. Results of Inspection

☒ Acceptable	☐ Unacceptable	NCR #:
Name: Ronald L. Stum Jr.	Signature:	Date: 8/16/2017

QC Manager Comments

QC Manager Review

☒ Concur	☐ Non-Concur	Signature:	Date: 8/16/2017

VIII. Distribution

☐ PM ☒ UXO Project MGR ☒ UXOS/QC ☒ SUXOS ☐ CLIENT REP

TETRA TECH

MRP FF.3
DAILY EQUIPMENT CHECKLIST

Facility/Location: Beaumont, CA/ Lockheed Site

Site(s): A, B, D-berm, D-stream bed, G, & H

Equipment: Vallon					Initial Condition Out of the Box Acceptable (Y/N/NA)				
Serial Number: 1004					Inspection		Spare parts		Cable Shake Test
Description: Metal Detector									
Date Out	Time Out	Daily Cond. & Comments Out	Monument Check (1)	Checked Out By	Date In	Time In	Daily Cond. & Comments In	Checked In By	Monument Check (1)
8/17	7:38	good			8/17	17:00	good		
8/18	"	"			8/18	17:00	good		
8/19	7:30	good			8/19	17:00	good		
8/20	7:30	good			8/20	17:00	good		

(1) For GPS Units, confirm accuracy correlation to referenced monument locations. Please record general description of monument locations in the Daily Activity Log, once established. (Example – GPS QC Location – Well MW-3 or northwest corner of intersection of Perimeter Road and Munitions Street)

TETRA TECH

MRP FF.3
DAILY EQUIPMENT CHECKLIST

Facility/Location: Beaumont, CA/ Lockheed Site

Site(s): A, B, D-berm, D-stream bed, G, & H

Equipment: Vallon					Initial Condition Out of the Box Acceptable (Y/N/NA)				
Serial Number: 92283					Inspection		Spare parts		Cable Shake Test
Description: Metal Detector									
Date Out	Time Out	Daily Cond. & Comments Out	Monument Check (1)	Checked Out By	Date In	Time In	Daily Cond. & Comments In	Checked In By	Monument Check (1)
8/17	7:39	good		SW	8/17	17:00	good	SW	
8/18	7:30	good		SW	8/18	17:00	good	SW	
8/19	7:30	good		SW	8/19	17:00	good	SW	
8/20	7:30	good		SW	8/20	17:00	good	SW	

(1) For GPS Units, confirm accuracy correlation to referenced monument locations. Please record general description of monument locations in the Daily Activity Log, once established. (Example – GPS QC Location – Well MW-3 or northwest corner of intersection of Perimeter Road and Munitions Street)

MRP FF.15
Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

DAILY QUALITY CONTROL REPORT

Project Name: UXO Investigation Report No: 01

Project No: 112IC08358 Location: Lockheed Site Banning Date: 08/17/2017

I. Personnel Present (Reference/attach SUXOS's daily report if applicable): **See Daily Tailgate Safety Form**

II. Definable Feature of Work (see Quality Control Plan and revise list as needed)

☒ Mob/Site Preparation	☐	☐
☒ IVS Certification	☐	☐
☒ Surface Investigation	☐	☐
☐ MEC/MPPEH Management	☐	☐
☐ Demobilization	☐	☐
☐	☐	☐ Other:

III. Quality Control Activities (Include Daily QC activities and results and reference/attach inspection/surveillance reports):

Observed the team perform equipment checks using a Blanket Test. Observed the team using proper techniques during surface investigation with the Vallons.

IV. GSV Seed Items

Seed Placement (Seed ID, Coordinates, and digital photo #)	**Seed Recovered** (Seed ID and Coordinates)
1. NA	1.NA
2.	2.
3.	3.

V. Problems Encountered / Corrective Actions Taken

NONE

VI. Directions Given / Received:

NONE

VII. Special Notes / Lessons Learned

NONE

VIII. Visitors:

☐ **Yes (see Visitor's Log/Daily Activity Log)** ☒ **No**

IX. Approval

Name and Signature: Ronald L. Stum Jr.	Title/Company: TT QC/Safety	Date: 08/17/2017

MRP FF.15
Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

DAILY QUALITY CONTROL REPORT

Project Name: UXO Investigation Report No: 02

- ☐ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☒ MEC/MPPEH

Project No: Management Location: Lockheed Site Banning Date: 08/18/2017

I. Personnel Present (Reference/attach SUXOS's daily report if applicable): **See Daily Tailgate Safety Form**

II. Definable Feature of Work (see Quality Control Plan and revise list as needed)

- ☐ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☒ MEC/MPPEH Management
- ☐ Demobilization
- ☐ Other

III. Quality Control Activities (Include Daily QC activities and results and reference/attach inspection/surveillance reports):

Observed the team perform equipment checks using a Blanket Test. Observed the team using proper techniques during surface investigation with the Vallons. Observed intrusive investigation of target anomalies. Performed QC detector aided surface survey of investigation area. Performed QC detector aided survey of target anomaly intrusive locations. No discrepancies noted.

IV. GSV Seed Items

Seed Placement (Seed ID, Coordinates, and digital photo #)	**Seed Recovered** (Seed ID and Coordinates)
1. NA	1.NA
2.	2.
3.	3.

V. Problems Encountered / Corrective Actions Taken

NONE

VI. Directions Given / Received:

NONE

VII. Special Notes / Lessons Learned

NONE

VIII. Visitors:

☒ **Yes (see Visitor's Log/Daily Activity Log)** ☐ **No**

MRP FF.15
Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

DAILY QUALITY CONTROL REPORT

Project Name: UXO Investigation Report No: 02

- ☐ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☒ MEC/MPPEH

Project No: Management Location: Lockheed Site Banning Date: 08/18/2017

IX. Approval

Name and Signature: Ronald L. Stum Jr.	Title/Company: TT QC/Safety	Date: 08/18/2017

Revised March 2011

MRP FF.15
Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

DAILY QUALITY CONTROL REPORT

Project Name: UXO Investigation | Report No: 03

Project No: 112IC08358 | Location: Lockheed Site Banning | Date: 08/19/2017

I. Personnel Present (Reference/attach SUXOS's daily report if applicable): **See Daily Tailgate Safety Form**

II. Definable Feature of Work (see Quality Control Plan and revise list as needed)

- ☐ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☒ MEC/MPPEH Management
- ☐ Demobilization
- ☐ Other

III. Quality Control Activities (Include Daily QC activities and results and reference/attach inspection/surveillance reports):

Observed the team perform equipment checks using a Blanket Test. Observed the team using proper techniques during surface investigation with the Vallons. Performed QC detector aided surveys. Riverside County Sheriffs HDT arrived and a safety briefing was conducted prior to the team proceeding with the demolition operation. No discrepancies noted.

IV. GSV Seed Items

Seed Placement (Seed ID, Coordinates, and digital photo #)	**Seed Recovered** (Seed ID and Coordinates)
1. NA	1.NA
2.	2.
3.	3.

V. Problems Encountered / Corrective Actions Taken

NONE

VI. Directions Given / Received:

NONE

VII. Special Notes / Lessons Learned

NONE

VIII. Visitors:

☒ **Yes (see Visitor's Log/Daily Activity Log)** ☐ **No**

IX. Approval

Name and Signature: Ronald L. Stum Jr.	Title/Company: TT QC/Safety	Date: 08/20/2017

MRP FF.15
Facility/Location: Beaumont, CA/Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

DAILY QUALITY CONTROL REPORT

Project Name: UXO Investigation | Report No: 04

Project No: 112IC08358 | Location: Lockheed Site Banning | Date: 08/20/2017

I. Personnel Present (Reference/attach SUXOS's daily report if applicable): **See Daily Tailgate Safety Form**

II. Definable Feature of Work (see Quality Control Plan and revise list as needed)

- ☐ Mob/Site Preparation
- ☒ Site Survey
- ☒ GPS Positional Data
- ☒ Detector Aided Surface Surveys
- ☒ Intrusive Investigation
- ☒ MEC/MPPEH Management
- ☐ Demobilization
- ☐ Other

III. Quality Control Activities (Include Daily QC activities and results and reference/attach inspection/surveillance reports):

Observed the team perform equipment checks using a Blanket Test. Observed the team using proper techniques during surface investigation with the Vallon. Performed detector aided QC survey over portions of the investigation area. No discrepancies noted.

IV. GSV Seed Items

Seed Placement (Seed ID, Coordinates, and digital photo #)	**Seed Recovered** (Seed ID and Coordinates)
1. NA	1.NA
2.	2.
3.	3.

V. Problems Encountered / Corrective Actions Taken

NONE

VI. Directions Given / Received:

NONE

VII. Special Notes / Lessons Learned

NONE

VIII. Visitors:

☐ **Yes (see Visitor's Log/Daily Activity Log)** ☒ **No**

IX. Approval

Name and Signature: Ronald L. Stum Jr.	Title/Company: TT QC/Safety	Date: 08/20/2017

MEC ACTIVITY LOG

TETRA TECH

MRP FF.2

DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 16 Aug 2017
PROJECT NO: 112IC08358	**TASK CODES**: B1GWOM.36

SUMMARY OF DAILY PROGRESS: (Update Definable Feature of Work - Worksheet 12)

Mobilization/Set Preparation: All Personnel mobilized 15 Aug 2017.

Site Survey: Site walk with local Biologist.

GPS Positional Data: N/A

Detector Aided Surface Surveys: Using Vallon Metal Detectors.

Target Reacquisition: N/A

Intrusive Operation: Excavating anomalies as encountered.

MPPEH Management (Inspections): N/A

MPPEH Management (Certification): N/A

Demobilization: N/A

Other: N/A

LIST OF MEC ITEMS ID, MPPEH ITEM ID, MDAS, OR NONE

Item ID	Description	Item ID	Description

NONE

TETRA TECH
MRP FF.2
DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 16 Aug 2017

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

08:00 Departed hotel to San Bernardino CA for initial briefing conducted by Tetra Tech Biologist.

09:00 Meeting at local Tetra Tech Office.

09:50 Departed Tetra Tech Office to Potero Canyon escorted by Tetra Tech Biologist (Peter Jimenez). Team assembled at a central location and was issued a SAT phone, Medical bag, GPS, and digging tools. Safety Officer gave initial Tailgate safety brief (a detailed safety brief will be conducted prior to the actual start of the survey). Each site to be surveyed was visited for familiarity and what hazards could be encountered. Certain areas were cordoned off do to nesting birds, these areas will not be surveyed.

12:45 Site walk was completed and the team went to lunch.

13:30 The team reassembled at the hotel, unpacked and checked the Vallon metal Detectors for operational readiness, both passed.

14:00 Team departed to purchase additional tools and equipment required to complete the survey.

16:30 All equipment was equipped with new batteries, inventoried and storied for the next day's operation.

17:00 Team secured for the day.

IMPORTANT PHONE CALLS/DECISIONS: NONE

FIELD TASK MODIFICATIONS: NONE

WEATHER CONDITIONS: Partly Cloudy, High of 87 and a low of 57 degrees, Winds E @ 10 mph, Humidity 99%, Visibility 7 mi.

VISITORS ON SITE: NONE

PERSONNEL ON SITE: Syd Rodgers (SUXUS), Ron Stum (QC/Safety), Tye Turner (UXO Tech II), Shaun Woods (UXO Tech I), Peter Jimenez (Biologist)

SIGNATURE:	**DATE:** 16 Aug 2017

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

TETRA TECH

MRP FF.2

DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 17 Aug 2017
PROJECT NO: 112IC08358	**TASK CODES**: B1GWOM.36

SUMMARY OF DAILY PROGRESS: (Update Definable Feature of Work - Worksheet 12)

Mobilization/Set Preparation: N/A

Site Survey: N/A

GPS Positional Data: GPS location data was collected using Garmin handheld GPS.

Detector Aided Surface Surveys: Detector aided surveys were performed using the Vallon all metals detectors.

Intrusive Operation: Intrusive Investigation was performed at select target anomalies.

MEC/MPPEH Management: N/A

Demobilization: N/A

Other: N/A

LIST OF MEC ITEMS ID, MPPEH ITEM ID, MDAS, OR NONE

Item ID	Description	Item ID	Description

NONE

TETRA TECH
MRP FF.2
DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 17 Aug 2017

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

07:00 All team members arrived at the assembly point for daily tailgate briefing, conducted by the site safety officer.

07:30 Team members verified instrument operational status using the blanket method.

08:00 Team including the resident Biologist arrived at site A. We were denied access to approximately 2/3 of site "A" by the Biologist due to nesting birds. Once the biologist surveys were complete the team performed a detector aided survey and intrusive investigation of target anomalies.

12:15 The team relocated to Site "D" (Dry River Bed) to perform detector aided survey and intrusive investigation of select target anomalies.

16:30 All personnel reported back to the assembly area to repeat the blanket test to verify instrumentation.

17:00 secured for the day.

IMPORTANT PHONE CALLS/DECISIONS: NONE

FIELD TASK MODIFICATIONS: NONE

WEATHER CONDITIONS: Clear, Westerly winds 1mph, Visibility 11mi, Humidity 83%. High 87 with a low of 60 degrees.

VISITORS ON SITE: NONE

PERSONNEL ON SITE: Syd Rodgers (SUXUS), Ron Stum (QC/Safety), Tye Turner (UXO Tech II), Shaun Woods (UXO Tech I), Peter Jimenez (Biologist)

SIGNATURE:	**DATE:** 17 Aug 2017

TETRA TECH
MRP FF.2
DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 18 Aug 2017
PROJECT NO: 112IC08358	**TASK CODES**: B1GWOM.36

SUMMARY OF DAILY PROGRESS: (Update Definable Feature of Work - Worksheet 12)

Mobilization/Set Preparation: N/A

Site Survey: N/A

GPS Positional Data: GPS location data was collected using Garmin handheld GPS.

Detector Aided Surface Surveys: Detector aided surveys were performed using the Vallon all metals detectors.

Intrusive Operation: Intrusive Investigation was performed at select target anomalies.

MEC/MPPEH Management: Custody of recovered MPPEH items were transferred to HDT DIV for disposal and final disposition.

Demobilization: N/A

Other: N/A

LIST OF MEC ITEMS ID, MPPEH ITEM ID, MDAS, OR NONE

Item ID	Description	Item ID	Description

Item #029 20mm Projectile, Fired, Surface, (MPPEH), Transported by HDT.

Item #030 20mm Projectile, Fired, Surface, (MPPEH), Transported by HDT.

Item #31 20mm Projectile, Fired, Surface, (MPPEH), Transported by HDT.

Item #32 20mm Projectile, Fired, Surface, (MPPEH), BIP by HDT.

Item #33 20mm Projectile, Fired, Surface, (MPPEH), Transported by HDT.

Item #34 20mm Projectile, Fired, Surface, (MPPEH), BIP by HDT.

TETRA TECH
MRP FF.2
DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 18 Aug 2017

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

07:00 All personnel arrived at the assembly point to receive daily tailgate safety briefing, presented by the site safety officer.

07:30 After safety briefing the UXO survey team verified their instrumentation using the blanket test method.

08:00 Survey team returned to Site D (The Berm) and conducted a surface sweep only. Two subsurface anomalies were identified at this location.

10:00 The survey team reported to Site "G" (Stream bed), No anomalies were identified at this location.

11:30 Survey team took lunch.

12:00 All personnel returned to site "A" to excavate anomalies identified the previous days operation. Five anomaly locations were excavated and no ordnance related items uncovered.

14:30 Requested support from Riverside County Sherriff's Office HDT DIV. Was informed of Approximately 1hr. ETA. Team performed detector aided surface survey of Site "B". A total of 6 20mm projectiles (MPPEH) were identified. Riverside Sherriff Department HDT Div. were notified of recovered munition items.

16:00 Sherriff's Dept. arrived and was escorted to the ordnance location. Upon arrival, the officers made an assessment of the items and determined 2 would be disposed of on site by BIP. Custody of remaining 4 items was transferred to HDT for final disposition.

16:35 Items were destroyed by detonation. A survey of the demo area was performed and recovered material was secured by HDT.

16:50 Instruments were verified using the blanket test.

17:00 All personnel departed for the day.

IMPORTANT PHONE CALLS/DECISIONS: Notified UXO Manager and local Tetra Tech Office of UXO identified at Site "B". Contacted Riverside Sherriff Office HDT DIV. of ordnance found and requested assistance for its disposal.

FIELD TASK MODIFICATIONS: NONE

WEATHER CONDITIONS: Clear, High 89 with a low of 58 degrees, Winds NE@1mph, Visibility 11mi, Humidity 76%

TETRA TECH

MRP FF.2

DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 18 Aug 2017
VISITORS ON SITE: NONE	
PERSONNEL ON SITE: Syd Rodgers (SUXUS), Ron Stum (QC/Safety), Tye Turner (UXO Tech II), Shaun Woods (UXO Tech I)	
SIGNATURE:	**DATE:** 18 Aug 2017

TETRA TECH

MRP FF.2

DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 19 Aug 2017
PROJECT NO: 112IC08358	**TASK CODES**: B1GWOM.36

SUMMARY OF DAILY PROGRESS: (Update Definable Feature of Work - Worksheet 12)

Site Survey: N/A

GPS Positional Data: GPS location data was collected using Garmin handheld GPS.

Detector Aided Surface Surveys: Detector aided surveys were performed using the Vallon all metals detectors.

Intrusive Operation: Intrusive Investigation was performed at select target anomalies.

MEC/MPPEH Management: Custody of recovered MPPEH items were transferred to HDT DIV for disposal and final disposition.

Demobilization: N/A

Other: N/A

LIST OF MEC ITEMS ID, MPPEH ITEM ID, MDAS, OR NONE

Item ID	Description	Item ID	Description

Item # 038 Ammo Belt Link (MDAS)

Item # 039 20mm, M55A2, complete round, (MPPEH), BIP by HDT

TETRA TECH
MRP FF.2
DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 19 Aug 2017

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

07:00 All personnel arrived at the assembly point for daily tailgate safety briefing conducted by site safety officer.

07:30 Instrument verification performed using the blanket test method. All instruments passed.

08:00 Team moved to Site "D" (Berm) to GPS anomaly locations and pull flags, this area is surface sweep only. The team then moved into the stream bed (area "D") to record and excavate anomalies encountered 18 Aug 2017. The team recovered 1ea, unfired 20mm complete round approximately 1" below ground surface.

11:45 Proper notifications were made, and a request for support was made to the Riverside County Sherriff's HDT.

14:15 Sherriff's HDT team arrived and was escorted to the items location. The HDT evaluated the situation and decided to blow the item in place.

15:45 Item was destroyed and HDT was escorted off site.

16:00 UXO Survey team departed to the assembly area to perform operational tests on the Vallon instruments.

17:00 All personnel secured for the day.

IMPORTANT PHONE CALLS/DECISIONS: Notified Tetra Tech UXO Manager and local Tetra Tech office of UXO discovery.

FIELD TASK MODIFICATIONS: NONE

WEATHER CONDITIONS: Clear, High 89 with a low of 60 degrees, Winds NE@ 2mph, Visibility 12mi, Humidity 86%.

VISITORS ON SITE: Riverside County Sherriff's Office HDT Team.

PERSONNEL ON SITE: Syd Rodgers (SUXUS), Ron Stum (QC/Safety), Tye Turner (UXO Tech II), Shaun Woods (UXO Tech I)

SIGNATURE:	**DATE:** 19 Aug 2017

TETRA TECH

MRP FF.2

DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 20 Aug 2017
PROJECT NO: 112IC08358	**TASK CODES**: B1GWOM.36

SUMMARY OF DAILY PROGRESS: (Update Definable Feature of Work - Worksheet 12)

Mobilization/Set Preparation: N/A

Site Survey: N/A

GPS Positional Data: GPS location data was collected using Garmin handheld GPS.

Detector Aided Surface Surveys: Detector aided surveys were performed using the Vallon all metals detectors.

Intrusive Operation: N/A

MEC/MPPEH Management: N/A

Demobilization: Team will demobilize 21 Aug.

Other: N/A

LIST OF MEC ITEMS ID, MPPEH ITEM ID, MDAS, OR NONE

Item ID	Description	Item ID	Description

None

TETRA TECH
MRP FF.2
DAILY MEC ACTIVITY LOG

Facility/Location: Beaumont, CA. Lockheed Martin Site

Potrero Canyon Site #1

FIELD ACTIVITY SUBJECT: UXO Survey	**Date:** 20 Aug 2017

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

07:00 All personnel arrived at the assembly point for daily tailgate safety briefing presented by the Site Safety Officer.

07:30 Verified instrumentation using the blanket test method.

08:30 Team arrived at Area "H" and began surveying the former landfill area.

11:45 Area "H" survey complete, no ordnance related items were identified during the survey. Numerous items such as barbed wire and rebar were observed on the surface and partially buried connected to something subsurface.

12:00 Debriefing was held of the entire project. Instrumentation was reverified using the blanket test.

13:15 Team reassembled and spent the afternoon cleaning tools and equipment, packaging for shipment.

15:30 Tools and equipment on loan to us from the local Tetra Tech office was returned.

17:00 Team secured for the day.

All Personnel Will Demobilize 8/21/2017.

Material to be shipped will be taken to Fed-EX 8/21/2017.

IMPORTANT PHONE CALLS/DECISIONS: None

FIELD TASK MODIFICATIONS: NONE

WEATHER CONDITIONS: Mostly Clear, High 89 with a low of 58 degrees, 0 Winds, Humidity 82% Visibility 12 Miles.

VISITORS ON SITE: None

PERSONNEL ON SITE: Syd Rodgers (SUXUS), Ron Stum (QC/Safety), Tye Turner (UXO Tech II), Shaun Woods (UXO Tech I)

SIGNATURE:	**DATE:** 20 Aug 2017

DIG SHEETS

TETRA TECH
MRP FF.11
DIG SHEET - MANUAL TARGET EXCAVATION RESULTS

Facility/Location: Beaumont, CA/ Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

Location or Anomaly Number (1)	Coordinates (1)		Detection Equip.	Excavation Dimensions (L x W x D) (inches)/(feet)	Number of Dig Locations	Munitions-Related Items				Non-Munitions Items			No Finds
	N	E				Number and Description	MEC/ MPPEH/ MDAS	Explosive Weight (lbs)	Disposition Date	Number and Description	Approx. Weight (lbs)	Disposition Date	Anomaly Deeper than ___'? (Y/N)
021	11S0505057	UTM3747805	Vallon	Surface	N/A	N/A	N/A	N/A	N/A	Scrap Metal, Pin Flag Wire	.10	08/17/2017	N/A
022	11S0504981	UTM3747515	Vallon	5”x6”x6”	N/A	N/A	N/A	N/A	N/A	Scrap Metal, wire	.10	08/18/2017	N/A
023	11S0504985	UTM3747515	Vallon	8’x1”x1”	N/A	N/A	N/A	N/A	N/A	Scrap Metal, Steel Fence Post	5 lbs	08/18/2017	N/A
024	11S0505064	UTM3747705	Vallon	5”x5”x4”	N/A	N/A	N/A	N/A	N/A	Scrap Metal	.50	08/18/2017	N/A
025	11S0505091	UTM3747989	Vallon	6”x5”x6”	N/A	N/A	N/A	N/A	N/A	Scrap Metal	.10	08/18/2017	N/A
026	11S0505080	UTM3747908	Vallon	Surface	N/A	N/A	N/A	N/A	N/A	Scrap Metal, Screen	.10	08/18/2017	N/A
027	11S0505934	UTM3746742	Vallon	Subsurface	N/A	Not Investigated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
028	11S0505953	UTM3746737	Vallon	Subsurface	N/A	Not Investigated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
029	11S0505937	UTM3746742	Vallon	Surface	N/A	20 MM projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
030	11S0505939	UTM3746743	Vallon	Surface	N/A	20 MM projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A

-- = None found or unknown, not applicable.

TETRA TECH
MRP FF.11
DIG SHEET - MANUAL TARGET EXCAVATION RESULTS

Facility/Location: Beaumont, CA/ Lockheed Site

Site(s): A, B, D-Berm, D-Stream Bed, G, & H/Potrero Canyon

Location or Anomaly Number (1)	Coordinates (1)		Detection Equip.	Excavation Dimensions (L x W x D) (inches)/(feet)	Number of Dig Locations	Munitions-Related Items				Non-Munitions Items			No Finds
	N	E				Number and Description	MEC/ MPPEH/ MDAS	Explosive Weight (lbs)	Disposition Date	Number and Description	Approx. Weight (lbs)	Disposition Date	Anomaly Deeper than ___'? (Y/N)
029	11S0505937	UTM3746742	Vallon	Surface	N/A	20 MM projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
030	11S0505939	UTM3746743	Vallon	Surface	N/A	20 MM projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
031	11S0505941	UTM3746742	Vallon	Surface	N/A	20 MM Projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
032	11S0505942	UTM3746742	Vallon	Surface	N/A	20 MM Complete Projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
033	11S0505943	UTM3746745	Vallon	Surface	N/A	20 MM Projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
034	11S0505942	UTM3746745	Vallon	Surface	N/A	20 MM Complete Projectile	MPPEH		08/18/2017	N/A	N/A	N/A	N/A
037	11S0505721	UTM3746277	Vallon	6”x4”x2”	N/A	Ammo Belt, Link	MDAS	N/A	8/19/2017	N/A	.10	N/A	N/A
039	11S0505707	UTM3746327	Vallon	10”x6”x1”	N/A	20 MM Complete Round (Projectile w/cartridge)	MPPEH		8/19/2017	N/A	.75	8/19/2017	N/A

Appendix B –Photographic Log

Photo: 1 **Description:** Magnetometer blanket testing	

Photo: 2 **Description:** Area A survey work	

Photo: 3 **Description:** Area A scrap metal	

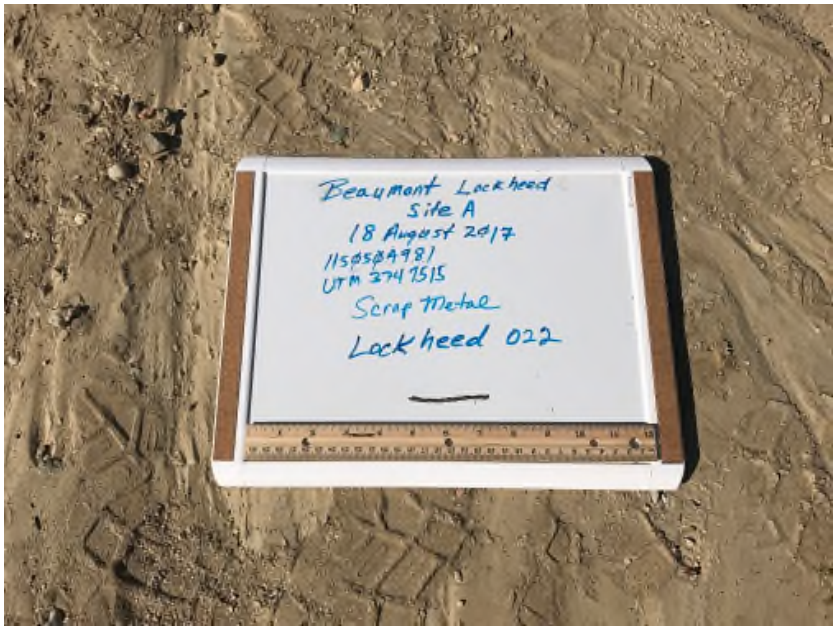
Photo: 4 **Description:** Area A scrap metal	

Photo: 5 **Description:** Area A scrap metal	

Photo: 6 **Description:** Area A scrap metal	

Photo: 7 **Description:** Area A scrap metal	

Photo: 8 **Description:** Area A scrap metal	

Photo: 9 **Description:** Area B MD – 20mm projectile	

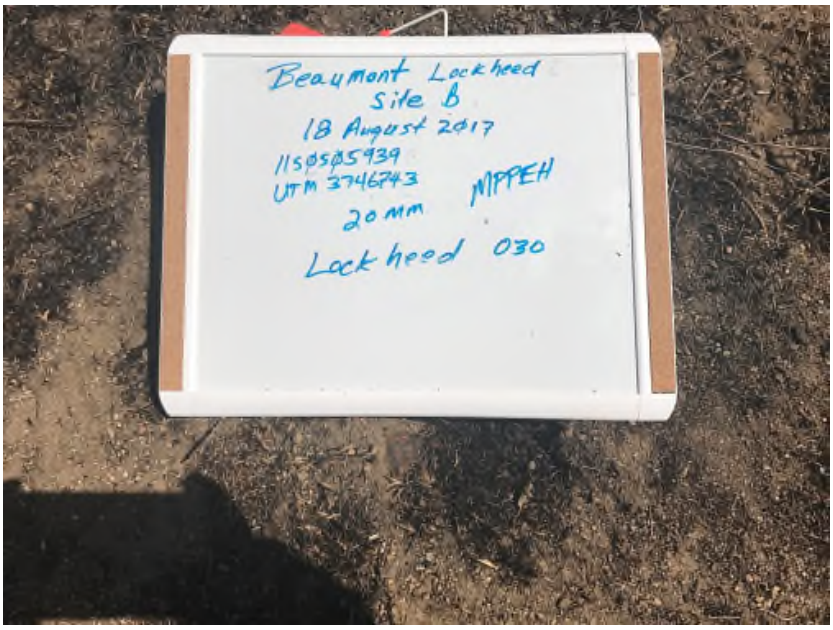
Photo: 10 **Description:** Area B MD – 20mm projectile	

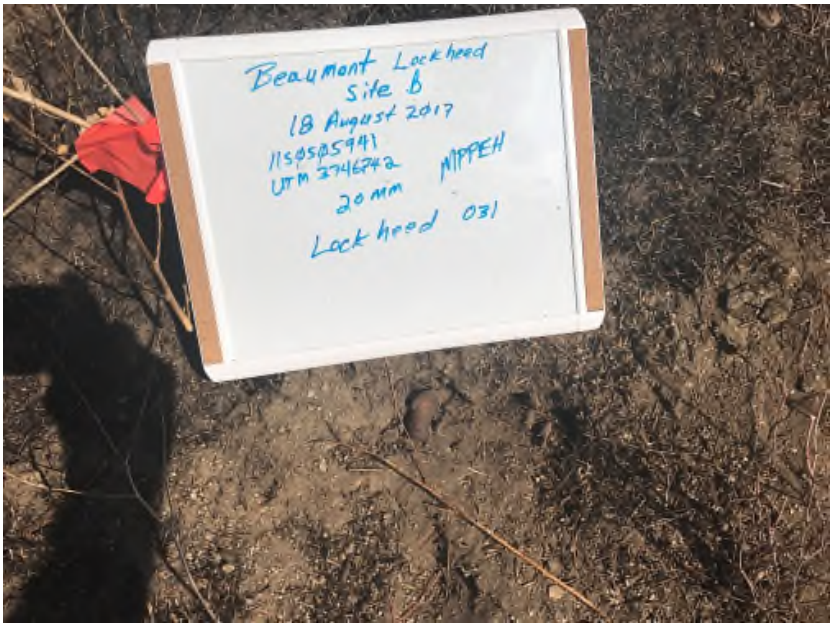
Photo: 11 **Description:** Area B MD – 20mm projectile	

Photo: 12 **Description:** Area B MEC – 20mm complete projectile	

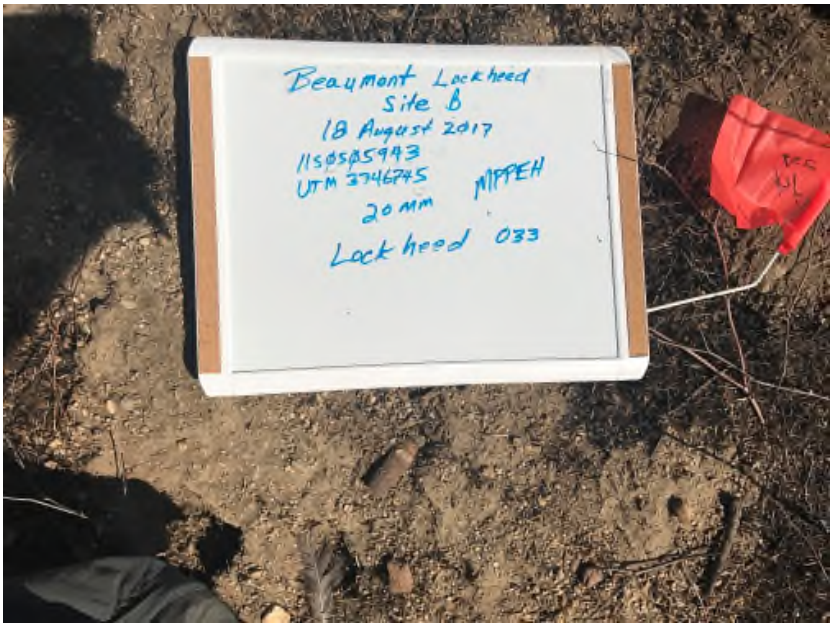
Photo: 13 **Description:** Area B MD – 20mm projectile	

Photo: 14 **Description:** Area B MEC – 20mm complete projectile	

Photo: 15 **Description:** Riverside County Hazardous Devices Team (HDT) health and safety meeting	

Photo:16 **Description:** HDT inspecting potential MEC in Area B	

Photo: 17 **Description:** HDT preparing for detonation of potential MEC in Area B	

Photo: 18 **Description:** HDT preparing for detonation of potential MEC in Area B	

Photo: 19 **Description:** Area D Streambed MD ammo belt link	

Photo: 20 **Description:** Area D Streambed scrap metal	

Photo: 21 **Description:** Area D Streambed MEC complete 20mm cartridge	

Photo: 22 **Description:** Area D Streambed scrap metal	

Photo: 23 **Description:** Barn owl nest	

Photo: 24 **Description:** Mourning dove on nest