DECISION DOCUMENT

CAMP SAN LUIS OBISPO

MUNITIONS RESPONSE SITE 05 –

MULTI-USE RANGE COMPLEX

PROJECT NUMBER – J09CA203105

SAN LUIS OBISPO COUNTY, CALIFORNIA

U.S. Army Corps of Engineers

Los Angeles District

915 Wilshire Boulevard

Los Angeles, California 90017

August 2020

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TABLE OF CONTENTS

PART 1: DECLARATION....1
1.1 SITE NAME AND LOCATION....1
1.2 STATEMENT OF BASIS AND PURPOSE....1
1.3 ASSESSMENT OF MRS 05....2
1.4 DESCRIPTION OF SELECTED REMEDY....2
1.5 STATUTORY DETERMINATIONS....3
1.6 DATA CERTIFICATION CHECKLIST....4
1.7 AUTHORIZING SIGNATURE....5
PART 2: DECISION SUMMARY....7
2.1 NAME, LOCATION, AND BRIEF DESCRIPTION....7
2.2 CSLO and MRS 05 HISTORY....7
2.2.1 Site Investigation History....8
2.2.2 Enforcement History....17
2.3 COMMUNITY PARTICIPATION....17
2.4 SCOPE AND ROLE OF RESPONSE ACTION....18
2.5 MRS 05 SITE CHARACTERISTICS....19
2.5.1 Conceptual Site Model....19
2.5.2 MRS 05 Site Features....20
2.5.3 Soil....21
2.5.4 Surface Water and Wetlands....21
2.5.5 Sampling Strategy....21
2.6 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES....22
2.6.1 Current Land Use....23
2.6.2 Future Land Use....23
2.6.3 Surface Water and Groundwater Use....23
2.7 SUMMARY OF SITE POTENTIAL RISKS/HAZARDS....24
2.7.1 Human Health Risks/Hazards....24
2.7.2 Biological Resource Analysis....24
2.8 REMEDIAL ACTION OBJECTIVES....25
2.9 DESCRIPTION OF ALTERNATIVES....28
2.9.1 Alternative 1 – No Further Action....28
2.9.2 Alternative 2 – Institutional Controls to Protect Current and Future Site

Users 28
2.9.3 Alternative 3 – DoD Military Munitions Removal from the Surface and ICs to Protect Current and Future Site Users 30
2.9.4 Alternative 4 – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users 31
2.9.5 Alternative 5 – Excavation, Sifting, Removal of DoD Military Munitions and Restoration 33
2.9.6 Five-Year Reviews 34
2.10 COMPARATIVE ANALYSIS OF ALTERNATIVES 34
2.10.1 Overall Protection of Human Health and the Environment 35
2.10.2 Compliance with Applicable or Relevant and Appropriate Requirements 35
2.10.3 Long-term Effectiveness and Permanence 37
2.10.4 Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment 37
2.10.5 Short-term Effectiveness 38
2.10.6 Implementability 38
2.10.7 Cost 39
2.10.8 State/Support Agency Acceptance 40
2.10.9 Community Acceptance 40
2.11 TREATMENT TO ADDRESS MEC EXPLOSIVES HAZARDS 40
2.12 SELECTED REMEDIES 41
2.12.1 Summary and Description 42
2.12.2 Cost Estimate 42
2.12.3 Estimated Outcomes 43
2.13 STATUTORY DETERMINATIONS 44
2.14 DOCUMENTATION OF SIGNIFICANT CHANGES 44
PART 3: RESPONSIVENESS SUMMARY 47
3.1 STAKEHOLDER COMMENTS AND LEAD AGENCY RESPONSES 47
3.1.1 DTSC Comments/Responses 47
3.1.2 Stakeholder Comments/Responses 52
3.2 TECHNICAL AND LEGAL ISSUES 55
REFERENCES 57

LIST OF TABLES

Table 1 – Selected Remedies for the MRS 05 Sub-areas

Table 2 – 2010 TCRA UXO Items

Table 3 – Summary of the RI Results at the MRS 05 Sub-areas

Table 4 – Revised MRS 05 Acreages

Table 5 – Potential DoD Military Munitions Summary for the MRS 05 Sub-areas

Table 6 – Selected Remedy Costs for the MRS 05 Sub-areas

Table 7 – Relevant Considerations for Cost-Effectiveness Determination

LIST OF ATTACHMENTS

Attachment 1 – Documentation of California Department of Toxic Substances Control Concurrence on MRS 05-North, MRS 05-South and MRS 05-SR Selected Remedies, May 2019

Attachment 2 – Site Figures

Figure 1 – MRS 05 Site Location

Figure 2 – MRS 05 Site Layout

Figure 3a – Results of the RI at MRS 05-North

Figure 3b – Results of the RI at MRS 05-South

Figure 3c – Results of the RI at MRS 05-SR

Figure 4 – MRS 05 Sub-Area Delineation

Figure 5a – Anomaly Density for MRS 05-North

Figure 5b – Anomaly Density for MRS 05-South

Figure 5c – Anomaly Density for MRS 05-SR

Figure 6 – Exposure Pathway Diagram for the Conceptual Site Model – MRS 05-North

Figure 7 – Exposure Pathway Diagram for the Conceptual Site Model – MRS 05-South

Figure 8 – Exposure Pathway Diagram for the Conceptual Site Model – MRS 05-SR

Attachment 3 – Administrative Record Index

Attachment 4 – Newspaper Publications

Attachment 5 – CSLO MRSs Public Meeting Transcript

Attachment 6 – RACER Cost Estimate Worksheets (Electronic version only)

LIST OF ACRONYMS AND ABBREVIATIONS

AGC	Advanced Geophysical Classification
ARARs	Applicable or Relevant and Appropriate Requirements
ASR	Archives Search Report
bgs	below ground surface
BIP	Blow in Place
Cal Poly	California Polytechnic State University
CDFW	California Department of Fish and Wildlife
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CNG	California National Guard
COPC	contaminants of potential concern
CSLO	Camp San Luis Obispo
CSM	Conceptual Site Model
DDESB	Department of Defense Explosives Safety Board
DERP	Defense Environmental Restoration Program
DGM	Digital Geophysical Mapping
DoD	United States Department of Defense
DTSC	State of California Department of Toxic Substances Control
ESA	Endangered Species Act
FS	Feasibility Study
ESTCP	Environmental Security Technology Certification Program
ft	feet/foot
FUDS	Formerly Used Defense Sites
GSA	General Services Administration
HA	Hazard Assessment
HE	high explosive
HEAT	high explosive anti-tank
HRR	Historical Records Review
IC	Institutional Controls
MC	Munitions Constituents
MD	Munitions Debris
MDAS	material documented as safe
MEC	Munitions and Explosives of Concern
mm	millimeter
MMRP	Military Munitions Response Program

MRS	Munitions Response Site
N/A	Not Applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
O&M	Operations and Maintenance
PA	Preliminary Assessment
PD	Point Detonating
RACER	Remedial Action Cost Engineering and Requirements
RAO	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
SARA	Superfund Amendment and Reauthorization Act
SI	Site Inspection
SLERA	Screening Level Ecological Risk Assessment
SR	Shooting Range
TCRA	Time Critical Removal Action
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
UTL	Upper Tolerance Limit
UXO	Unexploded Ordnance
WAA	Wide Area Assessment
WP	white phosphorus
WWII	World War II

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PART 1: DECLARATION

1.1 SITE NAME AND LOCATION

Project Name: Camp San Luis Obispo (CSLO) Munitions Response Site (MRS) 05 – Multi-Use Range Complex

Site Name: MRS 05 – Multi-Use Range Complex

Formerly Used Defense Site (FUDS) Project Number: J09CA203105

Federal Facility Identifier: CA99799F688000

MRS 05 – Multi-Use Range Complex (hereafter referred to as MRS 05) is located along California Highway 1, approximately 8 miles east of the Pacific Ocean at Morro Bay and approximately 5 miles northwest of U.S. Highway 101, between the cities of San Luis Obispo and Morro Bay on the western slopes of the Santa Lucia Range. MRS 05 comprises 2,626 acres and has been subdivided into three sub-areas: MRS 05-North (904.8 acres), MRS 05-South (1,450.7 acres) and MRS 05-Shooting Range (SR) (270.5 acres). The MRS location is depicted on Figure 1 – MRS 05 Site Location and the site layout is depicted on Figure 2 – MRS 05 Site Layout (all referenced figures throughout this document are included in Attachment 2).

Based on the results of the Archives Search Report (ASR) (Ref. 1), the Historical Records Review (HRR) (Ref. 2), and the Site Inspection (SI) conducted for CSLO (Ref. 3), three MRSs (MRS 01, MRS 02 and MRS 05) were identified for further investigation, and are included and described in the Final Remedial Investigation/Feasibility Study (RI/FS) Report (Ref. 4). MRS 07 (previously identified as MRS 01/02) will be addressed under a separate response project and will have its own stand-alone Decision Document.

This Decision Document addresses MRS 05 and describes the final Selected Remedy for each sub-area. Each Selected Remedy is specific to that particular sub-area. As such, the Selected Remedy may differ between sub-areas.

1.2 STATEMENT OF BASIS AND PURPOSE

This Decision Document presents the Selected Remedies for each MRS 05 sub-area, in San Luis Obispo County, California, as documented in the *Formerly Used Defense Sites Program Proposed Plan for Camp San Luis Obispo, MRS 01/02 – Grenade Courts 25 and 26 and MRS 05 – Multi-Use Range Complex, San Luis Obispo County California Formerly Used Defense Sites (FUDS) Project No. J0CA203107* (Proposed Plan) (Ref. 5). The Selected Remedies were chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Ref. 6), as amended by the Superfund Amendment and Reauthorization Act (SARA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Ref. 7). These decisions are supported by the documents included in the Administrative Record Index for this site (Attachment 3).

The State of California Department of Toxic Substances Control (DTSC) reviewed the Proposed Plan and submitted correspondence to the U.S. Army Corps of Engineers (USACE) on 15 May 2019, indicating that they had no further comment on the Selected Remedies. Documentation of DTSC's concurrence is included as an attachment to this Decision Document (Attachment 1) and is

provided in the Administrative Record file at the San Luis Obispo Public Library, 995 Palm Street, San Luis Obispo, California 93403.

1.3 ASSESSMENT OF MRS 05

The Multi-Use Range Complex (MRS 05) comprises 2,626 acres situated north of Highway 1 and spans the width of the entire former training area with all ranges facing north to northeast. Multiple, overlapping ranges associated with this MRS include ranges for 3.5-inch rockets, rifles, mortars, squad defense training and close combat training. For more information on the historical use of MRS 05, see Section 2.2.

The objective of this Decision Document is to document the final selection of the remedial alternatives for the MRS that will meet the remedial objectives for each of the MRS sub-areas. The remedial objectives for each sub-area are to eliminate the unacceptable risk due to the presence of munitions within the MRS in order to ensure protection of human health and the environment. The Selected Remedies in this decision document are necessary to protect public health or welfare or the environment from unexploded military munitions on the surface and/or subsurface of MRS 05.

1.4 DESCRIPTION OF SELECTED REMEDY

Five remedial alternatives were evaluated for each MRS 05 sub-area. The Selected Remedies for each MRS 05 sub-area are presented in Table 1 – Selected Remedies for the MRS 05 Sub-areas.

Table 1 Selected Remedies for the MRS 05 Sub areas

MRS	Evaluated Alternatives for each MRS 05 Sub-area				
	Alternative 1 – No Further Action.	**Alternative 2** –ICs to Protect Current and Future Site Users.	**Alternative 3** – DoD Military Munitions[(1)] Removal from the Surface and ICs to Protect Current and Future Site Users.	**Alternative 4** – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users.	**Alternative 5** - Excavation, Sifting, Removal of DoD Military Munitions and Restoration
MRS 05-North		✓			
MRS 05-South				✓	
MRS 05-SR				✓	

[(1)] The term "Military Munitions" means all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the DoD, the Coast Guard, the Department of Energy, and the National Guard [see 10 United States Code (USC) §101(e)(4)(A) for a detailed definition].

AGC = Advanced Geophysical Classification

DoD = Department of Defense

DGM = Digital Geophysical Mapping

ICs = Institutional Controls

The Selected Remedies were based upon the ability to address unacceptable explosives risks posed by the presence of DoD Military Munitions remaining at the MRS 05. The Selected Remedies for MRS 05-North, MRS 05-South and MRS 05-SR are described in further detail in Section 2.12 of this Decision Document.

The Selected Remedy for MRS 05-North will be composed of the following ICs:

- 3Rs (Recognize, Retreat, Report) Education Awareness Program.
- Site-specific Emergency Contact Information.
- Informational signs.

The Selected Remedy for both MRS 05-South and MRS 05-SR will be a remedial action composed of:

- Boundary surveying.
- Vegetation clearance, as applicable and appropriate.
- Surface clearance.
- DGM (with traditional or AGC sensors).
- Intrusive investigation of geophysical anomalies and removal of subsurface munitions.
- 3Rs (Recognize, Retreat, Report) Education Awareness Program.
- Site-specific Emergency Contact Information.
- Informational signs.

DGM and/or AGC, along with surface clearance, will remove both surface and subsurface Munitions and Explosives of Concern (MEC) that present a threat at the site. While not a component of the Selected Remedies, Five-Year Reviews will be implemented to ensure the Selected Remedies remain protective of human health and the environment after implementation.

1.5 STATUTORY DETERMINATIONS

The Selected Remedy for MRS 05-North is Alternative 2 (ICs to Protect Current and Future Site Users). The Selected Remedy for both MRS 05-South and MRS 05-SR is Alternative 4 (DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users). Based on the information currently available, the Selected Remedies are protective of human health and the environment; comply with federal and state requirements that are applicable or relevant and appropriate to the remedial action (unless justified by a waiver); are cost-effective when evaluated against the nine criteria described in the NCP, 40 Code of Federal Regulations Section (§) 300.430(e)(9)(iii); and utilize permanent solutions and treatment to the maximum extent practicable. The Selected Remedies provide the best balance of tradeoffs when compared to the other evaluated alternatives with respect to the balancing and modifying criteria specified in the NCP. They provide the greatest reduction of risk within the constraints imposed by environmental conditions and reasonably anticipated future land use at a reasonable cost when compared with the other alternatives. The remedy for MRS 05-South and MRS 05-SR also satisfies

the statutory preference for treatment as a principle element of the remedy. The Selected Remedies are also acceptable to the community and DTSC, the state regulator.

USACE concluded from the results of the RI that there are no unacceptable human health or ecological risks at each of the MRS 05 sub-areas due to Munitions Constituents (MC) exposure; therefore, there were no contaminants of concern or related MC risks/hazards to be addressed in the development of Remedial Action Objectives (RAO) (Ref. 4).

Because the Selected Remedies may result in potential explosives hazards remaining on site, a statutory review will be conducted every five years after initiation of the remedial action to ensure that the Selected Remedies remain protective of human health and the environment after implementation.

1.6 DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary section (Part 2) of this Decision Document. Additional information can be found in the Administrative Record file.

- Summary of characterization of nature and extent of MEC (defined as unexploded ordnance [UXO], discarded military munitions [DMM], and MCs present in high enough concentrations to pose an explosives hazard), and MC (Section 2.2.1.6).
- Potential hazards represented by MEC (Section 2.7).
- RAO established for MEC and the basis for this objective (Section 2.8).
- How DoD Military Munitions will be addressed (Section 2.9.2).
- Current and reasonably anticipated future land use assumptions (Section 2.6).
- Potential groundwater and land use that will be available at the site as a result of the Selected Remedies (Sections 2.6.3 and 2.12.3, respectively).
- Estimated remedial action costs and the included Five-Year Review costs (Section 2.12).
- Key factors that led to selecting the remedies that describe how the Selected Remedies provide the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision (Section 2.10).

1.7 AUTHORIZING SIGNATURE

This Decision Document, prepared by USACE, Los Angeles District presents the Selected Remedies for MRS 05 – Multi-Use Range Complex, Project Number J09CA203105. USACE is the lead executing agency under the Defense Environmental Restoration Program (DERP) at MRS 05 and has developed this Decision Document in compliance with CERCLA, as amended by SARA and the NCP. This Decision Document will be incorporated into the larger Administrative Record file for MRS 05, which is available for public view at the San Luis Obispo Public Library, 995 Palm Street, San Luis Obispo, California 93403. This document, presenting the Selected Remedy (ICs to Protect Current and Future Site Users) for MRS 05-North and the Selected Remedy (DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users) for MRS 05-South and MRS 05-SR, with total cost estimates of $740,685 (MRS 05-North), $29,454,967 (MRS 05-South), and $6,893,442 (MRS 05-SR) (total cost estimate for MRS 05 is $37,089,094), is approved by the undersigned, pursuant to Memorandum, CEMP-CED (200-1a), 10 August 2019, subject: Re-delegation of Assignment of Mission Execution Functions Associated with Department of Defense Lead Agent Responsibilities for the Formerly Used Defense Sites Program.

APPROVED:

28 SEP 2020

JEFFREY L. MILHORN Date
Major General, US Army
Deputy Commanding General
for Military & International Operations

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PART 2: DECISION SUMMARY

The Decision Summary identifies the Selected Remedies, explains that remedial action is necessary to ensure protection of human health and the environment, and provides a substantive summary of the Administrative Record file that supports the remedy selection decisions.

2.1 NAME, LOCATION, AND BRIEF DESCRIPTION

MRS 05 is depicted on Figure 1 and Figure 2. MRS 05, located approximately 8 miles east of the Pacific Ocean at Morro Bay and approximately 5 miles northwest of U.S. Highway 101, between the cities of San Luis Obispo and Morro Bay, comprises 2,626 acres.

USACE, Los Angeles District is the executing agency for the military munitions response at MRS 05 (Federal Facilities Identifier: CA99799F688000), which is composed of formerly-used artillery ranges, small arms ranges, mortar, rocket and grenade practice ranges. DTSC is the regulatory support agency for the military munitions response at MRS 05. The source of funding is the DERP.

MRS 05 is one of several MRSs that are collectively referred to as the CSLO MRSs. MRS 05 has been subdivided into three sub-areas: MRS 05-North, MRS 05-South and MRS 05-SR. The land within MRS 05-North is 904.8 acres and used mainly for recreational and agricultural (grazing only) purposes. MRS 05-South is 1,450.7 acres and used primarily for recreational and ranching purposes, including development of existing or new ranching facilities). MRS 05-SR is 270.5 acres and is used primarily for recreational (public shooting range) and agricultural purposes, which will include maintenance and renovation of the shooting range.

2.2 CSLO and MRS 05 HISTORY

CSLO was established in 1928 by the State of California as a National Guard Camp. Identified at that time as Camp Merriam, it originally consisted of 5,800 acres. The U.S. Army took over Camp Merriam and renamed it Camp San Luis Obispo in 1940. Additional lands (including MRS 05) were added in the early 1940s until the total acreage reached 14,959. Although the available historical information does not indicate how the land was transferred from the State of California to the Department of the Army, historical records do indicate that between 1945 and 1952, the Department of the Army owned and leased land used for CSLO. The records, which are inventories of owned, sponsored and leased facilities, indicate that the maximum amount of land owned was 12,958 acres between 1946 and 1948, along with 6,069 acres leased through four leases. (Note that not all land was owned or leased at the same time and the maximum size of CSLO was 14,959 acres.) During World War II (WWII), CSLO was used by the U.S. Army from 1943 to 1946 for infantry division training. Uses of the camp included artillery ranges, small arms ranges, mortar, rocket and grenade practice ranges. There were 27 ranges and 13 training areas located on CSLO during WWII (Ref. 4).

Following the end of WWII, a small portion of the camp land was returned to its former private owners. The U.S. Army was making arrangements to relinquish the rest of CSLO to the State of California and other government agencies when the conflict in Korea started in 1950. The camp was reactivated at that time (Ref. 4).

The U.S. Army used the former camp during the Korean Conflict from 1951 through 1953 when the Southwest Signal Center was established for the purpose of signal corps training. Eighteen ranges and 16 training areas were present at CSLO during the Korean Conflict. A limited number of these ranges and training areas were used previously during WWII. Following the Korean Conflict, the camp was maintained in inactive status until it was relinquished by the Army in the 1960s and 1970s. Approximately 4,685 acres were relinquished to the General Services Administration (GSA) in 1965. GSA then transferred the property to other agencies and individuals beginning in the late-1960s through the 1980s. Most of the property was transferred for educational purposes (e.g., California Polytechnic State University [Cal Poly] and Cuesta College). A large portion of CSLO, the original 5,800 acres, has been retained by the California National Guard (CNG) and is not part of the FUDS program. In the ASR completed in 1994, 9,159 acres of CSLO were identified as eligible for the DERP FUDS (Ref. 1).

The Multi-Use Range Complex (MRS 05) consists of approximately 2,626 acres situated north of Highway 1 and spanning the width of the entire former training area, with all ranges facing north to northeast. Multiple, overlapping ranges associated with this MRS include ranges for 3.5-inch rockets, rifles, mortars, squad defense training and close combat training. It is important to note that many of these ranges and range fans overlap.

The following types of munitions are suspected or known to have been used in MRS 05:

- Projectile, 105 millimeter (mm) high explosive (HE).
- Projectile, 105mm Smoke.
- Projectile, 75mm Shrapnel.
- Projectile, 37mm HE.
- Rocket, 5-inch HE.
- Rocket, 2.36-inch HE Anti-tank (HEAT).
- Rocket, 2.36-inch Practice.
- Rocket, 3.5-inch HE, Practice.
- Mortar, 3-inch Stokes.
- Mortar, 81mm HE.
- Mortar, 81mm white phosphorus (WP).
- Mortar, 60mm HE.

2.2.1 Site Investigation History

In 1986, Congress established the DERP for cleanup of active and former military sites. Based on its past use as a combat training area, MRS 05 was designated a FUDS in 1994, and became eligible for cleanup funding under this program. Previous investigations were conducted at MRS 05 from 1946 to 2018. These investigations that are specifically related to MRS 05 are summarized below.

2.2.1.1 1946 Surface Clearance

According to U.S. Army correspondence from 1964, all the range impact areas, including MRS 05, were cleared by Explosive Ordnance Disposal personnel and recovered items disposed of in 1946. No information regarding types of munitions or disposition of munitions was noted (Ref. 2).

2.2.1.2 1986 and 1993 Preliminary Assessments

USACE, Los Angeles District prepared multiple Preliminary Assessments (PAs) in 1986 for individual portions of CSLO. The individual PAs were superseded by a more comprehensive PA that included the entire CSLO acreage, including MRS 05, prepared in 1993 by USACE, Los Angeles District. The 1993 PA determined that CSLO, including MRS 05, was used for various military activities (e.g., artillery and small arms training, including mortar, rocket and grenade ranges) that included the use of DoD Military Munitions and could constitute a public safety hazard (Ref. 1).

2.2.1.3 1992 Time-Critical Removal Action

In 1992, USACE performed an UXO Removal Action on approximately 95 acres of MRS 05 and MRS 07. The 1992 Time Critical Removal Action (TCRA) Report indicated that no UXO items were observed in the impact areas within MRS 05 (Ref. 9).

2.2.1.4 1994 and 2004 Archives Search Report and Supplement

The ASR was completed by USACE, Rock Island District in September 1994 (Ref. 1). The ASR presented its findings of an historical records search and site inspection for ordnance and explosive waste at the CSLO MRSs (including MRS 05) that included confirmed ordnance presence based on available records, as well as an evaluation of potential ordnance contamination based on site ordnance components and site information. During the ASR site visit (18-24 October 1993), the survey team discovered several abandoned vehicles identified as munitions targets within MRS 05. The ASR reported that 9,159 acres of CSLO were eligible for the DERP-FUDS. The CNG was active (and remains so) on 5,800 acres of the former camp; therefore, those 5,800 acres were ineligible for DERP-FUDS. Included in Appendix E (Document E14) of the ASR is a reference to the 1992 UXO removal action completed at CSLO.

The ASR Supplement was completed by USACE, Rock Island District in 2004 (Ref. 10) and summarized the information from the 1994 ASR and other associated investigations. The ASR Supplement provided a summary of the retained MRSs (including MRS 05), the acreage for each MRS, and other pertinent information. The ASR Supplement provided a breakdown for each MRS with the standard range configuration based on the use of each MRS. The MRSs identified in the ASR Supplement for CSLO, their suspected acreage, and types of munitions include:

- MRS 01 – Grenade Court, Range 25; 10 acres; MKII, hand grenade; M21, practice hand grenade; M9A1, rifle grenade, anti-tank.
- MRS 02 – Grenade Court, Range 26; 16 acres; MKII, hand grenade; M21, practice hand grenade; M9A1, rifle grenade, anti-tank.
- MRS 03 – Grenade Court, Range 27; 24 acres; M21, practice hand grenade; M62, practice hand grenade.
- MRS 04 – Grenade Court, Range 17; 2 acres; MKII, hand grenade; M21, practice hand grenade; M9A1, rifle grenade, anti-tank.

- MRS 05 – Multi-Use Range Complex; 2,049 acres; small arms, general; M28, rocket, HEAT, 3.5-inch.

2.2.1.5 2006 Draft Preliminary Historical Records Review

In July 2006, a Draft Preliminary HRR Report was completed for CSLO (including MRS 05) and Baywood Park Training Area by USACE, St. Louis District. The HRR was primarily focused on identifying historical activities that might potentially generate the presence of hazardous substances with an emphasis on establishing the types, quantities, and areas of MEC and chemical warfare activities. The report concentrated on verifying findings of previous studies and supplementing them, if possible, with particular emphasis on filling "data gaps" (Ref. 2).

2.2.1.6 2007 Site Inspection

The SI was performed to evaluate evidence for the presence of DoD Military Munitions and MC at the CSLO MRSs (including MRS 05). The objective of the SI was to determine whether MRSs identified within CSLO warranted subsequent characterization as part of an RI/FS, No DoD Action Indicated, or a TCRA. To accomplish this objective, Qualitative Reconnaissance and MC sampling were performed (Ref. 3).

Munitions Debris (MD) associated with 81mm, 60mm, 4.2-inch mortars; 3.5-inch rockets; 37mm, 75mm, and 105mm projectiles; and fuzes were observed in MRS 05. (Note: Based on a review of records and databases by USACE, there is no information to indicate that 4.2-inch mortars used at CSLO were chemical munitions.) In addition, small arms debris was also observed.

During the SI, no explosives were detected in surface soil, but antimony and copper exceeded background concentrations in MRS 05. Evaluation of those MC in a Screening Level Human Health Risk Assessment determined that exposures at the reported surface soil concentrations did not pose significant human health risks.

Only one MC (copper) slightly exceeded the ecological screening levels at MRS 05 during the Screening Level Ecological Risk Assessment (SLERA). The SLERA concluded that copper is not present at a concentration that would pose an unacceptable potential for risk to the health of ecological receptors.

The Final SI Report recommended MRS 05 for TCRA, ICs and RI/FS with further environmental sampling recommended for all media. This recommendation is based on numerous reports of MEC and MD and factors such as population density and current land use, as well as confirmed presence of MEC and MD. SI data demonstrated the need for characterizing all media at MRS 05.

2.2.1.7 2009 Environmental Security Technology Certification Program (ESTCP) Wide Area Assessment (WAA)

During an ESTCP UXO classification pilot study using WAA at a 10-acre test area in MRS 05, over 2,500 anomalies were identified and 26 UXO items were blown in place. UXO that were found included (18) 60mm HE mortars, (4) 81mm HE mortars, a 37mm HE projectile, a 5-inch HE rocket warhead, a 2.36-inch HEAT rocket (model not indicated) and a 3-inch Stokes mortar. Four of the

UXO items were found on the surface, while the remainder were found in the shallow subsurface (Ref. 11).

2.2.1.8 2010 Time Critical Removal Action

A TCRA was conducted during the autumn of 2010 on approximately 170 acres of MRS 05. The TCRA consisted of detector-aided visual surface sweeps (using 200 foot [ft] by 200 ft grids) to locate MEC. The MEC was detonated on-site and the MD was removed from the site to facilitate identification of MEC. Approximately 5,500 pounds of MD were inspected, certified clear of hazardous/explosives material, and removed from the site. Twenty-three MEC items were located and detonated on-site during the TCRA field activities. An additional task during the TCRA was to place nine warning signs indicating potential UXO hazards in the area. The signs were placed at locations identified by Cal Poly and San Luis Obispo County (Ref. 12).

Table 2 summarizes the UXO discovered and detonated on-site during the TCRA field activities.

Table 2: 2010 TCRA UXO Items

MEC Item Identification	Quantity	Condition
M43, 81mm HE mortar w/M525 Point Detonating (PD) fuze	5	Armed
3-inch Stokes mortar (no fuze)	1	Unfuzed
2.36-inch rocket warhead (model not indicated)	1	Unfuzed
M49A2, 60mm HE mortar w/M525 PD fuze	10	Armed
M19A1, WP rifle grenade w/M9A1 fuze	1	Armed
M6A1, 2.36-inch HEAT rocket	1	Armed
M49A2, 60mm HE mortar / unfuzed	4	Unfuzed

MC samples were collected from six grids during the demolition process. Samples were collected before and after detonation. Fifteen samples were collected and analyzed as part of the investigation. Analytical results for all soil samples were below stated project goals and did not indicate any MC left behind resulting from the detonation activities.

2.2.1.9 2010 Historic Map and Aerial Photo Analysis

USACE, St. Louis District completed an historical map and aerial photography analysis of CSLO. In this report, several ranges associated with MRS 05 were identified including mortar/machine gun ranges, rocket ranges, and small arms ranges (Ref. 13).

2.2.1.10 Additional Munitions and Munitions-Related Findings

Local property owners such as Cal Poly (i.e., within MRS 05) have discovered DoD Military Munitions in the past during routine facility maintenance activities. The following text summarizes some of the non-investigation related munitions finds:

- DTSC conducted informal site visits at CSLO in 2006 and 2007. During the site visits, the teams encountered the following items and recorded their coordinates.

- 3-inch rocket debris.
- Rifle grenade debris.
- 60mm tail fin.
- 81mm WP mortar, intact.
- 81mm HE mortar, intact.
- 4.2-inch mortar debris.
- Various berms, bunkers, and crater features.

The San Luis Obispo County Sheriff was dispatched to dispose of the two intact mortars.

- The ASR identified and reported numerous accounts of MEC and MD observed on property owned by Cal Poly (i.e., within MRS 05) over the years. Munitions that were identified include bazooka rounds, WP items, hand grenades, an 81mm round, and an artillery round. Also reported in the ASR, explosive ordnance has been found at the El Chorro Regional Park. Reportedly, a WP grenade was found on the County schools site in 1986 and a mortar was found on the adjacent property the same year. Research of San Luis Obispo County Bomb Squad responses for 1986 revealed removal of a hand grenade found on the San Luis Obispo County School site, but no 1986 response record was shown for a mortar round.

2.2.1.11 2011-2018 Remedial Investigation/Feasibility Study

USACE conducted an RI to characterize the nature and extent of DoD Military Munitions and MC, fill data gaps, and assess potential explosives safety hazards within the CSLO MRSs (including MRS 05). The FS evaluated remedial alternatives for their ability to eliminate the unacceptable explosives risks associated with munitions posed to property owners and the general public (Ref. 4).

RI field operations were conducted at the MRS 05 from September to December 2011. The RI included a geophysical survey using DGM towed-array and man-portable equipment. The RI also included environmental sampling, including sampling of background soil and analysis. DoD Military Munitions were recovered during the intrusive investigation. The geophysical and soil sampling data collected during the RI identified the boundaries of the potential impact areas, while the results of previous investigations at the CSLO MRSs provided data to identify the potential munitions present. Collectively, these investigations, which bounded the impact areas and identified the munitions potentially present, satisfied the criteria for characterizing the nature and extent of munitions present.

Following the completion of the RI field operations, USACE performed a Treatability Study within a portion of MRS 05-South to evaluate the AGC process (from data collection through data analysis and intrusive investigation). USACE used data collected during the Treatability Study in the Final RI/FS Report to develop anomaly densities and to calculate cost estimates for Remedial Action Alternatives involving AGC (Ref. 14). Cost estimates presented in the RI/FS Report have been revised to costs for completing the remedial actions as calculated using Remedial Action Cost Engineering and Requirements (RACER) version 11.6. Summary worksheets supporting the revised cost estimates are included in Attachment 6.

Munitions and Explosives of Concern Characterization

The acreage associated with MRS 05 was identified as 2,523.2 acres at the beginning of the RI. RI fieldwork within the 2,523.2 acres of MRS 05 included 36.8 line miles of DGM transects and 23.6 line miles of analog geophysical surveys (Figures 3a, 3b and 3c). In addition, 2.9 line miles of DGM survey and 4.0 line miles of analog survey were completed outside the MRS boundary to ensure the extent of potential MEC contamination had been delineated. The density of geophysical anomalies observed within the additional transects along the southern boundary and in one area along the northwestern boundary were indicative of a potential target area; therefore, the MRS boundary was expanded to incorporate 102.8 acres in these areas (total acreage is 2,626 acres).

Based on the results of the RI, MRS 05 has been divided into new sub-areas to facilitate the evaluation of the potential hazards to human health posed by the potential presence of MEC in these areas. Figures 3a-c describe the results of the RI at the MRS 05 sub-areas. Figure 4 depicts the sub-area delineation (MRS 05-North, MRS 05-South, and MRS 05-SR). Figures 5a-c show the anomaly density for each MRS 05 sub-area. The sub-areas are summarized below:

- MRS 05-North sub-area consisting of 904.8 acres was developed because the area has a low density of MD/UXO based on results of RI data. In addition, people accessing the area is limited due to terrain and vegetation. No UXO and very few MD items were recovered, which suggests the MRS sub-area was used as a safety buffer area.
- MRS 05-South sub-area consisting of 1,450.7 acres was developed because the area has a high density of MD/UXO (average of 154 anomalies/acre with a maximum density of 986 anomalies/acre) based on results of RI data. In addition, it is likely that people will access the area based on current and future land use as an agricultural and recreational area. UXO and MD items were recovered in sufficient quantity and distribution to suggest the use of the MRS sub-area as target areas for rocket, mortar and artillery training. Investigation of 105.5 acres adjacent to the south and northwestern boundaries of MRS 05-South sub-area identified similar density of MD/UXO; therefore, the MRS boundary has been expanded to incorporate 102.8 acres in these areas.
- MRS 05-SR sub-area consisting of 270.5 acres was developed because the area has a medium density of MD/UXO (average of 46 anomalies/acre with a maximum density of 409 anomalies/acre) based on results of RI data. In addition, it is likely that people will access the area based on current and future land use as a recreational shooting range. UXO and MD items were recovered in sufficient quantity and distribution to suggest the use of the MRS sub-area as target areas for mortar and rocket training.

Table 3 summarizes the results of the geophysical investigation at the MRS 05 sub-areas:

Table 3: Summary of RI Results at the MRS 05 Sub areas					
MRS Sub-area	**DoD Military Munitions Found**	**Average Calculated Geophysical Anomaly[1] Density**	**Maximum[2] Calculated Geophysical Anomaly Density**	**Estimated High Anomaly Density Areas within Sub-area**	**Estimated Total Anomalies within Sub-area[4]**
MRS 05-North	6 MD[3]	7/acre	0-10/acre at over 90% of the sub-area	None	6,335
MRS 05-South	13 UXO 2,594 MD	184/acre	986/acre	1,093 acres with >100/acre	267,352
MRS 05-SR	1 UXO 173 MD	113/acre	409/acre	11 acres with >100/acre	30,510

[1] Anomaly is defined as subsurface metallic material that may or may not be MEC or MD.

[2] Based on the available data, USACE determined that anomaly density of greater than 400 anomalies/acre may be indicative of potential impact areas.

[3] MD does not include small arms or small arms debris.

[4] Details regarding the calculations for estimated total anomalies are provided in Section 5.3.1.4 of the Final RI/FS Report (September 2018).

Munitions Constituents Characterization

Surface soil sampling (0-6 inches below ground surface [bgs]) within MRS 05-North, MRS 05-South and MRS 05-SR for MC was performed at selected locations where visual and geophysical data indicated the highest suspected contamination (i.e., areas with higher relative density of MD or instances of UXO). Sediment sample locations were based on downslope locations of creek beds near the areas of high density anomalies (MRS 05-South). These samples were analyzed to evaluate whether the MCs identified as contaminants of potential concern (COPCs) (explosives and select metals [antimony, copper, lead, and zinc]) remained at MRS 05 as a result of prior military actions and if they would contribute to an environmental risk/hazard to human and ecological receptors. The locations of these biased samples were considered to be potential sources and were used to determine whether a release had occurred. Additionally, pre- and post-Blow in Place (BIP) soil sampling was implemented during RI field data collection at six locations where BIP of UXO was conducted (MRS 05-South). Background soil samples were collected during the RI field activities to develop background concentrations. All soil and sediment samples collected were discrete samples. The information below summarizes MC characterization at MRS 05.

- MRS 05-North – One surface soil sample was collected in the area where MD was observed.
  - Explosives – All analytical results for explosives were reported as non-detects at concentrations less than the risk-based screening limits.
  - Metals – Analytical results indicate the presence of metals in the soil samples. All metals results were below the background 95% upper tolerance limit (UTL) established for each analyte, which indicates that no release occurred as a result of the presence of MD.

- MRS 05-South – Twenty-nine surface soil samples were collected in MRS 05-South.
  - Explosives – All analytical results for explosives were reported as non-detects at concentrations less than the risk-based screening limits.
  - Metals – Analytical results indicate the presence of metals in the soil samples. Concentrations of metals in the soil samples collected exhibited concentrations above background levels, indicating a potential release of metals due to historical military activities. All results were below human health screening criteria; therefore, a human health risk assessment was not applicable. Because sampling results exceeded ecological screening criteria, antimony, copper, lead and zinc were retained as contaminants of potential ecological concern for MRS 05-South and were evaluated in the SLERA.
  - Sediments – Six sediment samples were collected from the San Luisito Creek in MRS 05-South. Nitroglycerin was detected in one sample; however, this concentration is well below the screening levels and no other explosives were detected. All metals results were below background concentrations. Based on the sample results, it is concluded that there has been no release into the sediments at MRS 05-South, and no further evaluation of COPCs is required.
  - BIP Samples – Biased, discrete surface soil samples were taken at each location before and after the BIP of UXO items. Results of the pre- and post-BIP sample results were then compared. Two post-BIP samples indicated a potential release of lead and copper. The jet perforators used during the BIP operations are manufactured using both copper (perforator cone) and lead (soldering for the cone to perforator connection). These analytes have been retained in MRS 05-South as contaminants of potential ecological concern and were further evaluated in a SLERA.
  - SLERA – Results of the SLERA for soil samples collected in MRS 05-South indicated that, while maximum observed concentrations of antimony, copper, lead and zinc are suggestive of potential releases at MRS 05-South, data suggests that the magnitude and extent of any releases were limited, and overall exposures are similar to background conditions. Therefore, it is unlikely that unacceptable risk exists from chemical constituents in soil at MRS 05-South. Results of the SLERA for lead identified in post-BIP samples found that because the mean concentration of lead exceeds the soil screening level for only the most sensitive ecological receptor and the total area represented by the six BIP samples is 0.09 acre, unacceptable risks from lead to ecological receptors in the post-BIP area is not expected. In addition, the results of the SLERA for copper found that risk to ecological receptors from copper cannot be ruled out in this very small, localized area; however, due to the very limited area of the release, unacceptable risks to ecological receptors are not expected.

- MRS 05-SR – One surface soil sample and field duplicate were collected in MRS 05-SR.
  - Explosives – All analytical results for explosives were reported as non-detects at concentrations less than the risk-based screening limits.
  - Metals – Analytical results indicate the presence of metals in the soil samples. All metals results were below the background 95% UTL established for each analyte, which indicates that no release occurred as a result of the presence of UXO and MD.

Remedial Investigation Results Conclusions

The primary objective and purpose of the RI was to characterize MEC and MC contamination present in the identified investigation areas at MRS 05 and to assess potential MEC and MC risks/hazards to human health or the environment that might result from that potential contamination. The following are the conclusions for each MRS 05 sub-area related to MEC.

- MRS 05-North, consisting of 904.8 acres, was developed because the area has the lowest density of MD/UXO with an estimated mean density of 2 MD/UXO per acre and a density of between 0 and 10 MD/UXO per acre at over 90% of the sub-area. The area also has an average geophysical anomaly density of 7 anomalies per acre. No UXO items and six MD items were observed within the sub-area during the RI field operations. No previous investigations have been conducted in this area. Current and future land use for MRS 05-North is expected to remain unchanged and continue to be used mainly for recreational and agricultural (ranching) purposes. Access to the area is very limited due to steep terrain and limited roads. Recreational and agricultural (ranching) activities are not anticipated to result in any intrusive activities. Therefore, exposure pathways for human receptors to encounter MEC are considered potentially complete for MRS 05-North where MD have been identified.
- MRS 05-South, consisting of 1,450.7 acres (including 102.8 acres of additional investigation area), was developed because the area has the highest density of MD/UXO with an estimated mean density of 154 MD/UXO per acre, a maximum density of 986 MD/UXO per acre, and 1,093 acres having an estimated density over 100 MD/UXO per acre. The area also has an average geophysical anomaly density of 184 anomalies per acre. Thirteen UXO items and 2,594 MD items were observed within the sub-area during the RI field operations. UXO and MD have been identified in the area during previous investigations. Current and future land use for MRS 05-South is expected to remain unchanged and continue to be used mainly for recreational and agricultural purposes by Cal Poly. The property within this sub-area is primarily owned and operated by Cal Poly School of Agriculture with student programs to demonstrate modern ranching practices. Recreational and agricultural (ranching) activities are not anticipated to result in any excavations deeper than 2 ft bgs. Therefore, exposure pathways for human receptors to encounter MEC are considered complete for MRS 05-South where UXO and MD have been identified.
- MRS 05-SR, consisting of 270.5 acres, was developed because the area has a medium density of MD/UXO with an estimated mean density of 46 MD/UXO per acre, a maximum density of 409 MD/UXO per acre, and 11 acres having an estimated density over 100 MD/UXO per acre. The area also has an average geophysical anomaly density of 113 anomalies per acre. One UXO item and 173 MD items were observed within the sub-area during the RI field operations. No previous investigations have been conducted in this area. Current and future land use for MRS 05-SR is expected to remain unchanged and continue to be used mainly for recreational and agricultural purposes, including a public shooting range. The property within this sub-area is operated by the San Luis Obispo Sportsmen's Association with a variety of ranges throughout the area open for public use. Recreational (including the public shooting range) and agricultural (ranching) activities are not anticipated to result in any excavations deeper than 2 ft bgs. Therefore, exposure pathways

for human receptors to encounter MEC are considered complete for MRS 05-SR where UXO and MD have been identified.

- MRS 05 Boundary Recommendation – Based on the RI, the boundary of MRS 05 has been expanded to incorporate an additional 102.8 acres in which UXO and a high density of MD were identified. Following the completion of the RI field operations, the boundary of MRS 05 was updated in the FUDS Management Information System. The updated acreages are listed in Table 4. The revised acreage for the MRS and sub-areas was used in the FS.

Table 4: Revised MRS 05 Acreage

MRS 05 Sub-area	MRS Acreage at Beginning or RI	RI Fieldwork Operations Acreage	FS Analysis Acreage[(1)]
MRS 05-North	N/A	905.1	904.8
MRS 05-South	N/A	1,453.0	1,450.7
MRS 05-SR	N/A	270.6	270.5
TOTAL	**2,523.2**	**2,628.7**	**2,626**

[(1)] Following the completion of the RI field operations, the boundary for MRS 05 was modified in the FUDS Management Information System, which resulted in changes to the overall acreage and the sub-areas.

A complete detailed listing of the investigation results for MRS 05 is contained in the Final RI/FS Report (Ref. 4).

2.2.2 Enforcement History

The DoD is the sole entity responsible for the potential presence of DoD Military Munitions and mitigation of any explosives hazards associated with the presence of munitions. No enforcement activities (other than the public notices regarding the RI/FS [Attachment 4]) have been undertaken to date.

2.3 COMMUNITY PARTICIPATION

In accordance with CERCLA, DoD, and U.S. Army regulations, USACE, Los Angeles District has conducted public involvement activities and provided the public opportunities to participate throughout the RI/FS Report, Proposed Plan, and Decision Document processes by hosting public meetings during the site characterization and remedial alternative selection process, and establishing and maintaining a publicly accessible Administrative Record file for the site. While coordinating with property owners/managers to obtain Rights of Entry for field investigations, USACE, Los Angeles District also requested input regarding reasonably anticipated future land use at MRS 05. USACE, Los Angeles District met with the current property owner on 30 May 2019 to discuss current and reasonably anticipated future land use. Community involvement was also facilitated through fact sheets, site visits and public notices published in the *San Luis Obispo County Tribune* (local newspaper) and at public meetings during the site characterization and remedy selection process when community members were invited to provide comments and recommendations regarding munitions response investigations and results and input regarding reasonably anticipated future land uses. USACE considered the public comments in determining which proposed remedial alternative would be most appropriate for MRS 05. USACE also prepared a Community Relations

Plan in 2018 to help ensure the public is informed about and involved in cleanup decisions at MRS 05, in accordance with CERCLA.

The Proposed Plan (Ref. 5) was presented during a public meeting. Notification of the Proposed Plan public comment period, schedule for the Public Meeting, and availability of the Administrative Record File were published in the *San Luis Obispo County Tribune* between May 2019 and June 2019 (Attachment 4). USACE, Los Angeles District held the public meeting on 22 May 2019, at the Ludwick Community Center, to: (1) present the recommendations of the Proposed Plan; (2) update community members and stakeholders about the status of the Proposed Plan and Decision Document for the site; and (3) accept comments on the Proposed Plan and Preferred Alternatives for the site. Four community members attended the meeting in addition to a representative from DTSC and one representative from the local media. The main concern expressed by the public was the schedule for completing work at MRS 05. There were no further questions or comments provided by meeting attendees that required revisions to the Proposed Plan. The transcript of the public meeting is included in Attachment 5. The Final RI/FS Report (Ref. 4) and the Proposed Plan (Ref. 5) documents were made available to the public prior to the comment period through the Administrative Record file located at:

San Luis Obispo Public Library
955 Palm Street, San Luis Obispo, California 93403
Contact: (805) 781-5991

Other public meetings have been held during the TCRA in 2010, prior to the RI fieldwork in 2011, and during the development of the RI/FS Report in 2018 to present information to the community about the history and potential hazards associated with the CSLO MRSs. In addition, warning signs were posted along access points to the MRSs during the 2010 TCRA.

Comments to the Proposed Plan (Ref. 5) were accepted during a public comment period that began on 1 May 2019 and ended on 7 June 2019. All stakeholder (DTSC, Cal Poly, U.S. Forest Service [USFS], California Department of Fish and Wildlife [CDFW]) and public comments included in the Responsiveness Summary were reviewed and considered in preparing this Decision Document. Note that the comments received addressed both MRS 05 specifically, as well as all of the CSLO MRSs. All comments were reviewed and taken into consideration.

2.4 SCOPE AND ROLE OF RESPONSE ACTION

Based on the findings presented in the Final RI/FS Report, there is no unacceptable human health or ecological risk at any of the MRS 05 sub-areas due to MC exposure; therefore, there were no contaminants of concern or related MC risks/hazards to be addressed in the development of RAOs (Ref. 4). The scope of the response actions is only to address unacceptable explosives risks posed by the presence of DoD Military Munitions at MRS 05-North, MRS 05-South and MRS 05-SR; therefore, the Selected Remedies are designed to address unacceptable explosives risks posed by the presence of DoD Military Munitions potentially remaining at the MRS 05 sub-areas. Actions for the Selected Remedies for MRS 05-South and MRS 05-SR, Alternative 4, include:

- Boundary surveying.
- Vegetation clearance, as applicable and appropriate.

- Surface clearance.
- DGM and/or AGC.
- Intrusive investigation of geophysical anomalies and removal of subsurface munitions.
- 3Rs (Recognize, Retreat, Report) Education Awareness Program.
- Site-specific Emergency Contact Information.
- Informational signs.

The Selected Remedy for MRS 05-North is Alternative 2, which includes the following actions:

- 3Rs (Recognize, Retreat, Report) Education Awareness Program.
- Site-specific Emergency Contact Information.
- Informational signs.

This Decision Document presents the final response actions for MRS 05-North, MRS 05-South and MRS 05-SR, and addresses unacceptable explosives risks at each MRS 05 sub-area through their Selected Remedies. The Selected Remedies presented in this decision document support USACE's overall strategy to address DoD Military Munitions at the property, in accordance with U.S. Environmental Protection Agency (USEPA) guidance (Refs. 15 and 16). In addition, the Selected Remedies allow for the current land uses to continue and allow for reasonably anticipated future land uses. MRS 07 will be remediated pursuant to a separate Decision Document.

2.5 MRS 05 SITE CHARACTERISTICS

This section provides an overview of the MRS 05 characteristics, including: surface and subsurface features, the RI munitions investigation strategies, the conclusions of the MC sampling program, and the expected hazards potentially posed by MEC that may be present based on investigation results.

2.5.1 Conceptual Site Model

Separate Exposure Pathway Diagrams for the revised Conceptual Site Models (CSM) for MRS 05-North, MRS 05-South, and MRS 05-SR, which were created based on the results of the RI, are provided as an attachment to this Decision Document (Figures 6, 7 and 8). Each Exposure Pathway Diagram for the CSMs represents the relationships between the former military use of each MRS 05 sub-area, current and future land use, the potential for people to encounter DoD Military Munitions, and any environmental features that may have an impact on proposed MRS 05 sub-area activities and/or decisions. Each CSM created during the planning phase of the RI and then revised based on the results of the RI, were developed in accordance with the USACE's *Conceptual Site Models - Engineer Manual 200-1-12* (Ref. 16), to communicate MRS 05 sub-area conditions, at the time of development, to project team members and stakeholders and to identify data gaps. Accordingly, each CSM provides the basis for identifying and evaluating potential MEC exposure hazards to the public.

For each MRS 05 sub-area, the CSM and exposure pathways for MC and MEC have been reviewed and revised to incorporate new information concerning MC and MEC presence, potential receptors, and site accessibility.

Based on the results of the RI, no explosives were detected in soil samples at any of the MRS 05 sub-areas. Therefore, the pathway for exposure to explosives in soil is incomplete at all MRS 05 sub-areas.

Results for metals in MRS 05-North sub-area were below the background UTL levels; therefore, it is unlikely that a release of MC occurred in this sub-area. The exposure pathway for metals is considered incomplete for all receptors (Figure 6). Additionally, no metals were detected above the background levels in MRS 05-SR; therefore, it is unlikely that a release of MC occurred in this sub-area. The exposure pathway for metals is considered incomplete for all receptors (Figure 6).

For MC metals, antimony, copper, lead and zinc were detected in MRS 05-South sub-area above site background levels, which indicate a potential release of MC. The exposure pathway for metals is considered complete for ecological receptors and incomplete for human receptors (i.e., residents, construction workers, commercial/industrial workers, visitors/recreational users) in this sub-area (Figure 7). Because sampling results exceeded ecological screening criteria and indicated a potential release of MC at MRS 05-South, antimony, copper, lead and zinc were retained as Contaminants of Potential Ecological Concern and were evaluated in a SLERA. Results of the SLERA for soil samples collected in MRS 05-South indicated that, while maximum observed concentrations of antimony, copper, lead and zinc are suggestive of potential releases at MRS 05-South, data suggests that the magnitude and extent of any releases were limited, and overall exposures to all receptors are similar to background conditions. Therefore, it is unlikely that unacceptable risk exists from chemical constituents in soil at MRS 05-South.

For the MRS 05 sub-areas, the CSMs and exposure pathways for MEC have been reviewed and revised to incorporate new information concerning MEC presence, potential receptors, and site accessibility. Based on historical information for MRS 05-North, munitions-related activities likely occurred within this MRS sub-area. The exposure pathway is considered potentially complete because while no MEC was found, MD was recovered within MRS 05-North. Based on previous investigations results and findings of MD, it was determined that MEC could be present and people, such as residents, construction workers, commercial/industrial workers, and visitors/recreational users, could possibly encounter MEC (Figure 6).

UXO was observed and removed from MRS 05-South (13 UXO items ranging from 1 to 30 inches bgs) and MRS 05-SR (1 UXO item at 10 inches bgs) during RI field activities. As a result of the RI findings, the surface and subsurface MEC exposure pathways for MRS 05-South and MRS 05-SR are considered complete (Figures 7 and 8). Based on the results and findings from previous investigations of MD, it was determined that MEC could be present and people, such as residents, construction workers, commercial/industrial workers and visitors/recreational users, could possibly encounter MEC (Figures 7 and 8).

2.5.2 MRS 05 Site Features

MRS 05 (2,626 acres) is situated along California State Highway 1, approximately 8 miles east of

the Pacific Ocean (at Morro Bay) and approximately 5 miles northwest of U.S. Highway 101 between the cities of San Luis Obispo and Morro Bay on the western slopes of the Santa Lucia Range (Figure 1). The MRS consists of moderate hills (in the south) to steeper hills/mountains in the northern and northeastern areas of the MRS. Terrain varies from nearly level to very steep, and the elevation ranges from 300 to 3,400 ft.

2.5.3 Soil

A large portion of MRS 05 consists of rolling hills and mountains with three categories of soils occurring within: alluvial plains and fans; terrace soils; and hill/mountain soils. Soils associated with the alluvial plains and fans occur mainly adjacent to stream channels. Near the southern boundary of MRS 05, where the slope is nearly level to moderately sloping, the surface layer is coarse sandy loam to shaley loam. Soils in steeper areas tend be silty clay, clay loam and clay.

2.5.4 Surface Water and Wetlands

MRS 05 is located in the Estero Bay and Salinas Hydrologic units and the Morro Creek-Frontal Pacific Ocean and Santa Margarita Creek-Salinas River watersheds. Chorro Creek-Frontal Morro Bay (draining west) and Santa Margarita Creek (draining east) are the predominant sub-watershed. Several creeks are located within MRS 05, including Walters Creek, Chumash Creek, Pennington Creek, Dairy Creek, San Luisito Creek and Chorro Creek. Most of the creeks are intermittent tributaries of Chorro Creek, which drains west into the Pacific Ocean via Morro Bay.

The National Wetlands Inventory database, based on the Cowardin classification used by the U.S. Fish and Wildlife Service (USFWS), was used as a baseline to develop a general idea of how many acres and what types of wetlands are found within MRS 05. Three types of wetlands are found within the entire MRS 05: freshwater emergent wetland (26.57 acres), freshwater forested/shrub wetland (22.38 acres) and riverine (29.23 acres).

2.5.5 Sampling Strategy

2.5.5.1 Munitions and Explosives of Concern Investigation

USACE, Los Angeles District performed the RI field investigations in 2011. A total of 36.8 line miles of DGM transects and 23.6 line miles of analog geophysical survey were collected within MRS 05. In addition, 2.9 line miles of DGM survey and 4.0 line miles of analog survey were completed outside of the MRS 05 boundary. Anomaly locations were identified for reacquisition, investigation and recovery.

Based on the results of the RI, MRS 05 was divided into new sub-areas to facilitate the evaluation of the potential hazards to human health posed by the potential presence of MEC in these areas (Figure 2). The sub-areas are summarized below:

- MRS 05-North sub-area (904.8 acres) was developed because the area has a low density of MD/UXO based on results of RI data. In addition, people accessing the area is limited due to terrain and vegetation. No UXO and very few MD items were recovered, which suggests the use of the MRS sub-area as a safety buffer area.

- MRS 05-South sub-area (1,450.7 acres) was developed because the area has a high density of MD/UXO (average of 154 anomalies/acre with a maximum density of 986 anomalies/acre) based on results of RI data. In addition, it is likely that people will access the area based on current and future land use as an agricultural and recreational area. UXO and MD items were recovered in sufficient quantity and distribution to suggest the use of the MRS sub-area as target areas for rocket, mortar, and artillery training. Investigation of 105.5 acres adjacent to the south and northwestern boundaries of MRS 05-South sub-area identified similar density of MD/UXO; therefore, the MRS boundary has been expanded to incorporate these areas.
- MRS 05-SR sub-area (270.6 acres) was developed because the area has a medium density of MD/UXO (average of 46 anomalies/acre with a maximum density of 409 anomalies/acre) based on results of RI data. In addition, it is likely that people will access the area based on current and future land use as a recreational shooting range. UXO and MD items were recovered in sufficient quantity and distribution to suggest the use of the MRS sub-area as target areas for mortar and rocket training.

A description of all UXO, MD, and non-munitions-related debris recovered were recorded and incorporated into the project database (Ref. 4).

2.5.5.2 Media Sampling

MC sampling was conducted within the MRS 05 sub-areas as part of the RI fieldwork through a biased sampling program for explosives and metals (antimony, copper, lead and zinc) in surface soil (0 to 6 inches bgs). According to the Final RI/FS Report, there is no unacceptable human health or ecological risk in soil at the entire MRS 05 due to MC exposure (see Section 4.2) (Ref. 4).

2.5.5.3 Contaminants of Potential Concern

The Final RI/FS Report concludes that results from the RI field investigation, the MC soil sampling, and SLERA indicate there are no unacceptable human health or ecological risks at MRS 05 due to MC exposure; therefore, there were no contaminants of concern or related MC risks/hazards to be addressed in the development of RAOs (Ref. 4).

MEC and MD (see Table 5) were observed and removed from the MRS. The current land use would not have contributed MEC-related contamination (i.e., a small arms range would not result in the presence of large caliber UXO or MD). Therefore, the MD (excluding small arms debris) observed in this area during the RI field operations is the result of previous DoD use. Due to continued use of the site as a small arms range, no remediation of small arms debris will be implemented within the boundary of the San Luis Obispo Sportsmen's Association's public shooting range property.

2.6 CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

While coordinating with property owners/managers to obtain Rights of Entry for field investigations, USACE, Los Angeles District also requested input regarding future land use at MRS 05. Current and reasonably anticipated future land use are presented below.

2.6.1 Current Land Use

MRS 05 is primarily used for recreation and agricultural purposes:

- MRS 05-North – Current land use is mainly for recreation and agricultural (ranching) purposes.
- MRS 05-South – Current land use is recreational and agricultural purposes by Cal Poly. The property within this sub-area is primarily owned and operated by Cal Poly School of Agriculture with student programs to demonstrate modern ranching practices.
- MRS 05-SR – Current land use is recreational (including the San Luis Obispo Sportsmen's Association's public shooting range) and agricultural purposes by Cal Poly. The property within this sub-area is primarily owned by CDFW (which leases the property to the San Luis Obispo Sportsmen's Association).

Current land use within adjacent properties surrounding MRS 05 is primarily agricultural and educational on properties owned and operated by Cal Poly School of Agriculture with student programs to demonstrate modern ranching practices. Other adjacent properties include privately-owned ranch lands and USFS property (to the north), San Luis Obispo County Schools properties operated as educational facilities (to the east), Dairy Creek Golf Course owned by San Luis Obispo County (to the southeast), State of California property managed by CDFW (to the west), and the CNG Camp San Luis Obispo (to the east).

2.6.2 Future Land Use

Projected land use is expected to remain the same for all MRS 05 sub-areas. Based on input received from the project stakeholders during the technical project planning process, the depth of intrusion for reasonably anticipated future land uses (recreational and agricultural activities) at MRS 05-South and MRS 05-SR could be up to 24 inches bgs and limited to the surface for MRS 05-North.

2.6.3 Surface Water and Groundwater Use

USACE regulates discharges of dredged and fill material into waters of the United States, which includes many streams and wetlands such as those in MRS 05. Prior to implementing any necessary remedial actions at MRS 05, additional evaluation of surface water features may be required to determine hydraulic connection between wetlands and waters of the U.S. to determine the requirements for meeting the substantive requirements of the Clean Water Act 33 USC §1344.

MRS 05 is located north of the San Luis Obispo Valley Groundwater Basin and east of the Chorro Valley and Los Osos Valley groundwater basins. The Los Osos, Chorro, Walters, Chumash, Pennington, and Morro creeks provide drainage to the Los Osos Valley drainage basin, where water-bearing formations are found. Groundwater in the Los Osos Valley is found at depths from 10 ft to 50 ft bgs. The water-bearing zone is estimated to extend to a depth of 200 ft bgs and is drained by Chorro Creek and Los Osos Creek. Sediment debris is transported by these creeks into Morro Bay during hydrologic events (Ref. 4).

According to Cal Poly, surface water and groundwater within MRS 05 is used for agricultural purposes (livestock watering and irrigation of grasslands). No resources are used as drinking water.

Chorro Creek and its tributaries are managed as part of the Morro Bay National Estuary Program.

2.7 SUMMARY OF SITE POTENTIAL RISKS/HAZARDS

USACE, Los Angeles District conducted a screening assessment for MC and Hazard Assessment (HA) for MEC at MRS 05-North, MRS 05-South, and MRS 05-SR as part of the RI.

MRS 05-North, MRS 05-South and MRS 05-SR were assessed using the USEPA MEC HA, which assesses the current potential MEC hazard and how that hazard may be modified by the implementation of remedial alternatives. Each MEC HA is based on the results of the RI and the historical information available from prior studies. Detailed information regarding the MEC HA can be found in the Final RI/FS Report (Ref. 4).

It is USACE's current judgment that each Selected Remedy identified in this Decision Document is necessary to protect public health or the environment from potential surface or subsurface MEC explosive safety hazards at MRS 05-North, MRS 05-South and MRS 05-SR.

The USACE FUDS Military Munitions Response Program (MMRP) Risk Management Methodology (Ref. 18) will be implemented after the completion of any potential Selected Remedy to determine the residual risk to MEC at the site. In the event USACE determines the remaining risk is unacceptable, USACE will evaluate the need to implement additional remedial action activities. The remedial action will not be considered complete until the RAO is achieved.

2.7.1 Human Health Risks/Hazards

Potential surface and subsurface pathways exist for exposure to explosives hazards at the MRS 05 sub-areas. There is sufficient evidence for the potential for MEC to be present based on items that were identified during the RI field investigation. These included 6 MD items (MRS 05-North), 13 UXO items and 2,594 MD items (MRS 05-South), and 1 UXO item and 173 MD items at MRS 05-SR..

Based on the results of the RI MC soil sampling at the MRS 05 sub-areas, analytical result screening, and subsequent human health risk assessments, there is no indication of MC (explosives) releases and no expectation of an unacceptable risk to human health from MC (metals) at the MRS 05 sub-areas. Detailed information on analytical results are provided in the Final RI/FS Report (Ref. 4).

2.7.2 Biological Resource Analysis

All sub-areas of MRS 05 are USFWS-designated Critical Habitat for California red-legged frog (Rana draytonii) (federally threatened species). Pennington Creek, Dairy Creek and San Luisito Creek within MRS 05 are National Oceanic and Atmospheric Administration fisheries designated Critical Habitat for steelhead trout (Oncorhynchus mykiss) (federally threatened species). USACE previously conducted biological surveys at the MRS 05 sub-areas and found positive presence of California red-legged frog. In addition, two mapped occurrences of Chorro Creek bog thistle (Cirsium fontinale var. obispoense) (federally endangered species) are located within MRS 05-North (Figure 2-3 in the Final RI/FS Report).

The risk to ecological receptors associated with MEC is considered negligible because receptors are unlikely to interact with MEC in a way that may trigger a detonation. Based on the results of the RI MC soil sampling at the MRS 05 sub-areas, analytical result screening, SLERA, and subsequent risk assessments, there is no indication of MC (explosives) releases and no expectation of an unacceptable risk to ecological receptors from MC (metals) at the MRS 05 sub-areas. Detailed information on analytical results are provided in the Final RI/FS Report (Ref. 4).

2.8 REMEDIAL ACTION OBJECTIVES

RAOs drive the formulation and development of response actions. The aim is to achieve the NCP's threshold criteria of "Overall Protection of Human Health and the Environment."

Because USACE found that unacceptable ecological risks are unlikely from MC related to historical DoD operations within the MRS 05 sub-areas, the RAOs do not address chemical contamination, including MC-related contamination. Instead, the RAOs focus on the unacceptable explosives risks posed by the presence of DoD Military Munitions.

RAOs address specific goals for eliminating the unacceptable risk due to the presence of munitions within an MRS to ensure protection of human health and the environment (Ref. 5).

A factor considered in the RAOs is the anticipated depth of intrusion (digging) during activities conducted within the MRS and the depth to which munitions may be present. USACE based the depth of intrusion on the current and anticipated future land uses. The depth at which various munitions may be present, which USACE based on previous investigations, is included in Table 5. The depth of intrusion for future land uses at MRS 05-South and MRS 05-SR could be up to 24 inches bgs and limited to the surface for MRS 05-North. The maximum depth at which evidence of munitions has been observed is 30 inches bgs (and does not extend below the top of bedrock). It is not anticipated that munitions potentially present within the MRS 05 sub-areas will be present below 30 inches bgs. According to the vertical CSM in the Final RI/FS Report, the detection depth for the munitions identified at the MRS 05 sub-areas using traditional DGM and AGC equipment ranges between 60 inches (M485 155mm illumination projectile) and 15 inches (M38 37mm HE and low explosive [LE] projectile).

Based on historical information, previous investigations, and anticipated future land use, the following RAOs have been developed for the MRS 05 sub-areas:

MRS 05-North: To reduce the unacceptable risk of future recreational and agricultural users encountering DoD Military Munitions. It is anticipated future uses will consist of surface use.

MRS 05-South: To reduce the unacceptable risk of future recreational and agricultural users encountering DoD Military Munitions. It is anticipated future uses will reach a depth of 24 inches bgs or top of bedrock, whichever is shallower.

MRS 05-SR: To reduce the unacceptable risk of future recreational and agricultural users encountering DoD Military Munitions. It is anticipated future uses will reach a depth of 24 inches bgs or top of bedrock, whichever is shallower.

Note that while the RAOs for MRS 05-South and MRS 05-SR are to clear munitions to a depth of 24 inches or top of bedrock, whichever is shallower, if any munitions are identified deeper than 24 inches, they will also be excavated. Also, as noted in Table 5, the depth of detection for several munitions items (e.g., 37mm projectiles) is less than the depth for removal of munitions included in the RAOs for MRS 05-South and MRS 05-SR. A 37mm projectile may penetrate up to 22 inches based on theoretical models; however, the 37mm gun used with this munitions is a "flat-trajectory weapon, such that the impact angle would most often be shallow. This shallow angle of impact would produce a shallower depth of penetration as penetration depth is a function of path length through the soil and angle of the path into the soil. This type of scenario is more consistent with the recovery depth of 37mm projectiles during the investigations; the maximum depth at which 37mm projectiles were recovered during the RI fieldwork was 2 inches bgs. Using a holistic approach, which takes in account: the normal use of the weapon system associated with the 37mm projectile, the recovery depths of the 37mm on the site during the RI, the required conditions for a 37mm to reach below 12 inches, and the detectability range at various orientations, the maximum detection depth for the DGM and/or AGC equipment encapsulates the most probable expected depth range for the 37mm projectiles and is sufficient to identify anomalies that may be related to these projectiles.

Table 5: Potential DoD Military Munitions Summary for the MRS 05 Sub areas				
MRS Sub-area	**Potential UXO**	**Description[(1)]**	**Maximum Depth of Recovery (RI Results)**	**Depth of Detection for (DGM and/or AGC)[(2)]**
MRS 05-North	N/A – No UXO identified during RI			
MRS 05-South	M1 practice mine w/spotting charge	Filler (black powder, red phosphorous)	5 inches bgs	90 inches bgs (DGM)
	M485 155mm illumination projectile	Fuze, Projectile, Point Detonating (Delay Element, Detonator) Fuze, Projectile, Mechanical Time Super Quick (Primer Mixture, Lead Charge, Relay Charge)	30 inches bgs	60 inches bgs (DGM) 45 inches bgs (AGC)
	M38 37mm LE projectile	Cartridge Case (FNH Powder) Fuze, Projectile, Base Detonating (Tetryl) Projectile, 37mm, Practice, LE (Black Powder)	2 inches bgs	15 inches bgs (DGM and AGC)
	M38 37mm HE projectile	Filler (TNT)	1 inches bgs	15 inches bgs (DGM and AGC)
	M6A1 2.36-inch rocket warhead	Rocket, Warhead (Pentolite) Fuze, Rocket, Base Detonating (Tetryl, Primer Mixture)	3 inches bgs	20 inches bgs (AGC)
	M6A1 2.36-inch HEAT rocket	Rocket Motor, M6A1 2.36-inch (M7 Propellant, Igniter, Electric Squib) Rocket, Warhead (Pentolite) Fuze, Rocket, Base Detonating (Tetryl, Primer Mixture)	0 inches bgs	20 inches bgs (AGC)
	M43 81mm HE mortar	Fuze, Projectile, Point Detonating (RDX, Tetryl) Projectile (TNT or Comp B) Propelling Assembly (Propellant, M9, Black Powder, Primer Mix No.70, Propellant, M8)	10 inches bgs	25 inches (DGM and AGC)
	M49 60mm HE mortar	Fuze, Projectile, Point Detonating (Booster, Detonator) Projectile (TNT) Propelling Assembly (Propellant, M9, Black Powder, Primer Mix No.70, Propellant, M8)	2 inches bgs	25 inches bgs (DGM) 20 inches (AGC)
	MK3 4.5-inch HE BR	Projectile (TNT)	11 inches bgs	45 inches bgs (DGM) 35 inches bgs (AGC)
	MK3 4.5-inch BR fuze (MK 145 with booster)	Projectile (TNT) Fuze, Rocket, (Tetryl, Primer Mixture)	0 inches bgs	45 inches bgs (DGM) 35 inches bgs (AGC)

Table 5: Potential DoD Military Munitions Summary for the MRS 05 Sub areas				
MRS 05-SR	M43 81mm HE mortar	Fuze, Projectile, Point Detonating (RDX, Tetryl) Projectile (TNT or Comp B) Propelling Assembly (Propellant, M9, Black Powder, Primer Mix No.70, Propellant, M8)	10 inches bgs	25 inches (DGM and AGC)
[(1)] Specific nomenclature regarding recovered DoD Military Munitions and MD is not available from the previous investigations; therefore, a best match was determined from the current Fragmentation Database dated September 22, 2015 (Final RI/FS Report). [(2)] Depth of detection data is not available for all munitions types for both AGC and DGM; therefore, the best available data is presented.				
bgs = below ground surface BR = barrage rocket FNH = flashless, nonhygroscopic HE = high explosive HEAT = high explosive anti-tank		LE = low explosive N/A = not applicable RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine Tetryl = Methyl-2,4,6-trinitrophenylnitramine TNT = trinitrotoluene		

2.9 DESCRIPTION OF ALTERNATIVES

Based on a review of the MRS 05 sub-area characterizations and hazard/risk assessments results, response action alternatives were identified, evaluated, comparatively analyzed and recommended for implementation at each MRS 05 sub-area. The possible response alternatives evaluated for each MRS 05 sub-area are as follows:

- Alternative 1: No Further Action.
- Alternative 2: ICs to Protect Current and Future Site Users.
- Alternative 3: DoD Military Munitions Removal from the Surface and ICs to Protect Current and Future Site Users.
- Alternative 4: DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users.
- Alternative 5: Excavation, Sifting, Removal of DoD Military Munitions and Restoration.

2.9.1 Alternative 1 – No Further Action

The No Further Action Alternative provides a baseline for comparative analysis and is not protective of human health or the environment. Under Alternative 1, response actions would not be taken; therefore, compliance with Applicable or Relevant and Appropriate Requirements (ARAR) (listed in Section 2.10.2) is not applicable. This alternative, which has no associated costs, does not either achieve the RAOs for each MRS 05 sub-area or require time to implement.

2.9.2 Alternative 2 – Institutional Controls to Protect Current and Future Site Users

In implementing this alternative, USACE, Los Angeles District will:

- Implement ICs, without removal of DoD Military Munitions, to address potential hazards associated with future activities (for example, agriculture/ranching maintenance activities) and to inform of actions to be taken for any potential encounter in the MRS 05 sub-areas.

The following is a brief description of the components for ICs considered for each of the MRS 05 sub-areas:

1. *3Rs (Recognize, Retreat, Report) Education Awareness Program (3Rs Program)*: USACE would implement a 3Rs Program to inform landowners and the public about the potential to encounter a munition within each MRS 05 sub-area and actions to take should they encounter or suspect they have encountered a munition. Implementation of a 3Rs Program increases public awareness of the dangers associated with approaching, touching, disturbing or moving a munition or suspect munition. Reducing the risk of encountering munitions is dependent upon the awareness and personal responsibility of landowners and the public who have access to MRS 05. If landowners and other members of the public are receptive to the awareness program and avoid activities that may result in encountering munitions, then the risk associated with interaction with munitions is reduced significantly.

   Munitions awareness and education, acknowledgement of the potential explosive safety hazard involved, and reinforcement of the message will minimize the unacceptable explosives risks posed by the presence of DoD Military Munitions. The avenue for this education and awareness of MEC would be through printed media. Specific printed media in the information packages will take the form of brochures, fact sheets and posters (presenting the "3Rs of Explosives Safety"). These information packages will be provided and distributed by USACE, as appropriate, by mail to stakeholders (San Luis Obispo County, Cal Poly) and other local government entities (DTSC). Information regarding maintenance of ICs will be included in a work plan for the implementation of this Alternative.

2. *Emergency Contact Information*: A communications tree including emergency contact information will be developed by USACE for inclusion in 3Rs (Recognize, Retreat, Report) Education Awareness Program materials.

3. *Informational Signs:* USACE installed signage during the 2010 TCRA regarding the presence of potential MEC hazards and the emergency contact information to use if MEC is encountered. These signs are posted at access points to the MRS. Additional signage will be installed and all signage will be maintained in the future to present the "3Rs of Explosives Safety." USACE will be responsible for installing, maintaining and replacing signs. Additional details regarding the signs will be identified during the remedial action implementation process and will be documented in a work plan or a memorandum of agreement with the stakeholders.

Because no removal action activities would take place as part of Alternative 2, ARARs are not applicable to this alternative.

2.9.3 Alternative 3 – DoD Military Munitions Removal from the Surface and ICs to Protect Current and Future Site Users

Under this alternative, USACE, Los Angeles District would implement a remedy composed of:

- A global positioning system survey of the project site to delineate the areas within the MRS where surface removal can and cannot be performed due to the presence of listed species habitats.
- Vegetation trimming/removal of applicable areas (i.e., those areas with vegetation density that would make areas inaccessible to surface clearance operations) within the remedial action boundaries.
- UXO-qualified personnel would:
  - Conduct a technology-aided surface removal to locate and remove DoD Military Munitions that are visible on the surface (On the surface means the munition is entirely or partially exposed above the ground surface [i.e., above the soil layer] or entirely or partially exposed above the surface of a water body.)
  - Evaluate each DoD Military Munition encountered to determine whether it poses an explosives hazard (i.e., is MEC).
  - Mark MEC encountered for destruction by detonation either in place or at a location and in a manner that meets the DoD Explosive Safety Board (DDESB) and Resource Conservation and Recovery Act (RCRA) Subpart X criteria.
- Items encountered on the surface determined to pose an explosives hazard would be destroyed by detonation. Material documented as safe (MDAS) would be disposed of or recycled at an appropriate facility. Prior to recycling, military munitions that are determined not to be MEC, but are MDAS, that resemble a munition would be deformed (e.g., cut in multiple sections, shredded or melted) so that they no longer resemble a munition.
- Develop and execute the ICs Implementation Plan prior to and after completing surface MEC removal.

For MRS 05-SR, approximately 22 acres of the sub-area is used as a small arms range. Within this area, only MD and MEC would be removed. Small arms debris would not be cleared during the remedial action because the presence of small arms debris would not interfere with the surface removal of MD and MEC.

To comply with ARARs (listed in Section 2.10.2), certain precautions would be taken during implementation of Alternative 3. Consolidated demolition of munitions-related items must occur in a manner that will ensure protection of human health and the environment, as specified in RCRA, Subpart X. To accomplish the remedy in accordance with the substantive provisions of the Endangered Species Act (ESA), implementation would include limiting the remedial action area for surface removal of DoD Military Munitions, and vegetation trimming/removal. All work within the remedial action areas would be done in such a way to minimize effects to listed species on site so that the work does not cause a "take" as described in the ESA. (Note: "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct).

Prior to beginning the field activities, surveys of biological resources would be completed to identify sensitive areas (e.g., habitats, nesting areas, presence of that listed species) that may require mitigation during the fieldwork. Information from the survey would be used to develop the approach for munitions removal activities, which would include input from the stakeholders.

During the implementation of this alternative, a biologist would be onsite during all remedial activities to monitor the presence of birds and nests that may be protected under the Migratory Bird Treaty Act (MBTA), as well as federally-listed species and critical habitats in accordance with ESA requirements. If birds or nests are identified, relevant buffer areas would be established around the bird and/or nest and fieldwork would not be conducted in the area until the biologist could ensure that activities would not result in a take. Fieldwork would be scheduled for outside the bird breeding season 15 February to 30 August. During the surface clearance, if it is determined that an item cannot be removed or an area cannot be accessed due to the presence of sensitive resources, ICs will be implemented to reduce the potential for exposure to the remaining items. Certain activities conducted during the implementation of Alternative 3, such as vegetation clearance, may result in discharge of materials into jurisdictional waters; therefore, the impact to streams and wetlands would be evaluated prior to initiating any activities.

A post-remedy data assessment, using the USACE FUDS MMRP Risk Management Methodology, will be implemented at the conclusion of any remedial action to evaluate the effectiveness of the alternative and to determine whether further remedial actions (e.g., ICs) are necessary to support acceptable risk conditions or whether no further action is necessary.

Alternative 3 would reduce or eliminate potential explosives hazards at the ground surface. As this is a surface-only clearance, any MEC present underground would remain in place. Implementing ICs across the MRS following the removal action provides potential site users an additional safety measure by providing notification that the area, or a limited area, may contain potential subsurface explosives hazards.

2.9.4 Alternative 4 – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users

Under this alternative, USACE, Los Angeles District will implement a remedy composed of:

- A global positioning system survey of the project site to delineate the areas within the MRS where surface and subsurface removal can and cannot be performed due to the presence of listed species habitats.
- Vegetation trimming/removal of applicable areas (i.e., those areas with vegetation density that will make areas inaccessible to surface and subsurface clearance operations) within the remedial action boundaries.
- UXO-qualified personnel would:
    - Conduct a technology-aided surface removal to locate and remove DoD Military Munitions that are visible on the surface (On the surface means the munition is entirely or partially exposed above the ground surface [i.e., above the soil layer] or entirely or partially exposed above the surface of a water body.)

  - Evaluate each DoD Military Munition encountered to determine whether it poses an explosives hazard (i.e., is MEC).
  - Mark MEC encountered for destruction by detonation either in place or at a location and in a manner that meets the DDESB and RCRA Subpart X criteria.

- Items encountered on the surface or in the subsurface determined to pose an explosives hazard will be destroyed by detonation. MDAS will be disposed of or recycled at an appropriate facility. Prior to recycling, DoD Military Munitions that are determined not to be MEC, and MDAS, that resembles a munition will be deformed (e.g., cut in multiple sections, shredded or melted) so that they no longer resemble a munitions.
- Geophysical investigation (including DGM and/or AGC) of 100% of the area within the site that is accessible to DGM and/or AGC equipment, and removal and destruction of subsurface MEC. The depth for removal of DoD Military Munitions identified in the RAO (24 inches bgs for MRS 05-South and MRS 05-SR) is based on the anticipated depth of future intrusive activities. USACE will evaluate the actual detection threshold during development of the remedial action work plan based on the available geophysical technology to ensure that the equipment will be capable of 100% detection of the DoD Military Munitions known to be associated with the MRS 05 sub-areas at appropriate depth (anticipated to be between one and 30 inches). All DoD Military Munitions detected and/or classified at that threshold will be removed, regardless of depth.

  Potential DoD Military Munitions will be mapped using technologies (AGC) that can discriminate anomalies that are most likely munitions from non-munitions items. Anomalies that cannot be discriminated will be investigated. The geophysical survey will adhere to the 2000 USEPA-DoD Unexploded Ordnance Management Principles (Ref. 19) requiring the collection of digital geophysical data whenever possible.
- Develop and execute the ICs Implementation Plan prior to and after completing surface and subsurface MEC removal.

In areas where this alternative will be implemented on property owned by Cal Poly, the following precautions will be implemented to minimize the impact to the school's agricultural programs:

- Limiting excavation to smallest footprint necessary and hand digging, if at all possible.
- Reseeding disturbed areas with native grass species with application of water, if necessary.
- Working in drier times of the year while avoiding high fire season.
- Having water available for fire mitigation if necessary.
- Allowing cattle to graze in paddocks not actively being investigated.
- Limiting traffic and prohibiting access during wet weather events when erosion risk is high.
- Allowing a stop period during the annual Bull Test Sale Event in early October.

For MRS 05-SR, approximately 22 acres of the sub-area is used as a small arms range. Within this area, only MD and MEC would be removed USACE would work with the landowner and the small arms range operator to have small arms debris removed prior to initiating the removal action. Following the removal of small arms debris, USACE would complete a surface clearance to ensure that the area is clear of metallic debris, MD, and MEC that may interfere with the collection of DGM and/or AGC data.

To comply with ARARs (listed in Section 2.10.2), certain precautions will be taken during implementation of Alternative 4. Consolidated demolition of munitions-related items must occur in a manner that will ensure protection of human health and the environment, as specified in RCRA, Subpart X. To accomplish the remedy in accordance with the substantive provisions of the ESA, implementation will include limiting the remedial action area for surface removal of DoD Military Munitions, vegetation trimming/removal, DGM equipment and subsurface removal of DoD Military Munitions. All work within the remedial action areas will be done in such a way to minimize effects to listed species onsite so that the work does not cause a take as described in the ESA. Prior to beginning the field activities, surveys of biological resources would be completed to identify sensitive areas (e.g., habitats, nesting areas, presence of that listed species) that may require mitigation during the fieldwork. Information from the survey would be used to develop the approach for DGM and intrusive activities, which would include input from the stakeholders. During the implementation of DGM data collection activities, a biologist would be onsite to monitor the presence of birds and nests that may be protected under the MBTA, as well as federally-listed species and critical habitats in accordance with ESA requirements. If birds or nests are identified, relevant buffer areas would be established around the bird and/or nest and fieldwork would not be conducted in the area until the biologist could ensure that activities would not result in a take. Fieldwork would be scheduled for outside the bird breeding season 15 February to 30 August. The DGM data will be reviewed in comparison to the locations of known sensitive areas to determine if intrusive investigations would result in a take as defined by the ESA. If it is determined that an item cannot be intrusively investigated, ICs will be implemented to reduce the potential for exposure to the remaining items. Certain activities conducted during the implementation of Alternative 4, such as vegetation clearance and intrusive investigation of subsurface anomalies, may result in discharge of materials into jurisdictional waters; therefore, the impact to streams and wetlands would be evaluated prior to initiating any activities.

A post-remedy data assessment, using the USACE FUDS MMRP Risk Management Methodology will be implemented at the conclusion of any remedial action to evaluate the effectiveness of the alternative and to determine whether further remedial actions (e.g., ICs) are necessary to support acceptable risk conditions or whether no further action is necessary.

Alternative 4 will reduce and/or eliminate known explosives hazards and reduce the potential for human exposure to DoD Military Munitions. Under this alternative, it is possible that some potential explosives hazards may go undetected due to inaccessible areas associated with steep terrain, dense vegetation, access restrictions associated with Cal Poly agricultural programs, or the presence of listed species, and therefore remain at an MRS 05 sub-area.

2.9.5 Alternative 5 – Excavation, Sifting, Removal of DoD Military Munitions and Restoration

Under this alternative, USACE, Los Angeles District would:

- Perform land surveying to delineate remedial action boundaries, vegetation clearance, and surface clearance (as discussed in Alternative 3).
- Perform full vegetation removal prior to the excavation.
- Excavate areas where (1) DoD Military Munitions were identified and would pose the

greatest potential hazard to human receptors and (2) very high densities of MD could cause the cost of other alternatives to be too high.

- Destruct DoD Military Munitions by detonation; and collect and/or remove MD from the surface of each MRS 05 sub-area for disposal (i.e., MD may be disposed of [or recycled] at an appropriate facility depending upon the nature of the item [i.e., if the item resembles a munitions item, it would be recycled/shredded/melted so that it no longer resembles a munition]).
- Restoration: Sift and reuse the soil at each MRS 05 sub-area for backfill of the excavated area and revegetate with appropriate native plants.

Alternative 5 would eliminate known explosives hazards at the surface and subsurface, and eliminate the potential for human exposure, which would result in Unlimited Use/Unrestricted Exposure (UU/UE); however, the extent of disturbance to the ground surface could result in the unacceptable destruction of sensitive habitat. This alternative would not achieve the ESA ARAR.

2.9.6 Five-Year Reviews

Five-Year Reviews would be required for all remedial alternatives (with the exception of Alternative 5), as none of the alternatives are expected to allow for UU/UE. Five-Year Reviews are not part of the remedy; however, they would be implemented to determine if the remedy remains protective.

2.10 COMPARATIVE ANALYSIS OF ALTERNATIVES

All alternatives were evaluated for each MRS 05 sub-area in accordance with the nine criteria provided in the NCP Code of Federal Regulations (CFR) §300.430(f)(5)(i). Additional details on the comparative analysis of alternatives are provided in the Final RI/FS Report (Ref. 4).

In addition, the alternatives were compared to the RAO to assess their ability to achieve this requirement.

MRS 05-North: Based on the description of alternatives presented in Section 2.9, Alternative 1 does not achieve the RAO, because no action is taken to reduce the exposure of receptors to potential explosives hazards. However, Alternatives 2, 3, 4, and 5 do achieve the RAO, because measures are taken to educate receptors on how to avoid exposure to potential explosives hazards or the hazards are physically removed.

MRS 05-South: Based on the description of alternatives presented in Section 2.9, Alternatives 1, 2 and 3 do not achieve the RAO, because the risk from potential subsurface explosives hazards is not addressed. However, Alternatives 4 and 5 do achieve the RAO by physically removing the risk associated with subsurface explosives hazards.

MRS 05-SR: Based on the description of alternatives presented in Section 2.9, Alternatives 1, 2 and 3 do not achieve the RAO, because the risk for potential subsurface explosives hazards is not addressed. However, Alternatives 4 and 5 do achieve the RAO by physically removing the risk associated with subsurface explosives hazards.

2.10.1 Overall Protection of Human Health and the Environment

The overall protection of human health and the environment criterion is used to determine whether an alternative provides adequate protection and describes how MEC hazards are eliminated, reduced or controlled through removal and/or ICs. This threshold criterion relates to a statutory requirement that must be satisfied in order for an alternative to be eligible for selection.

As presented in Sections 11.3.2, 11.3.3 and 11.3.4 of the Final RI/FS Report, the alternatives that provide overall protection to both human health and the environment for MRS 05-North, MRS 05-South and MRS 05-SR are Alternatives 2, 3 and 4. Alternative 1 does not provide overall protection to human health or the environment in any of the MRS sub-areas. Alternative 5 provides overall protection to human health in MRS 05-North, MRS 05-South and MRS 05-SR; however, it does not provide protection of the environment in any of the sub-areas. Therefore, it does not meet the criterion.

Based on the results of the RI, MRS 05-North had no MEC reported during the RI and a low density of MD was observed; MRS 05-South had numerous MEC and MD items observed; MRS 05-SR had one MEC item and several MD items observed. Alternative 2 uses education and printed media awareness programs to modify the community's behavior in order to prevent community members from exposing themselves to the dangers of MEC. No removal actions are conducted so the environment is not affected. Alternative 3 would provide some protection to human health and the environment by reducing the amount of potential MEC the public may be exposed to through surface removal of MEC within each of the MRS 05 sub-areas. Alternative 4 would reduce the volume of potential explosive safety hazards (i.e., MEC) through removal of both surface and buried MEC. Alternative 1 does not reduce any risk because no further actions are taken and the conditions at each of the MRS 05 sub-areas remain the same. Alternative 5 does protect human health by permanently removing MEC that is detected by the currently available technology, but it does not protect the environment due to the 100% vegetation removal and earth sifting required within the identified footprint of concern (Ref. 4).

2.10.2 Compliance with Applicable or Relevant and Appropriate Requirements

In accordance with CERCLA and NCP requirements, all remedial actions at CERCLA sites must at least attain legally applicable or relevant and appropriate federal and state requirements, standards, criteria and limitations (collectively referred to as ARARs), unless such ARARs are waived under CERCLA §121(d)(4).

ARARs are divided into three categories: action-specific, location-specific and chemical-specific. ARARs were identified and evaluated in the Final RI/FS Report. The results of the evaluation of ARARs for the MRS 05 sub-areas are described below. The ARARs apply to all alternatives that involve completion of removal actions (e.g., removal of surface and subsurface MEC); therefore, compliance with ARARs would be attained for Alternatives 3 and 4 (Selected Remedy for MRS 05-South and MRS 05-SR) by designing and scheduling project activities to meet the requirements of the ARARs.

- Action-specific: two action-specific ARARs have been identified:
  - Resource Conservation and Recovery Act, Subpart X, 40 CFR §264.601, Environmental

performance standards for impacted soils. The listed document delineates environmental performance standards to be complied with during disposition of munitions-related items (e.g., blow-in-place or consolidated demolition). Consolidated demolition of munitions-related items must occur in a manner that will ensure protection of human health and the environment, as specified in this section.

- California Health and Safety Code, Title 22 §66265.382. The substantive requirement under this code is to ensure that detonation of waste explosives is done in a manner that does not threaten human health or the environment.

- Location-specific: three location-specific ARARs have been identified:
  - Endangered Species Act, 16 USC §1538(a). The substantive standards of the Endangered Species Act require that a Federal agency must ensure that any action it takes is not likely to jeopardize the continued existence of any threatened or endangered species, is not likely to result in the destruction or adverse modification of designated critical habitat, and will not unlawfully take any threatened or endangered species. According to Cal Poly's Poly Land website, California red-legged frogs have been identified within the ranch lands used by the university. In addition, all of the MRS 05 sub-areas are within USFWS-designated critical habitat for the California red-legged frog. Pennington Creek, Dairy Creek and San Luisito Creek, all which traverse MRS 05-North and MRS 05-South, are designated as critical habitat for the south-central steelhead trout. Two mapped occurrences of the Chorro Creek bog thistle are located within MRS 05-North. The vegetation clearing and ordnance removal and/or detonation activities required at the MRS under the Surface Removal and ICs alternative and the Surface and Subsurface Removal alternative would potentially adversely impact the environment in the short-term by disturbing wildlife habitat that is used by federally-listed species, and potentially adversely modify designated critical habitat. Coordination with state and federal agencies during planning stages would lay out site-specific measures to be implemented during clearance activities including what areas may need to be avoided or have restrictions on the methods and extent of vegetation removal to facilitate surface clearance activities. In order to avoid these habitats and species, a qualified biologist familiar with the resources would conduct biological and habitat surveys prior to initiating any fieldwork in order to identify species of concern, and to delineate any sensitive habitat areas that may need to be avoided. A qualified biologist would accompany fieldwork teams to ensure compliance with coordination agreements and biological resource protection. If the species is present, work in the area would be modified to minimize impact to the resources. The biologists would also ensure that adverse modifications to critical habitat do not occur, consistent with USFWS/National Marine Fisheries Service coordination. Additionally, fieldwork would be scheduled for times of the year when movement of California red-legged frogs to and from riparian areas is at a minimum. The ICs only alternative would not impact critical habitat or federally-listed species.
  - Migratory Bird Treaty Act, 16 USC §703(a) (prohibition on take of migratory birds). MBTA prohibits pursuit, hunting, taking, capture, or killing or attempting the same, of migratory birds native to the United States. There have been observations of birds, such as Hutton's vireo (forest-nesting), oak titmouse (forest- and ground-nesting), blue grosbeak (forest [shrub]-nesting), and lazuli bunting (forest [shrub]-nesting), which are

subject to the MBTA, onsite during the breeding season of early March through mid-July (with the season extended from 15 February to 30 August, to ensure the protection of birds and nests). In addition, red-breasted and red-napped sapsuckers (forest-nesting), which are subject to the MBTA, have been observed onsite during the winter. The vegetation clearing and ordnance removal and/or detonation activities required at the MRS under the Surface Removal and ICs alternative and the Surface and Subsurface Removal alternative would potentially adversely impact the environment in the short-term by disturbing wildlife habitat that is used by ground- and forest-nesting birds. To avoid this potential impact, a biologist would be onsite during all remedial action activities to monitor for birds and nests. If birds or nests are identified (during the winter or during nesting season), relevant buffer areas would be established around the bird and/or nest and fieldwork would not be conducted in the area until the biologist could ensure that activities would not result in a take. In addition, vegetation removal would be restricted by not clearing vegetation during the 15 February to 30 August time frame. Ordnance removal and demolition operations would be scheduled and implemented based on this time restriction as well. The ICs only alternative would not impact habitat that is used by ground- and forest-nesting birds.

  - Clean Water Act, 33 USC §1344. Regulates the discharge of dredged or fill material into the waters of the U.S., including wetlands. Applicable because jurisdictional waters are present within MRS 05. Remedial action activities, such as vegetation clearance and intrusive investigation of subsurface anomalies, could result in the discharge of materials into jurisdictional waters; therefore, the impact to streams and wetlands may need to be evaluated prior to initiating any activities.

- Chemical-specific: no chemical-specific ARARs have been identified.

2.10.3 Long-term Effectiveness and Permanence

Long-term effectiveness and permanence refer to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup levels have been met. This criterion includes consideration of residual risk that will remain at each MRS 05 sub-area following remediation as well as the adequacy and reliability of controls.

For each MRS 05 sub-area, Alternative 1 does not meet the criteria for long-term effectiveness and permanence because no further action would be taken. Alternative 2 ranks second lowest because it would reduce potential exposure to exposure hazards through education. Alternative 3 would rank third highest because it would eliminate surface MEC at MRS 05-South and MRS 05-SR. Alternatives 4 and 5 rank highest in terms of long-term effectiveness and permanence because they would eliminate both surface and buried MEC at MRS 05-South and MRS 05-SR.

2.10.4 Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment

For each MRS 05 sub-area, Alternatives 1 and 2 would not reduce toxicity, mobility or volume of any potential MEC hazard. Alternative 2 does not address this criterion as there is no reduction in the amount of MEC under this alternative, only the implementation of ICs (note that the potential for MEC to be present in MRS 05-North is minimal). Alternative 3 only reduces the surface volume of potential MEC. Alternative 3 would provide some reduction in mobility of MEC items (removed

from the surface). Mobility of MEC items is associated with erosion that may occur due to weather events. Alternatives 4 and 5 would achieve reduction in both surface and buried MEC at MRS 05-South and MRS 05-SR; however, implementing Alternative 5 could cause destruction of ecological habitats. Alternative 4 would reduce the volume of potential explosive safety hazards (i.e., MEC) through removal of both surface and buried MEC at MRS 05-South and MRS 05-SR without this negative ecological impact.

2.10.5 Short-term Effectiveness

Short-term effectiveness addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community and the environment during implementation and operation of the remedy.

For each MRS 05 sub-area, under Alternative 1, there is no short-term effectiveness because no remedial actions would be executed. Alternative 2 ranks highest for short-term effectiveness, because it reduces potential exposure to hazards upon implementation, requires little time to implement, and has minimal adverse effect on human health and the environment. The use of a 3Rs Program may involve a level of uncertainty not inherent in alternatives that include MEC removal actions. Alternatives 3, 4 and 5 rank lower in short-term effectiveness, as they reduce potential hazards upon implementation and minimize human health and environmental impacts; however, they take longer to implement and have greater risk for exposure to site workers during implementation.

The following are estimates of the potential time frame for implementation of each evaluated alternative after remedial action funding is allocated:

- Alternative 1: no applicable time frame.
- Alternative 2: approximately 1 year time frame.
- Alternative 3: approximately 4 year time frame.
- Alternative 4: approximately 4 year time frame.
- Alternative 5: approximately 6 year time frame.

2.10.6 Implementability

Implementability addresses the technical and administrative feasibility of a remedy from design through construction and operation. Factors such as the availability of services and materials, administrative feasibility, and coordination with other governmental entities are also considered as aspects of implementability.

For each of the MRS 05 sub-areas, Alternative 2 ranks highest in terms of implementability, because the resources are available to implement a public education program and develop an emergency contact list. Alternatives 3 and 4 rank next, since they require more personnel resources, materials and services over time to implement than does Alternative 2. Certain factors, including Location-specific ARARs and property owner precautions (see Section 2.9.4), may result in the need to modify the schedule for implementing Alternatives 3 and 4; however, these factors will not prevent the successful implementation of these alternatives because they can be addressed during the

planning phase of any remedial action. Alternative 5 has limited implementability due to complete removal of ecological receptor habitat.

2.10.7 Cost

The Selected Remedies (Alternative 2 for MRS 05-North and Alternative 4 for MRS 05-South and MRS 05-SR) are cost-effective and represent a reasonable value for the expected expenditures. In making these determinations, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness." (NCP §300.430(f)(1)(ii)(D)). Overall effectiveness was evaluated for those alternatives that satisfied the threshold criteria (i.e., were protective of human health and the environment and compliance with ARARs) was evaluated by assessing balancing criteria in combination (long-term effectiveness and permanence; reduction of toxicity, mobility, and volume through treatment; and short-term effectiveness) compared to costs. The estimated Capital Costs for the five alternatives for each MRS 05 sub-area are listed below and indicate the expenditures that are included in the costs. Costs were calculated using RACER version 11.6 and summary reports from RACER are included in Attachment 6. The only Operations and Maintenance (O&M) Costs associated with the Remedial Actions at the MRS sub-areas are associated with warning sign inspection and maintenance and updates to the 3Rs program. The O&M Costs are included in the Alternative Costs and amount to $130,638. In addition to the default markups calculated in the RACER software, all costs include a 25% contingency. For those alternatives (Alternatives 2, 3 and 4) that will involve Five-Year Reviews (Periodic Costs), the added cost associated with conducting the six Five-Year Reviews over 30 years is approximately $264,163.

MRS 05-North:

- Alternative 1 is a no cost alternative.
- Alternative 2 has an estimated total cost of $740,685 (based on the total cost of installation of 13 signs, two site visits to inspect and maintain signs and all printed educational media, training and updates for 3Rs program).
- Alternative 3 has an estimated total cost of $3,327,592(based on the cost of the MEC surface removal and cost of implementing ICs as noted for Alternative 2).
- Alternative 4 has an estimated total cost of $5,097,410 (based on the combined cost of the MEC surface and subsurface removal and cost of implementing ICs as noted for Alternative 2).
- Alternative 5 has an estimated total cost of $49,924,393 (based on the combined cost of the Excavation, Sifting, Removal of DoD Military Munitions and Restoration).

MRS 05-South:

- Alternative 1 is a no cost alternative.
- Alternative 2 has an estimated total cost of $736,622 (based on the total cost of installation of nine signs, two site visits to inspect and maintain signs and all printed educational media, training and updates for 3Rs program).

- Alternative 3 has an estimated total cost of $9,710,995 (based on the cost of the MEC surface removal and cost for implementing ICs as noted for Alternative 2).
- Alternative 4 has an estimated total cost of $29,454,967 (based on the combined cost of the MEC surface and subsurface removal and cost for implementing ICs as noted for Alternative 2).
- Alternative 5 has an estimated total cost of $142,130,089 (based on the combined cost of the Excavation, Sifting, Removal of DoD Military Munitions and Restoration, including escalation of costs).

MRS 05-SR:

- Alternative 1 is a no cost alternative.
- Alternative 2 has an estimated total cost of $729,511 (based on the total cost of installation of two signs, two site visits to inspect and maintain signs and all printed educational media, training and updates for 3Rs program).
- Alternative 3 has an estimated total cost of $3,464,035 (based on the cost of the MEC surface removal and cost for implementing ICs as noted for Alternative 2).
- Alternative 4 has an estimated total cost of $6,893,442 (based on the combined cost of the MEC surface and subsurface removal and cost for implementing ICs as noted for Alternative 2).
- Alternative 5 has an estimated total cost of $54,461,221 (based on the combined cost of the Excavation, Sifting, Removal of DoD Military Munitions and Restoration).

2.10.8 State/Support Agency Acceptance

The State of California DTSC concurs with and supports the Selected Remedies for MRS 05-North, MRS 05-South and MRS 05-SR as the final remedies. DTSC reviewed the Proposed Plan and submitted correspondence to USACE on 15 May 2019 indicating that they had no further comments on the Preferred Remedies. Documentation of DTSC's concurrence is included in Attachment 1.

2.10.9 Community Acceptance

Based on stakeholder input during public meetings, the community supports the Selected Remedies for MRS 05-North, MRS 05-South and MRS 05-SR as the final remedies. USACE, Los Angeles District received comments from stakeholders (i.e., CDFW and Cal Poly) throughout the development period and during the public comment period for the Proposed Plan. USACE, Los Angeles District considered the comments, provided responses, and included them in this Decision Document (refer to Part 3 - Responsiveness Summary).

2.11 TREATMENT TO ADDRESS MEC EXPLOSIVES HAZARDS

As presented in Section 2.2.1 of this Decision Document, previous investigations have identified items that may pose a potential explosives safety hazard at each MRS 05 sub-area. The Selected Remedy for MRS 05-South and MRS 05-SR utilizes treatment to address the unacceptable explosives risks posed by the presence of DoD Military Munitions. The remedy incorporates

removal technologies to reduce the volume (and potential movement or mobility) of materials similar to those encountered during the RI (see Table 5). The Selected Remedy for MRS 05-North utilizes ICs to educate and inform the public to minimize inadvertent exposure to explosives safety hazards potentially remaining at MRS 05-North.

2.12 SELECTED REMEDIES

Based on detailed and comparative analyses of alternatives, the following alternatives protect public health, welfare and the environment from actual or threatened releases of hazardous substances into the environment:

- MRS 05-North: Alternative 2 – ICs to Protect Current and Future Site Users.
- MRS 05-South: Alternative 4 – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users.
- MRS 05-SR: Alternative 4 – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users.

These alternatives have been selected for each MRS 05 sub-area as their remedy because they would achieve substantial hazard reduction by minimizing exposure to explosives safety hazards potentially remaining at the site and will achieve the RAOs:

- Prevent handling of DoD Military Munitions on the surface of MRS 05-North.
- Prevent encounter with DoD Military Munitions by removing munitions to a depth of 24 inches bgs at MRS 05-South and MRS 05-SR.

Each Alternative is also: (1) protective of human health and the environment; (2) effective in both the short- and long-term at mitigating potentially remaining explosives hazards to human receptors conducting surface and subsurface activities during reuse of the site; and (3) administratively and technically feasible to implement at its specific MRS 05 sub-area.

Based on information currently available, USACE believes the Selected Remedies for each MRS 05 sub-area meet the threshold criteria and provide the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. The Selected Remedies provide the greatest reduction of risk within the constraints imposed by the environmental conditions at a reasonable cost when compared to the other options for each MRS 05 sub-area. USACE expects each Selected Remedy to satisfy the following statutory and regulatory requirements of §121(b) of CERCLA: (1) be protective of human health and the environment, (2) comply with ARARs (as applicable), (3) be cost-effective, and (4) provide a permanent remedial solution. However, if new information is discovered during remedial action implementation or recurring reviews (e.g., assumptions regarding site accessibility and the density of MD observed at the site does not match with expectations, and/or unexpected sensitive biological or archaeological resources are observed) requiring a new or supplementary response, the alternative preference and/or selection may be revisited.

The Selected Remedies were selected with consideration for public interest, as well as economic, social, cultural and environmental impacts. Stakeholder comments (included in Section 3, the

Responsiveness Summary) were reviewed with regard to future land use requirements involving continued use of the land for recreational and agricultural purposes. In addition, the Selected Remedies minimize future exposure to munitions potentially remaining at each of the MRS 05 sub-areas. The supporting agency, DTSC, concurs that the selection of Alternative 2 for MRS 05-North and Alternative 4 for MRS 05-South and MRS 05-SR is appropriate and provides the best balance of tradeoffs with respect to the balancing and modifying criteria (Ref. 8).

2.12.1 Summary and Description

The Selected Remedy for both MRS 05-South and MRS 05-SR is Alternative 4 – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users. For MRS 05-SR, in the portion used as a small arms range, only MD and MEC would be removed. USACE would work with the landowner and the small arms range operator to try to have small arms debris removed prior to initiating the removal action. The Selected Remedy for MRS 05-North is Alternative 2 – ICs to Protect Current and Future Land Users. Descriptions in Section 1, Section, 2.9.2 and Section 2.9.4 of this Decision Document detail how USACE, Los Angeles District will implement the Alternatives at MRS 05-North, MRS 05-South and MRS 05-SR.

The Selected Remedies include implementation of measures to limit public exposure to residual explosive materials. These remedies include development of a 3Rs (Recognize, Retreat, Report) Education Awareness Program and installation of signage, which will be presented in the remedial action work plan and in the ICs Implementation Plan. The USACE-implemented site-specific 3Rs (Recognize, Retreat, Report) Education Awareness Program will consist of educational tools and materials (e.g., brochures and fact sheets) and emergency contact information (e.g., information for use during potential construction activities). Caution signs are typically installed to inform the public either that entry to an area is prohibited, that activities within the property are restricted in some manner, or that potential hazards exist within an area. These caution signs will warn visitors, in English or Spanish, about the potential for encountering munitions items, and provide contact information in the event a potential munitions item is discovered. The exact wording of the signs and the sign locations will be finalized during the systematic planning process for the remedial action and will be documented in the ICs Implementation Plan.

Because the Selected Remedies may result in potential explosives hazards remaining on site, USACE, Los Angeles District will perform Five-Year Reviews, as required by CERCLA and the NCP. The reviews will involve returning to each MRS 05 sub-area after the selected munitions remedial actions have been initiated to assess their continued protectiveness.

2.12.2 Cost Estimate

The cost estimates for each MRS 05 sub-area Selected Remedy are as follows: MRS 05-North – $740,685; MRS 05-South – $29,454,967; and MRS 05-SR – $6,893,442 (total cost estimate for MRS 05 is $37,089,094). Costs (Table 6) are based on information regarding the anticipated scope of each Selected Remedy, including anomaly densities based on the results of the RI and anticipated depth of removal for subsurface activities. The assumptions used to develop the cost estimates are included in Attachment 6a. The detailed cost information for the Selected Remedies for each MRS sub-area are provided in Attachment 6b and the cost information for the remaining alternatives are included in Attachment 6c. Changes in the cost element may occur as new information and data is

collected during the remedial action design process. The type of document used to record changes (e.g., memorandum to the post-Decision Document file, Explanation of Significant Differences, or Decision Document amendment) will be based on the nature of the change. Costs for each MRS 05 sub-area Selected Remedy are an order-of-magnitude engineering cost estimate that is expected to be within 30% to 50% of the actual project cost.

Table 6 Selected Remedy Costs for the MRS 05 Sub areas

Site	Evaluated Alternatives for the MRS 05 Sub-areas				
	Alternative 1 – No Further Action.	Alternative 2 – ICs to Protect Current and Future Site Users.	Alternative 3 – Removal of DoD Military Munitions from the Surface and ICs to Protect Current and Future Site Users.	Alternative 4 – DGM and/or AGC with Surface/Subsurface Removal of DoD Military Munitions and ICs to Protect Current and Future Site Users.	Alternative 5 – Excavation, Sifting, Removal of DoD Military Munitions and Restoration.
MRS 05-North	$0	**$740,685**	$3,327,592	$5,097,410	$49,924,393
MRS 05-South	$0	$736,622	$9,710,995	**$29,454,967**	$142,130,089
MRS 05-SR	$0	$729,511	$3,464,035	**$6,893,442**	$54,461,221

Notes:
Selected Remedy is presented in **Bold Underline**.
The estimated cost for the alternatives shown in this table were calculated using RACER version 11.6.
All cost information is provided as an estimate, with an accuracy expectation of +50 to -30%. The cost estimates will be refined as the remedy is designed and implemented.
Details regarding the itemized costs and assumptions used in developing the cost estimates for each alternative are provided in Attachment 6.

2.12.3 Estimated Outcomes

The time frame for completion of each MRS 05 sub-area is dependent on receipt of Federal funding and an award of a contract for MRS 05-North, MRS 05-South and MRS 05-SR. Once required funding is received, completion of the remedial action projects would be expected to take no longer than one year (MRS 05-North) and four years (MRS 05-South and MRS 05-SR) from the time of project initiation. The expected outcomes for each selected remedy for the MRS 05 sub-areas are:

MRS 05-North (904.8 acres):

- Elimination or minimization of encounters with DoD Military Munitions after implementation of ICs.
- Maintaining current and future available uses of land (e.g., recreational and agricultural use).

MRS 05-South (1,450.7 acres):

- Elimination or minimization of surface and subsurface DoD Military munitions.
- Elimination or minimization of encounters with DoD Military Munitions after implementation of ICs.
- Maintaining current and future available uses of land (e.g., recreational and agricultural use).

MRS 05-SR (270.5 acres):

- Elimination or minimization of surface and subsurface DoD Military munitions.
- Elimination or minimization of encounters with DoD Military Munitions after implementation of ICs.
- Maintaining current and future available uses of land (e.g., recreational and agricultural use).

2.13 STATUTORY DETERMINATIONS

In accordance with CERCLA §121 (as required by NCP §300.430(f)(5)(ii)), USACE, Los Angeles District has identified Selected Remedies that are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action (unless justified by a waiver), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

Overall effectiveness was evaluated by assessing the long-term effectiveness and permanence; reduction in toxicity, mobility and volume through treatment; and short-term effectiveness. The requirement to reduce toxicity (hazardous substances, pollutants, or contaminants) does not apply because the RI concluded that there are no unacceptable human health or ecological risks at MRS 05 due to MC exposure; therefore, there were no COPCs or related MC risks/ hazards to be addressed in the development of RAOs.

Human health and the environment will be protected through removal of DoD Military Munitions and/or implementation of ICs. Relevant considerations for the cost-effectiveness determination are presented in Table 7.

Because the Selected Remedy for each MRS 05 sub-area will result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, a review will be conducted within five years after initiation of remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

2.14 DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan was released for public comment on 1 May 2019. It identified the Selected Remedies for MRS 05-North, MRS 05-South and MRS 05-SR as detailed in Section 2.12. USACE, Los Angeles District reviewed all comments that were received during the public comment period and determined that no significant changes to the Preferred Alternatives identified in the Proposed Plan are necessary.

Table 7 Relevant Considerations for Cost Effectiveness Determination

Alternative	MRS Sub-area	Estimated Response Action Cost (Capital Cost)	Estimated IC Cost[(1)]	Estimated Total Cost	Estimated Five-Year Review Cost (Periodic Cost)	Long-Term Effectiveness and Permanence	Short-Term Effectiveness
Alternative 1	MRS 05-North	$0	$0	$0	$0	No reduction of risk to human health or the environment	No removal of DoD Military Munitions potentially present
	MRS 05-South	$0	$0	$0	$0		
	MRS 05-SR	$0	$0	$0	$0		
Alternative 2	MRS 05-North	N/A	$740,685	$740,685	$264,163	Reduces risk of human contact with DoD Military Munitions through educational means.	Public education; no removal of DoD Military Munitions potentially present
	MRS 05-South	N/A	$736,622	$736,622			
	MRS 05-SR	N/A	$729,511	$759,511			
Alternative 3	MRS 05-North	$2,586,907	$740,685	$3,327,592	$264,163	Reduces risk of human contact with DoD Military Munitions at the site	Public education; removal of detected DoD Military Munitions on the surface of the site
	MRS 05-South	$8,974,373	$736,622	$9,710,995			
	MRS 05-SR	$2,734,524	$729,511	$3,464,035			
Alternative 4	MRS 05-North	$4,356,725	$740,685	$5,097,410	$264,163	Reduces risk of human contact with DoD Military Munitions at the site	Public education; removal of detected DoD Military Munitions at the site
	MRS 05-South	$28,718,345	$736,622	$29,454,967			
	MRS 05-SR	$6,163,931	$729,511	$6,893,442			
Alternative 5	MRS 05-North	$49,924,393	$0	$49,924,393	$0	Reduces risk of human contact with DoD Military Munitions at the site	Removal of all detected DoD Military Munitions at the site
	MRS 05-South	$142,130,089		$142,130,089			
	MRS 05-SR	$54,461,221		$54,461,221			

[(1)] The O&M Costs associated with ICs include warning sign inspection and maintenance and 3Rs program. These costs are included in the Alternative Costs and amount to $130,638.

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PART 3: RESPONSIVENESS SUMMARY

This Responsiveness Summary presents all comments on the Proposed Plan that were received from stakeholders (including DTSC, USFS, Cal Poly, San Luis Obispo Sportsmen's Association, and CDFW) regarding the Selected Remedies as well as any general concerns that were expressed related to MRS 05. No public comments were received on the Proposed Plan.

3.1 STAKEHOLDER COMMENTS AND LEAD AGENCY RESPONSES

USACE, Los Angeles District provided information to the local community on the Preferred Alternatives for the MRS 05 sub-areas at a public meeting held on 22 May 2019. The meeting was attended by representatives from Cal Poly, the San Luis Obispo Botanical Garden and DTSC. No members of the public attended. There were no further questions or comments provided by meeting attendees that required revisions to the Proposed Plan. A comment period began on 1 May 2019 and ended on 7 June 2019, which allowed the public an opportunity to convey any questions and/or concerns about the MRS 05 sub-areas to the lead agency for consideration in the remedial selection process.

3.1.1 DTSC Comments/Responses

The following DTSC comments were provided for the Proposed Plan in May/June 2019 and were responded to by USACE. The comments are organized with those specifically related to the MRS 05 sub-areas appearing first followed by general comments and those related to all of the CSLO MRSs.

3.1.1.1 DTSC MRS 05 Sub-Area Specific Comments

DTSC Specific Comment No. 6: Each MRS or MRS sub-area should discuss any uncertainties or contingency measures that could be found or needed for the Preferred Alternative.

> **USACE Response: A – Accepted/Concur.** The subject summaries have been revised to add text regarding uncertainties/contingency measures. The following text has been added to the discussion of each Preferred Alternative:
>
> **"**MRS 05-North – If new information is discovered during remedial action implementation, general site use by the public, or recurring reviews (e.g., assumptions regarding site accessibility or the density of MD observed at the site do not match with expectations) requiring a new or supplementary response, the alternative preference and/or selection may be revisited."
>
> "MRS 05-South – If new information is discovered during remedial action implementation, general site use by the public, or recurring reviews (e.g., unexpected sensitive biological or archaeological resources) requiring a new or supplementary response, the alternative preference and/or selection may be revisited."
>
> "MRS 05-SR - If new information is discovered during remedial action implementation, general site maintenance or use by the public, or recurring reviews (e.g., unexpected

sensitive biological or archaeological resources) requiring a new or supplementary response, the alternative preference and/or selection may be revisited."

3.1.1.2 DTSC General Comments for the CSLO MRSs

DTSC General Comment No. 1: Based upon US EPA guidance found in EPA 540-R.98-031, OSWER 9200.1-23P of July 1999 a statement similar to: "It is the lead agency's judgment that the Preferred Alternatives identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened exposure to DoD Military Munitions," should be included in this section.

USACE Response: A – Accept/Concur. The subject section has been revised to add the recommended text per the guidance.

DTSC General Comment No. 2: Is this list of ARARs only what you consider key ARARs or is this a list of all ARARs identified in the RI/FS? If it is the entire list of ARARs identified in the RI/FS please update this section to include all ARARs identified in the final RI/FS.

USACE Response: A – Accepted/Concur. The subject list of ARARs, revised based on further internal USACE commentary, is considered the ARARs pertinent to the MRS sub-areas and remedial alternatives evaluated for this site.

DTSC General Comment No. 3: How and when will the IC's be evaluated as to successful implementation? Is there a report summary that will document discovery by users of military munitions?

USACE Response: A – Accept/Concur. A completion report would be developed at the conclusion of the remedial action implementation regardless of the alternative selected and recurring reviews would be implemented to determine whether the institutional controls and previous work conducted at the site continue to minimize explosives safety risks and continue to be protective of human health, safety, and the environment. The second paragraph of the Long-term Management section has been revised to read as follows: "Recurring reviews would be required for each alternative except Alternative 1, the No Further Action alternative, and Alternative 5, which would allow for UU/UE. These recurring reviews would be conducted to monitor the effectiveness of the remedy and determine if the response action continues to minimize human health risks and be protective of human health and safety and of the environment. Evidence of changes to anticipated land use (i.e., construction of buildings) or increased activity in the area could influence this assessment."

DTSC General Comment No. 4: Should discuss who will maintain, and how frequently they will be checked for damage and decay.

USACE Response: A – Accept/Concur. As part of the remedy implementation process, USACE will coordinate with stakeholders to evaluate and determine the approach for installing and maintaining signs. These responsibilities will be identified in an Institutional Controls Plan or a memorandum of agreement with the stakeholders. The following text has

been added to the 3rd item under the alternative: "USACE will be responsible for installing, maintaining and replacing signs. Additional details regarding the signs will be identified during the remedial action implementation process and will be documented in a work plan or a memorandum of agreement with the stakeholders."

DTSC General Comment No. 5: Per US EPA guidance found in EPA 540-R.98-031, OSWER 9200.1-23P of July 1999, this section should include a statement: "The preferred Alternative can change in response to public comment or new information," in this section.

USACE Response: A – Accept/Concur. The following text has been added to the Summary of Preferred Alternative section: "The preferred Alternative can change in response to public comment or new information, such as a change in land use or identification of new hazards."

DTSC ARARs Comment: The response to DTSC Comment 2 indicated to DTSC that the list of Applicable or Relevant and Appropriate Requirements (ARARs) presented in the CSLO Proposed Plan is incomplete and inadequate. The final Remedial Investigation and Feasibility Study (RI/FS) for CSLO MRS 01/02-Grenade Courts 25 and 26 and MRS 05 had 9 specific ARARs that the State and USACE had agreed to as appropriate for the preferred remedies for the MRS in question, which were as a point of fact the remedies selected in this Proposed Plan. However, the Proposed Plan only identified 2 ARARs, and provided no explanation to the State why the other 7 ARARs were omitted. DTSC has the following findings regarding ARARs for the proposed remedies for CSLO MRS 01/02-Grenade Courts 25 and 26 and MRS 05:

1. Omission of RCRA Subpart X 40 CFR 264.601 implies that no consolidation and storage of munitions-related items and consolidation of shots can take place at CSLO. All munitions-related items must be blown in place individually as discovered, and any remedial work plan submitted to DTSC must reflect this.

2. The 49 CFR Part 172.101 requirements must be met as a point of law, violation of these regulatory requirements during your remedial work involving public roadways could result in vehicle operators being investigated, charged and subject to civil violations and penalties of up to $186,610 by the appropriate public roadway authorities (federal, state and local).

3. California Code of Regulations, Title 22, Section 66265.382. Open Burning; Waste Explosives is an ARAR for the selected remedies for all munitions-related items that will be discovered and blown in place. Responsible parties choosing to open burn or detonate waste explosives shall do so in accordance with the following table and in a manner that does not threaten human health or the environment:

Pounds of Waste Explosive	Minimum Set Back Distance
0 to 100	204 meters
101 to 1,000	380 meters
1,001 to 10,000	530 meters
10,001 to 30,000	690 meters

This was an ARAR negotiated and agreed to by DTSC and USACE in the final CSLO MRS 01/02-Grenade Courts 25 and 26 and MRS 05 RI/FS, and would be a matter of formal dispute if not included in the Proposed Plan.

4. Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section 703 (a) and/or Fish and Game Code (FGC) Chapter 1 Section 3503. "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird..." The MBTA ARAR was negotiated and agreed to as an ARAR in the CSLO MRS 01/02-Grenade Courts 25 and 26 and MRS 05 RI/FS to address the need to plan to protect nesting birds during the breeding season (15 February to 30 August) in the MRS fieldwork area during the remedial effort. This would include planning and conducting pre-field mobilization work biological surveys and planned avoidance methods or the incorporation of biological support staff with field teams to identify and avoid nesting birds, since the Proposed Plan indicated that field work will take place outside of the wet season and thus most likely during the bird breeding season. If USACE chooses not to apply the MBTA, then FGC 3503 must be included in the Proposed Plan as an ARAR. DTSC would consider this a matter for formal dispute if neither the MBTA nor the FGC 3503 ARARs were include in the Proposed Plan.

5. California Endangered Species Act (CESA), Fish and Game Code Section 2080 requires that: "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts..." The California Endangered Species Act lists species that are not included under the federal Endangered Species Act 16 U.S.C. Section 1538 (a). The California Natural Diversity Database (https://www.wildlife.ca.gov/data/cnddb) provides information on the types of California-listed threatened and endangered plants and animals found in California, to include the San Luis Obispo area. A number of these listed plants and animals exist or may exist in the MRS fieldwork area. The CESA and CFG Section 2080 ARAR was negotiated and agreed to as an ARAR in the CSLO MRS 01/02-Grenade Courts 25 and 26 and MRS 05 RI/FS to address the need to plan to protect California listed threatened and endangered species in the MRS fieldwork area during the remedial effort. The remedial work plan must include plans to conduct pre-fieldwork mobilization biological surveys and planned avoidance methods, or the incorporation of biological support staff with field teams to identify and avoid listed California threatened and endangered species. DTSC would consider this a matter for formal dispute if the CESA and FGC 2080 ARARs were not include in the Proposed Plan.

USACE Response: A – Accept/Concur. DTSC telephoned Mr. Bruce James, USACE Project Manager, on February 12, 2019, to request clarification regarding Applicable or Relevant and Appropriate Requirements (ARARs) associated with this document. DTSC also sent a letter dated March 8, 2019, requesting further explanation regarding the list of potential ARARs, specifically:

a. Resource Conservation and Recovery Act (RCRA), Subpart X, 40 Code of Federal Regulations (CFR) §264.601.
b. Hazardous Materials Transportation Act regulations, 49 CFR §172.101.
c. California Health and Safety Code, Title 22 §66265.382.

d. Migratory Bird Treaty Act, 16 United States Code (USC) 703(a) and/or California Fish and Game Code (FGC) Chapter 1 §3503.
e. California Fish and Game Code §2080, California Endangered Species Act (CESA).

Section 3.3 of the Camp SLO Final Remedial Investigation/Feasibility Study Report (RI/FS) identified potential ARARs USACE was considering at the time of development of the RI/FS. As further investigation, evaluation, and coordination is conducted by USACE and stakeholders, including the state regulatory agency, as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), this list of potential ARARs can be refined before final ARARs are listed in the Decision Document. Below is further clarification as to each of the above-mentioned requirements as they relate to the Camp SLO Proposed Plan:

a. **RCRA, Subpart X, 40 CFR §264.601 -** This requirement was included as an ARAR in the Draft Final Proposed Plan, as described on page 25 of the document.

b. **Hazardous Materials Transportation Act regulations, 49 CFR §172.101 -** Upon further review of this requirement since development of the RI/FS, it has been determined this requirement is not a promulgated environmental law, rather a transportation law, and does not meet the definition of an ARAR for on-site activities conducted under CERCLA, as indicated in 42 U.S.C. §9621(d)(2). If transportation of materials that are regulated under the Hazardous Materials Transportation Act and its regulations, including 49 CFR §172.01, is to occur, USACE will comply with all applicable elements of the law and regulations.

c. **California Health and Safety Code, Title 22 §66265.382 -** This requirement was included as an ARAR in the Draft Final Proposed Plan, as described on page 25 of the document.

d. **Migratory Bird Treaty Act, 16 USC §703(a) and/or FGC Chapter 1 §3503 -** This requirement was not included in the Draft Final Proposed Plan as a result of internal USACE coordination; however, after USACE's further evaluation of the proposed remedial activities and site-specific conditions, MBTA will be included as an ARAR in the Proposed Plan. FGC Chapter 1 §3503 is not an ARAR. The state requirement is not more stringent than the Federal MBTA, as required by CERCLA (42 U.S.C. § 9621(d)(2)(A)(ii). The following text has been added to the ARAR section on pages 25-26 of the Proposed Plan:

"Migratory Bird Treaty Act, 16 USC §703(a) - (prohibition on take of migratory birds). The Migratory Bird Treaty Act (MBTA) prohibits pursuit, hunting, taking, capture, or killing or attempting the same, of migratory birds native to the United States. There have been observations of birds, such as Hutton's vireo (forest-nesting), oak titmouse (forest- and ground-nesting), blue grosbeak (forest [shrub]-nesting), and lazuli bunting (forest [shrub]-nesting), which are subject to the MBTA, onsite during the breeding season of early March through mid-July (with the season extended from February 15 to August 30, to ensure the protection of birds and nests). In addition, red-breasted and red-napped sapsuckers (forest-nesting), which are subject to the MBTA,

have been observed onsite during the winter. The vegetation clearing and ordnance removal and/or detonation activities required at the MRS under the Surface Removal with ICs alternative and the Surface and Subsurface Removal alternative would potentially adversely impact the environment in the short-term by disturbing wildlife habitat that is used by ground- and forest-nesting birds. To avoid this potential impact, a biologist would be onsite during all remedial action activities to monitor for birds and nests. If birds or nests are identified (during the winter or during nesting season), relevant buffer areas would be established around the bird and/or nest and fieldwork would not be conducted in the area until the biologist could ensure that activities would not result in a take. In addition, vegetation clearing would not occur during the February 15 to August 30 time-frame. Ordnance removal and demolition operations would be scheduled and implemented based on this time restriction as well. The ICs only alternative would not impact habitat that is used by ground- and forest-nesting birds."

In addition, the following text has been added to the descriptions of Alternatives 3 and 4:

"During the implementation of this alternative, a biologist would be onsite during all remedial activities to monitor the presence of birds and nests that may be protected under the MBTA. If birds or nests are identified, relevant buffer areas would be established around the bird and/or nest and fieldwork would not be conducted in the area until the biologist could ensure that activities would not result in a take. Fieldwork would be scheduled for outside the bird breeding season February 15 to August 30."

e. **California Fish and Game Code §2080, California Endangered Species Act -** This requirement was considered as a potential ARAR during development of the RI/FS. However, upon further evaluation of this requirement, it has been determined that this state endangered species law is not an ARAR. In addition, as can be seen on Table 3 of the Draft Final Proposed Plan, each of the relevant species listed as endangered or threatened under this state law is already subject to protection under the Federal ESA or MBTA. The CESA, including FGC §2080, is not more stringent than these Federal laws. As part of compliance with the Federal ESA and MBTA, please note that USACE would complete biological and habitat surveys prior to initiating any fieldwork to identify species of concern and to delineate any sensitive habitat (including federally designated critical habitat) areas that may need to be avoided. A biologist would be onsite during all remedial action activities and fieldwork would be scheduled to avoid impacting species to the extent possible. In addition, coordination with state and federal agencies during planning stages would lay out site-specific measures to be implemented during clearance activities including what areas may need to be avoided or whether there should be restrictions on the amount and type of vegetation that may be removed to facilitate surface clearance activities.

3.1.2 Stakeholder Comments/Responses

Stakeholder comment on the Proposed Plan related to MRS 05 were received from the USFS, Cal Poly and the San Luis Obispo Sportsmen's Association.

3.1.2.1 USFS Comment/Response

USFS Specific Comment No. 1 (Specific to MRS 05-North): Camp SLO FUD - add discussion that the LUC (signing, etc.) will be maintained by USACE. The USFS portion is small and we have no concerns. Both personnel from the Santa Lucia Ranger District have or will be moving on – the Ranger has transferred and Melody is retiring.

> **USACE Response: A – Accept/Concur.** As part of the remedy implementation process, USACE will coordinate with stakeholders to evaluate and determine the approach for installing and maintaining signs. These responsibilities will be identified in an Institutional Controls Plan or a memorandum of agreement with the stakeholders. The following text has been added to the third item under the alternative: "USACE will be responsible for installing, maintaining and replacing signs. Additional details regarding the signs will be identified during the remedial action implementation process and will be documented in a work plan or a memorandum of agreement with the stakeholders."

3.1.2.2 Cal Poly Comment/Response

Cal Poly Specific Comment No. 1 (Specific to MRS 05-South): Cal Poly is an educational institution dedicated to teaching students best management practices regarding sustainable rangeland use. To that end, extensive work has been done and money spent to develop native perennial grasses and to reduce erosion on this property. We understand the value of removing any remaining unexploded [ordnance], but would respectfully request consideration of the following:

- Limiting excavation to smallest footprint necessary and hand digging if at all possible.
- Reseeding disturbed areas with native grass species with application of water if necessary.
- Working in drier times of the year while avoiding high fire season.
- Having water available for fire mitigation if necessary.
- Allowing cattle to graze in paddocks not actively being investigated.
- Limiting traffic and prohibiting access during wet weather events when erosion risk is high.
- Allowing a stop period during the annual Bull Test Sale Event in early October.

Based on the conversation with [USACE PDT], they seem open and willing to do their best to help us maintain the rangeland throughout the process.

> **USACE Response: A – Accept/Concur.** The following text has been added to the description of Alternative 4 on page 28 of the Proposed Plan. In addition, all of the elements recommended will be incorporated in the remedial alternative implementation work plans, as appropriate. "In areas where this alternative would be implemented on property owned by Cal Poly, the following precautions would be implemented to minimize the impact to the school's agricultural programs:
>
> - Limiting excavation to smallest footprint necessary and hand digging, if at all possible.
> - Reseeding disturbed areas with native grass species with application of water, if

necessary.

- Working in drier times of the year while avoiding high fire season.
- Having water available for fire mitigation if necessary.;
- Allowing cattle to graze in paddocks not actively being investigated.
- Limiting traffic and prohibiting access during wet weather events when erosion risk is high.
- Allowing a stop period during the annual Bull Test Sale Event in early October.

3.1.2.3 San Luis Obispo Sportsmen's Association Comments/Responses

San Luis Obispo Sportsmen's Association Comment No. 1: With the exception of a small piece of Camp San Luis Obispo's current impact range, all of the land that comprises MRS 05 is cattle pasturelands. Current management is divided between SLOSA and Cal Poly's Animal Science Beef program. The Cal Poly portion has been used as grazing ground since 1968 with no "mishaps." The SLOSA portion has been utilized since 1983 as grazing ground and, at one time or another, all of it has burned.

> **USACE Response: A – Accept/Concur.** The information presented by the commenter is consistent with the historical information that has been developed during the Remedial Investigation (RI)/Feasibility Study (FS).

San Luis Obispo Sportsmen's Association Comment No. 2: Speaking with Cal Poly's cattle herd manager about MRS 05 and the Option 4 remediation led to the response of "rather excessive." Future use of MRS 05 will be the same as the current use as grazing ground. There are no plans to ever put buildings or development of any kind on MRS 05. Fence placement and repair is conducted currently using a metal detector, primarily checking for water lines, so other dense metals will show up.

> **USACE Response: N – Non-Concur.** Comments received from Cal Poly stakeholders [i.e., Thomas Featherstone, Cal Poly Environmental Health and Safety; and Dr. Jaymie Nolan and Aaron Lazanoff, Animal Science Department] have indicated they support the selection of Alternative 4 for the property owned by the university to ensure the safety of students/personnel during current and future land uses.

San Luis Obispo Sportsmen's Association Comment No. 3: SLOSA is mandated to run public shooting ranges on the Department of Fish and Wildlife's portion of MRS 05. The ranges that are currently in place occupy the only ground available for ranges, with the majority of the property serving as an impact area for the current ranges. Thus, there will not be any further development of the property. Efforts are underway at this time to have cattle grazing on about 300 of the 440 acres.

> **USACE Response: A – Accept/Concur.** The following information presented in the Proposed Plan is consistent with the information provided by the commenter:
>
> "MRS 05-SR – Current and future land use is expected to remain unchanged and continue to be used mainly for recreational (public shooting range) and agricultural purposes, which will include maintenance and renovation of the shooting range resulting in intrusive activities up to a depth of 2 ft bgs."

San Luis Obispo Sportsmen's Association Comment No. 4: Since 2011 all of MRS 05, with the exception of Camp San Luis Obispo, has been under Option 2- signage and information only. Since 1983, I am not aware of any reports of any kind of incident. From the SLOSA position, Option 2 is all that is needed and that Options 3-5 are "rather excessive."

> **USACE Response: N – Non-Concur.** Review of the Proposed Plan by the California Department of Toxic Substances (state regulator) and Cal Poly (landowner/operator) have supported the Preferred Alternatives presented for the three sub-areas of MRS 05; therefore, no changes will be made to the Preferred Alternatives presented in the Proposed Plan.

3.1.2.4 California Department of Fish and Wildlife Comments/Responses

California Department of Fish and Wildlife Comment No. 1: I have reviewed the plan and concur with the USACE's preferred alternative. I feel that their recommendation is reasonably conservative and that they have adequately assessed the potential risk for future development and public safety. Please do not hesitate to contact me with any questions or concerns. Thank you for the opportunity to review the plan.

> **USACE Response: A – Accept/Concur.** Comment noted. No response required.

3.2 TECHNICAL AND LEGAL ISSUES

Surface and subsurface removal of DoD Military Munitions along with a 3Rs (Recognize, Retreat, Report) Education Awareness Program will be implemented to minimize potential explosives hazards and to raise public awareness of DoD Military Munitions hazards at MRS 05. After the remedial action is complete, property owners may find munitions items that were not detectable or not removed from each of the MRS 05 sub-areas. The owners should be advised to contact their local law enforcement agency.

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REFERENCES

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2. CEMVS. 2006. Preliminary Historical Records Review Camp San Luis Obispo and Baywood Park Training Area, San Luis Obispo, California. 6 July.
3. USACE. 2007. Final Site Inspection Report, Former Camp San Luis Obispo, San Luis Obispo, California. Prepared for U.S. Army Corps of Engineers Southwest IMA Region. September.
4. USACE. 2018. Final Remedial Investigation/Feasibility Study Report, Camp San Luis Obispo – San Luis Obispo County, California, MRS 01/02 and MRS 05, FUDS MMRP Project Number – J09CA203107 (MRS 01/02) and J09CA203105 (MRS 05), Contract No. W912PL-12-D-0005, Task Order 0008. September.
5. USACE. 2019. Formerly Used Defense Sites Program Proposed Plan for Camp San Luis Obispo, MRS 01/02 – Grenade Courts 25 and 26, San Luis Obispo County California Formerly Used Defense Sites (FUDS) Project No. J0CA203107. May.
6. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). 11 December 1980. 42 United States Code (USC) 9601-9675, Public Law (PL) 96-510, as amended by the Superfund Amendment and Reauthorization Act (SARA). 17 October 1986.
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12 USACE. 2011. Final Time-Critical Removal Action Report, Former Camp San Luis Obispo MRS 05, San Luis Obispo, California.
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15. USEPA. 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, EPA/540/G-89/004, OSWER Directive 9355.3-01, pp. 186.
16. USEPA. 1999. A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, EPA/540/R-98/031, OSWER Directive 9200.1-23P, Section 6.3.4.
17. USACE. 2012. Conceptual Site Models - Engineer Manual 200-1-12. December.

18. USACE. 2017. Memorandum Establishing Guidance and Implementing Trial Period for Risk Management Methodology at FUDS MMRP Projects. 3 January.

19. USEPA-DoD. 2000. Unexploded Ordnance Management Principles.

ATTACHMENTS

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Attachment 1

Documentation of California Department of Toxic Substances Control Concurrence on MRS 05-North, MRS 05-South, and MRS 05-SR Selected Remedies

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Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

May 15, 2019

Mr. Bruce R. James
Project Manager EQ/IRP Program Manager
Department of the Army
Los Angeles District U.S. Army Corps of Engineers
Attn: CESPL-PM-M (Bruce James)
915 Wilshire Blvd, Suite 930
Los Angeles, California 90017

FINAL PROPOSED PLAN CAMP SAN LUIS OBISPO MUNITIONS RESPONSE SITES (MRS) 01/02- GRENADE COURTS 25 AND 26 AND MRS 05 – MULTI-USE RANGE COMPLEX

Dear Mr. James:

The Department of Toxic Substances Control (DTSC) has reviewed the Final Proposed Plan Camp San Luis Obispo (CSLO), California, Munitions Response Site (MRS) 01/02 - Grenade Courts 25 and 26 and MRS0 05 - Multi Use Range Complex received on May 6, 2019. The Proposed Plan for CSLO MRS 01/02 and MRS 05 and Grenade Courts 25 and 26 was prepared for the U.S. Army Corps of Engineers (USACE), Los Angeles District by Bristol Environmental Remediation Services, LLC.

DTSC has no comments on the Final Proposed Plan Camp San Luis Obispo, California, Munitions Response Site (MRS) 01/02 - Grenade Courts 25 and 26 and MRS 05 - Multi Use Range Complex.

If you have any questions, please contact me at (916) 255-6403, or via email at Stephen.Pay@dtsc.ca.gov.

Sincerely,

Stephen Pay, P.G., M. Sc.
Project Manager
Federal Facilities Unit
Site Mitigation and Restoration Program

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Attachment 2

Site Figures

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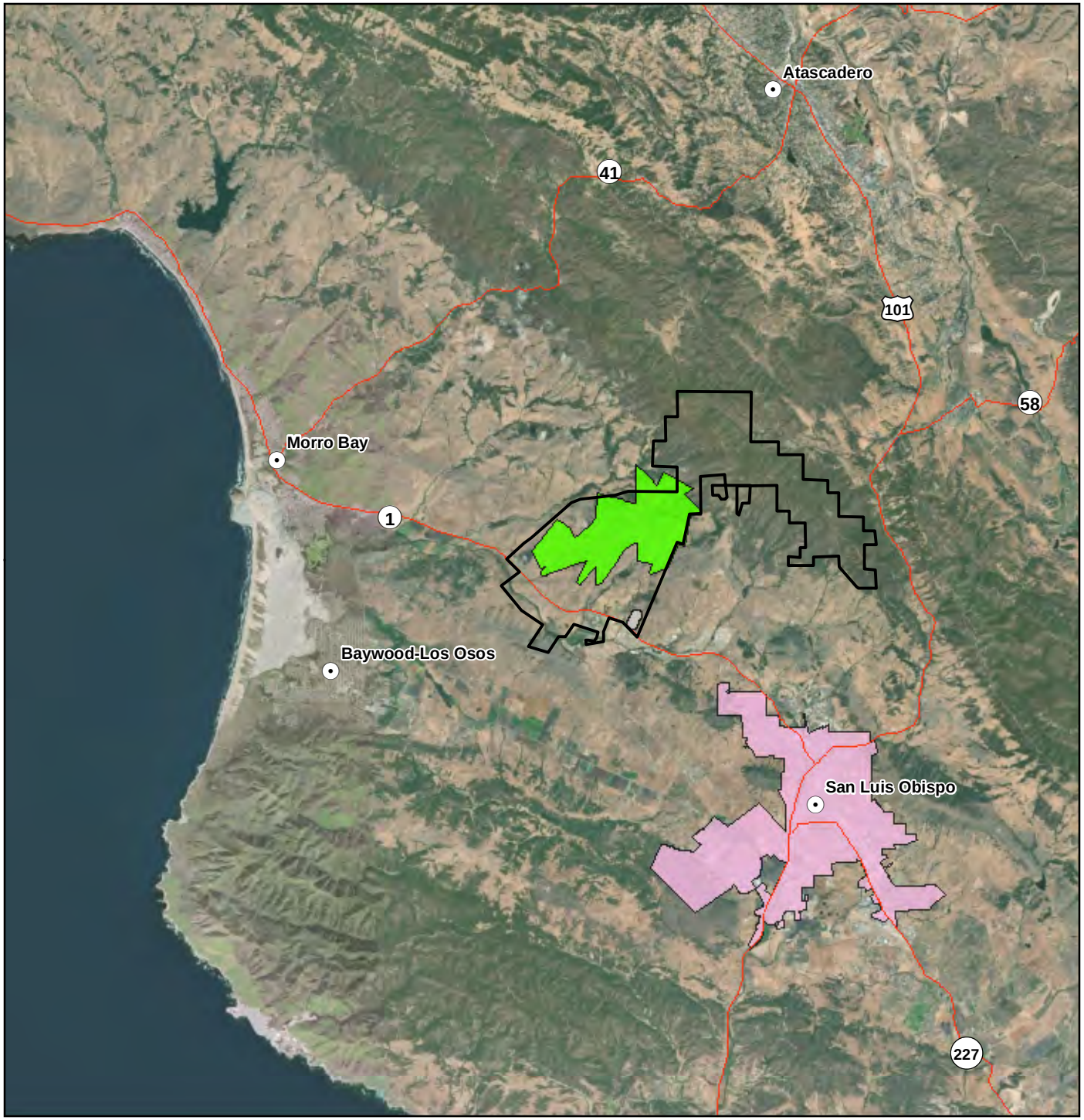

Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California
Figure 1
Site Location

Legend

- City
- MRS 07
- MRS 05
- San Luis Obispo City Limits
- CSLO FUDS Boundary
- Highway

MRS Boundaries:
Final Site Inspection Report,
Camp San Luis Obispo, San Luis Obispo, California.
Prepared for U.S. Army Corps of Engineers Southwest IMA Region.
Parsons, September 2007

N

0 1 2 3 Miles

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 1	
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 3/29/2019	
SUBMITTED BY:	BH	FILE: DD_mrs5_fig1	

Army Range Support Center

US Army Corps of Engineers
Los Angeles District

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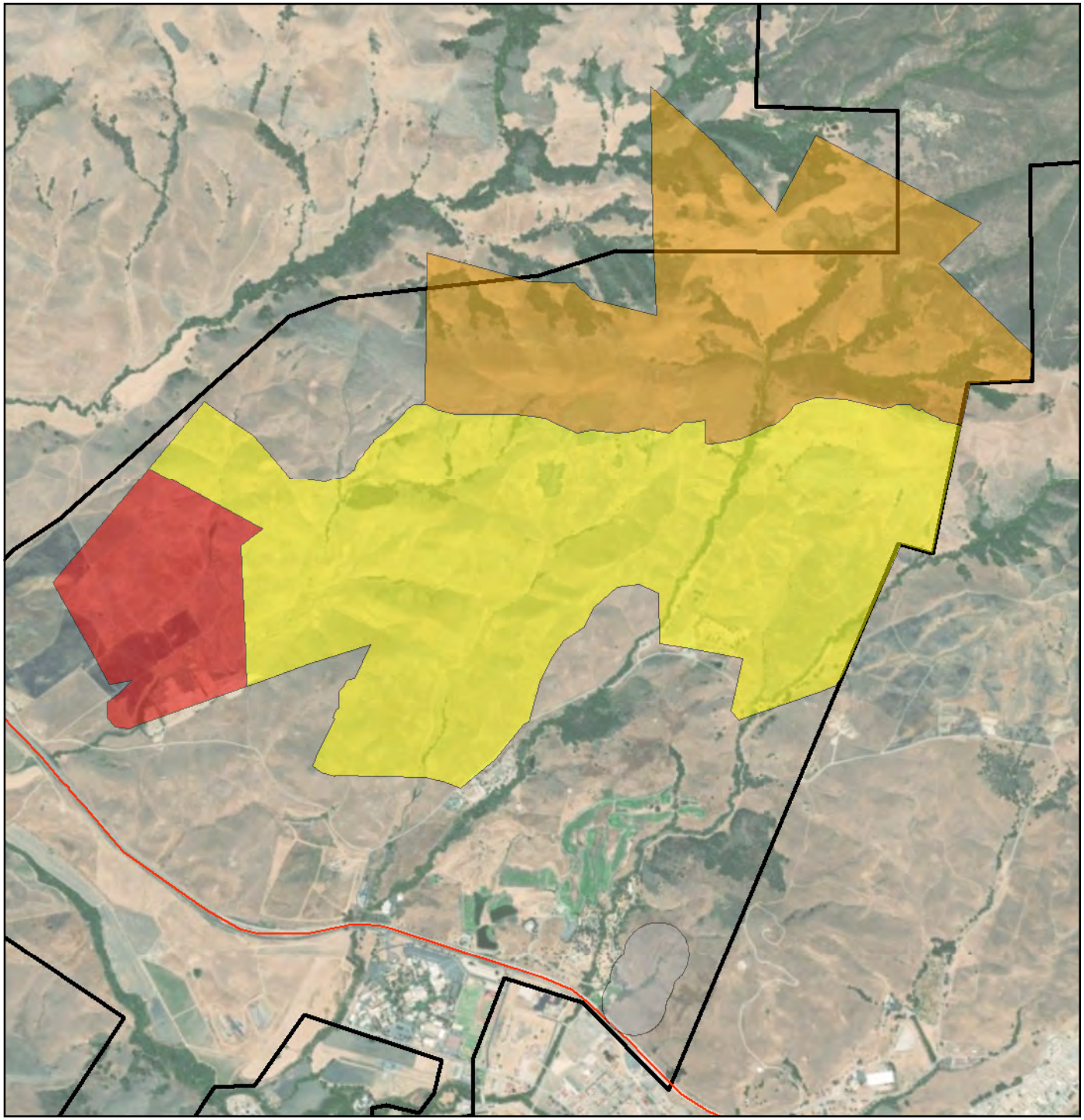
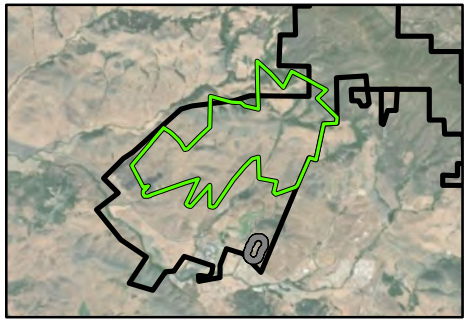


Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California

Figure 2
Site Layout

Legend

- MRS 07
- MRS 05–North (905.1 ac.)
- MRS 05–South (1453.0 ac.)
- MRS 05–SR (270.6 ac.)
- CSLO FUDS Boundary
- State Route 1



N

0 1,300 2,600 3,900 Feet

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 2	
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 6/4/2020	
SUBMITTED BY:	BH	FILE: Fig2_MRS_05_Layout	

US Army Corps of Engineers
Los Angeles District

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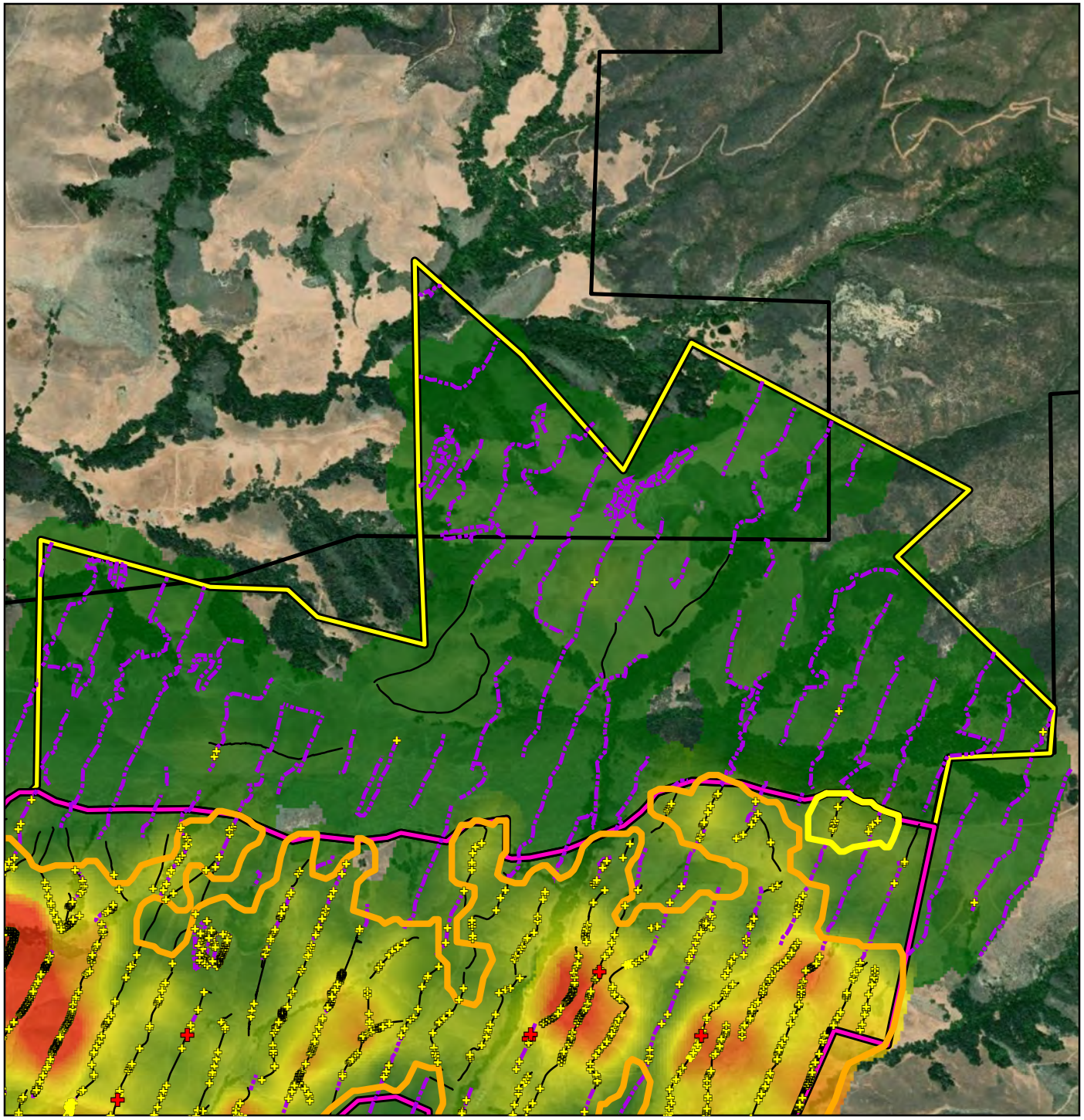


Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California

Figure 3a

Results of the RI at MRS-05 North

Legend

- Munitions and Explosives of Concern
- Munitions Debris
- Analog Geophysical Transects
- DGM Transects
- High Density Area 1 (1,093 acres)
- Medium Density Area 2 (14 acres)
- Medium Density Area 3 (11 acres)
- MRS 05-North
- MRS 05-South
- CSLO FUDS Boundary
- State Route 1

Estimated Density from Kriging (MD / MEC per Ac.)

450 — 0

Mean MD/UXO Density per Acre: 2
Total Estimated MD /UXO Targets: 1,810

N

0 820 1,640 2,460 Feet

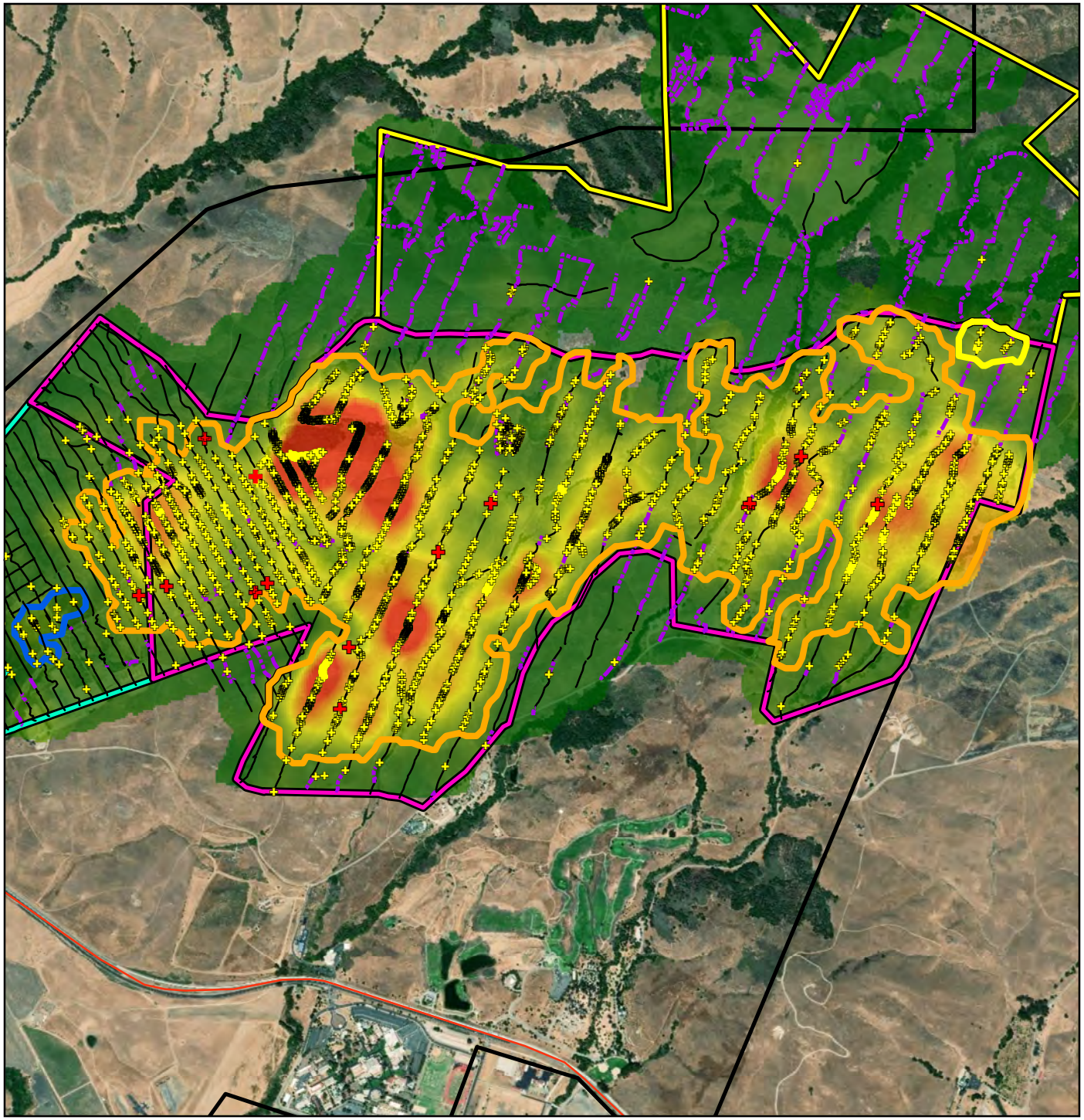
PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 3a	**FINAL**
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 8/22/2019	
SUBMITTED BY:	BH	FILE: Fig3_MRS_05_RI_Results	

Army National Guard Training Support Center

US Army Corps of Engineers. Los Angeles District

Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig3_MRS_05_RI_Results.mxd, 8/22/2019



Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California

Figure 3b

Results of the RI at MRS-05 South

Legend

- Munitions and Explosives of Concern
- Munitions Debris
- Analog Geophysical Transects
- DGM Transects
- High Density Area 1 (1,093 acres)
- Medium Density Area 2 (14 acres)
- Medium Density Area 3 (11 acres)
- MRS 05-North
- MRS 05-SR
- MRS 05-South
- CSLO FUDS Boundary
- State Route 1

Estimated Density from Kriging (MD / MEC per Ac.)

450 — 0

Mean MD/UXO Density per Acre: 154
Total Estimated MD /UXO Targets: 223,762

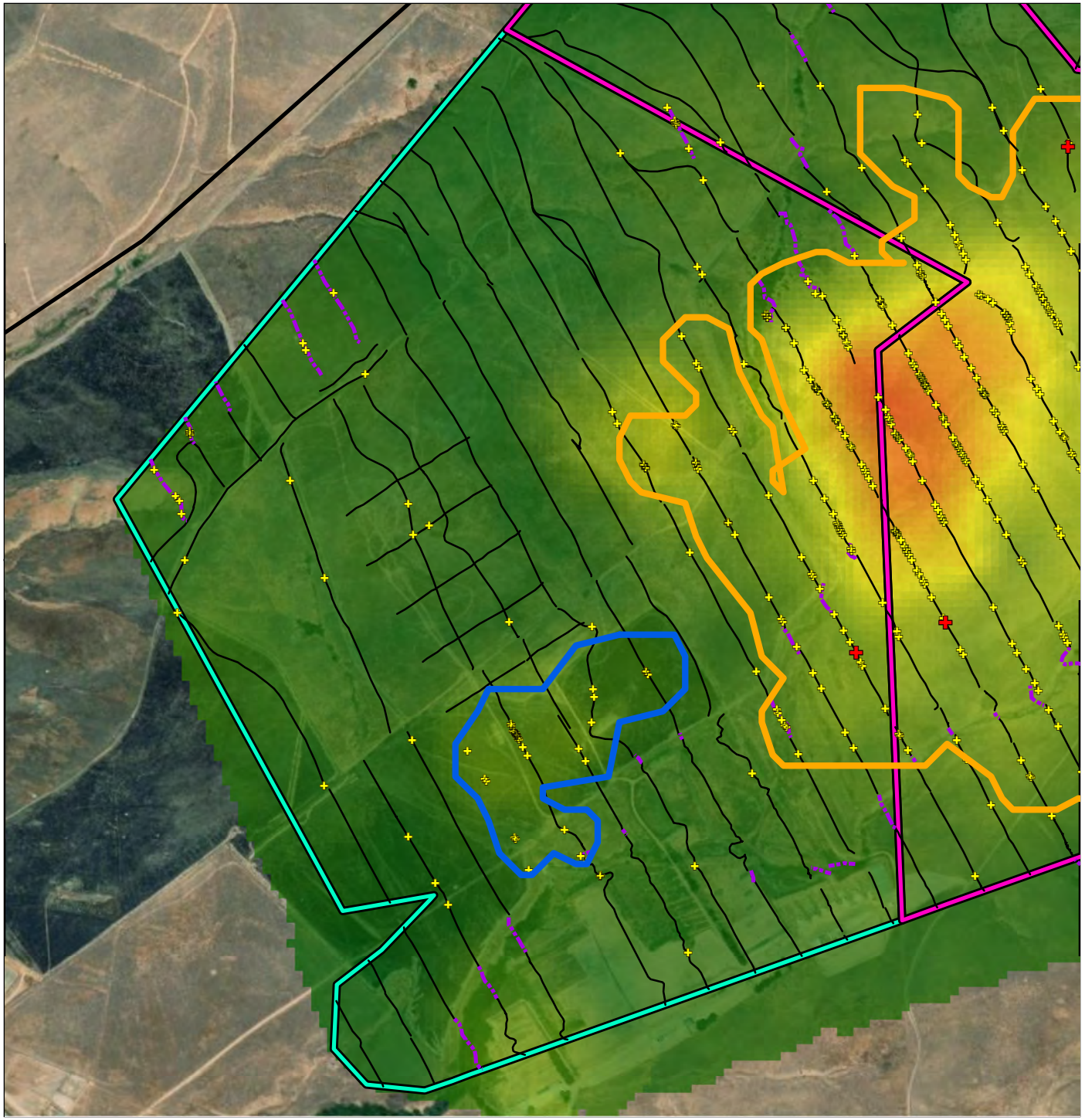
N

0 1,000 2,000 3,000 Feet

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 3b	**FINAL**
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 8/22/2019	
SUBMITTED BY:	BH	FILE: Fig3_MRS_05_RI_Results	

Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig3_MRS_05_RI_Results.mxd, 8/22/2019



Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California

Figure 3c

Results of the RI at MRS-05 SR

Legend

- Munitions and Explosives of Concern
- Munitions Debris
- Analog Geophysical Transects
- DGM Transects
- High Density Area 1 (1,093 acres)
- Medium Density Area 2 (14 acres)
- Medium Density Area 3 (11 acres)
- MRS 05-SR
- MRS 05-South
- CSLO FUDS Boundary
- State Route 1

Estimated Density from Kriging (MD / MEC per Ac.)

450 — 0

Mean MD/UXO Density per Acre: 46
Total Estimated MD /UXO Targets: 12,447

N

0 330 660 990 Feet

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 3c	**FINAL**
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 8/22/2019	
SUBMITTED BY:	BH	FILE: Fig3_MRS_05_RI_Results	

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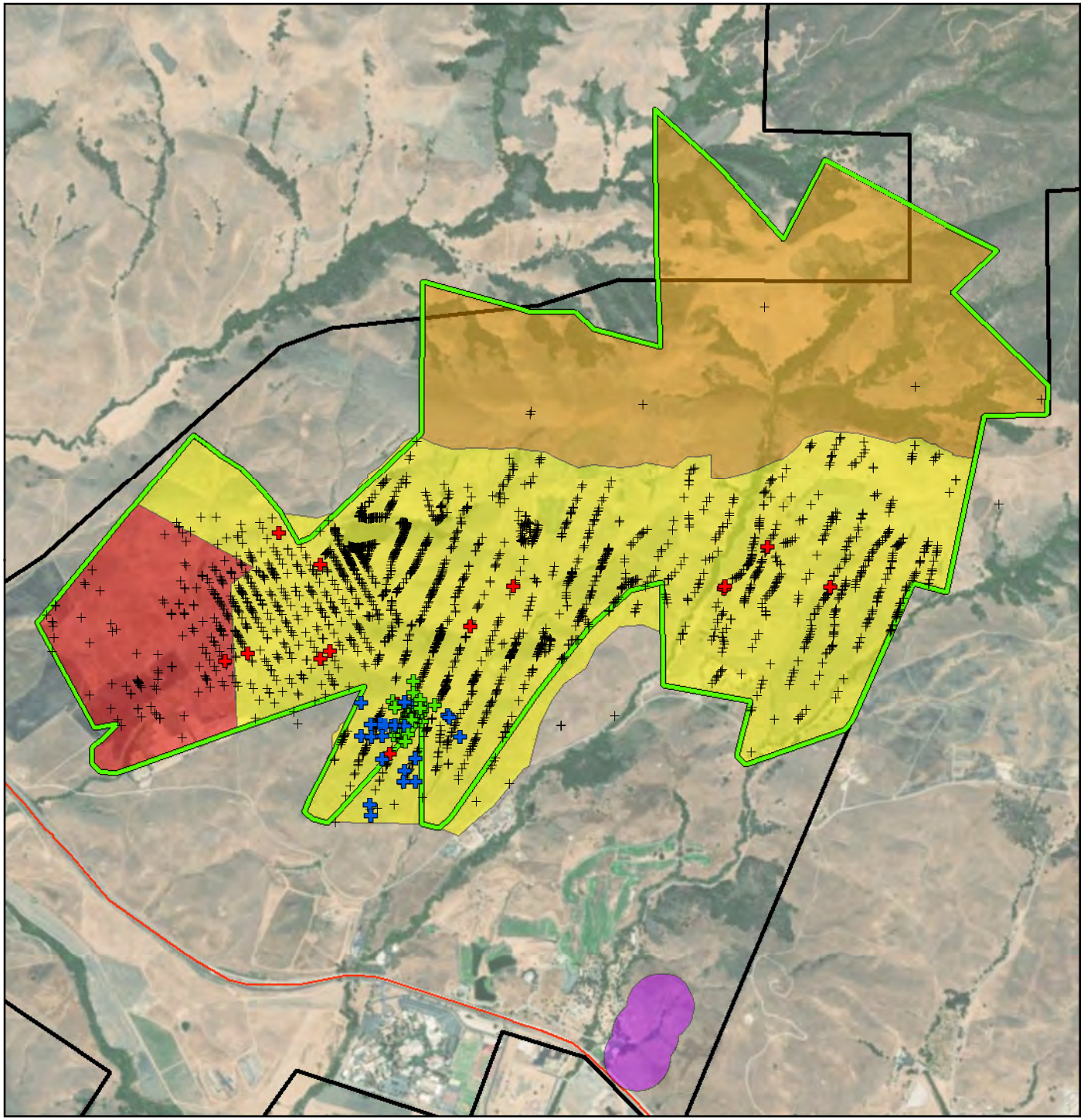
Los Angeles District

Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig3_MRS_05_RI_Results.mxd, 8/22/2019



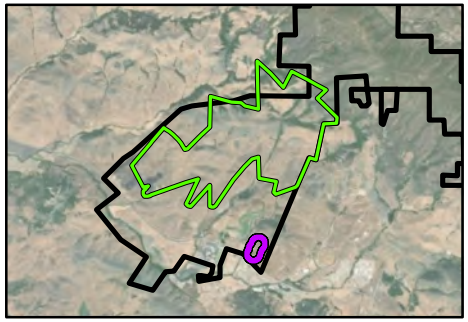
Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California
Figure 4
MRS 05 Sub-Area Delineation

Legend

Previous Investigations Results ESTCP
- UXO

Previous Investigations Results TCRA
- UXO

Investigations Results RI/FS
- UXO
- Munitions Debris
- MRS 05–North (904.8 ac.)
- MRS 05–South (1450.7 ac.)
- MRS 05–SR (270.5 ac.)
- MRS 07
- MRS 05
- CSLO FUDS Boundary
- State Route 1



N

0 1,300 2,600 3,900 Feet

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 4	**FINAL**
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 6/4/2020	
SUBMITTED BY:	BH	FILE: Fig4_Sub-Area	

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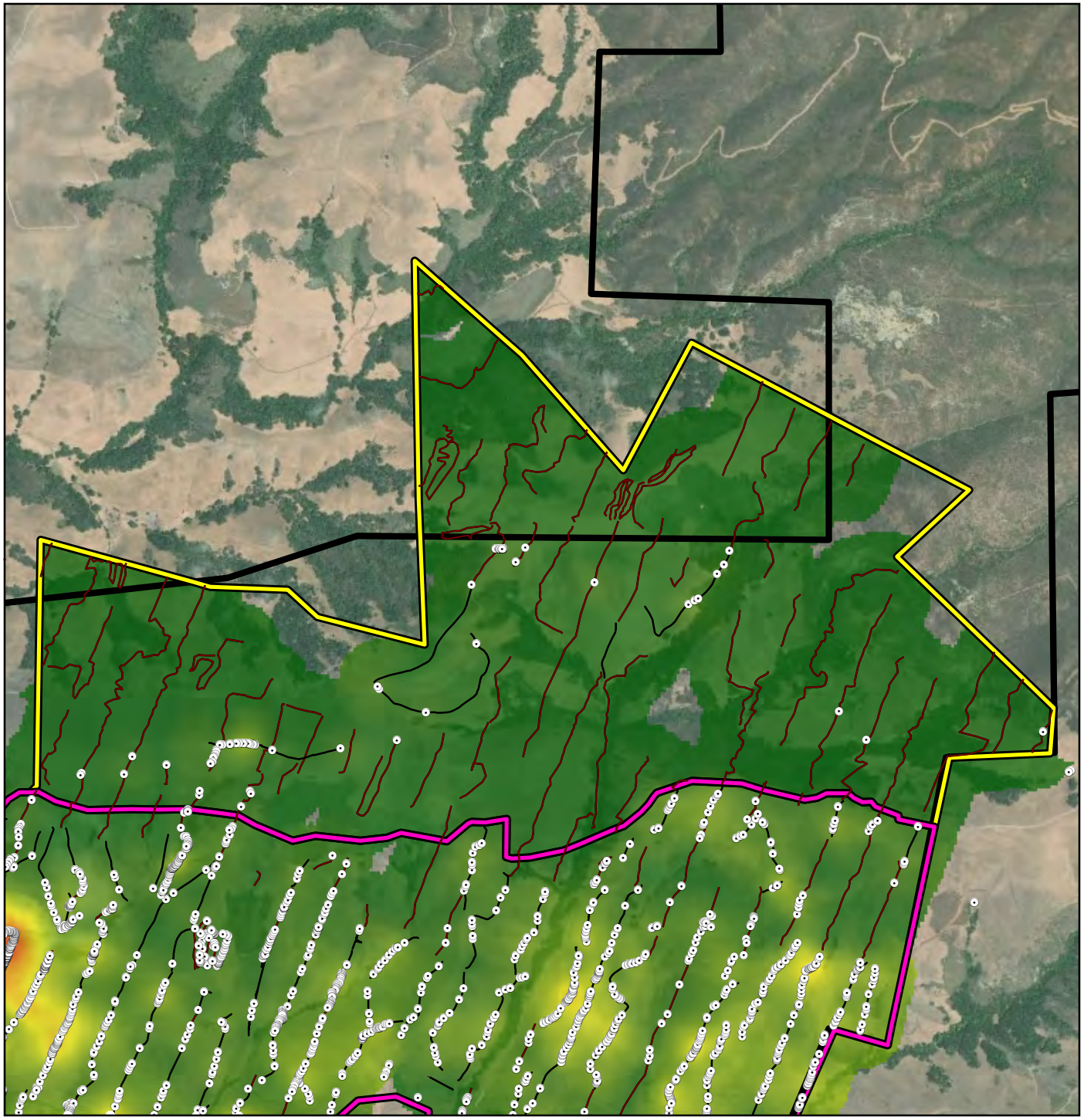
Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig4_Sub-Area.mxd, 6/4/2020



Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California
Figure 5a
Anomaly Density for MRS 05-North

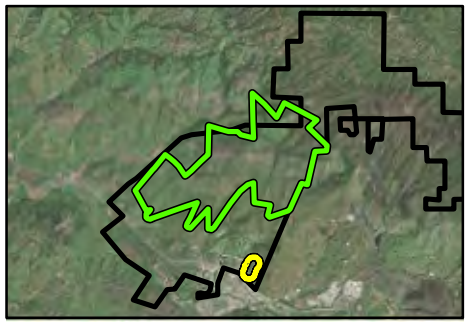
Legend

- Geophysical Targets
- DGM Transects
- Analog Geophysical Transects
- MRS 05-North
- MRS 05-SR
- MRS 05-South
- CSLO FUDS Boundary
- State Route 1

Estimated Density from Kriging (Anomalies per Ac.)

1220 — 0

Mean Anomaly Density per Acre: 7
Total Estimated Targets: 6,335



N

0 0.15 0.3 0.45 Miles

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 5a	**FINAL**
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 3/29/2019	
SUBMITTED BY:	BH	FILE: Fig5_AnomalyDenstiy_MRS_05	

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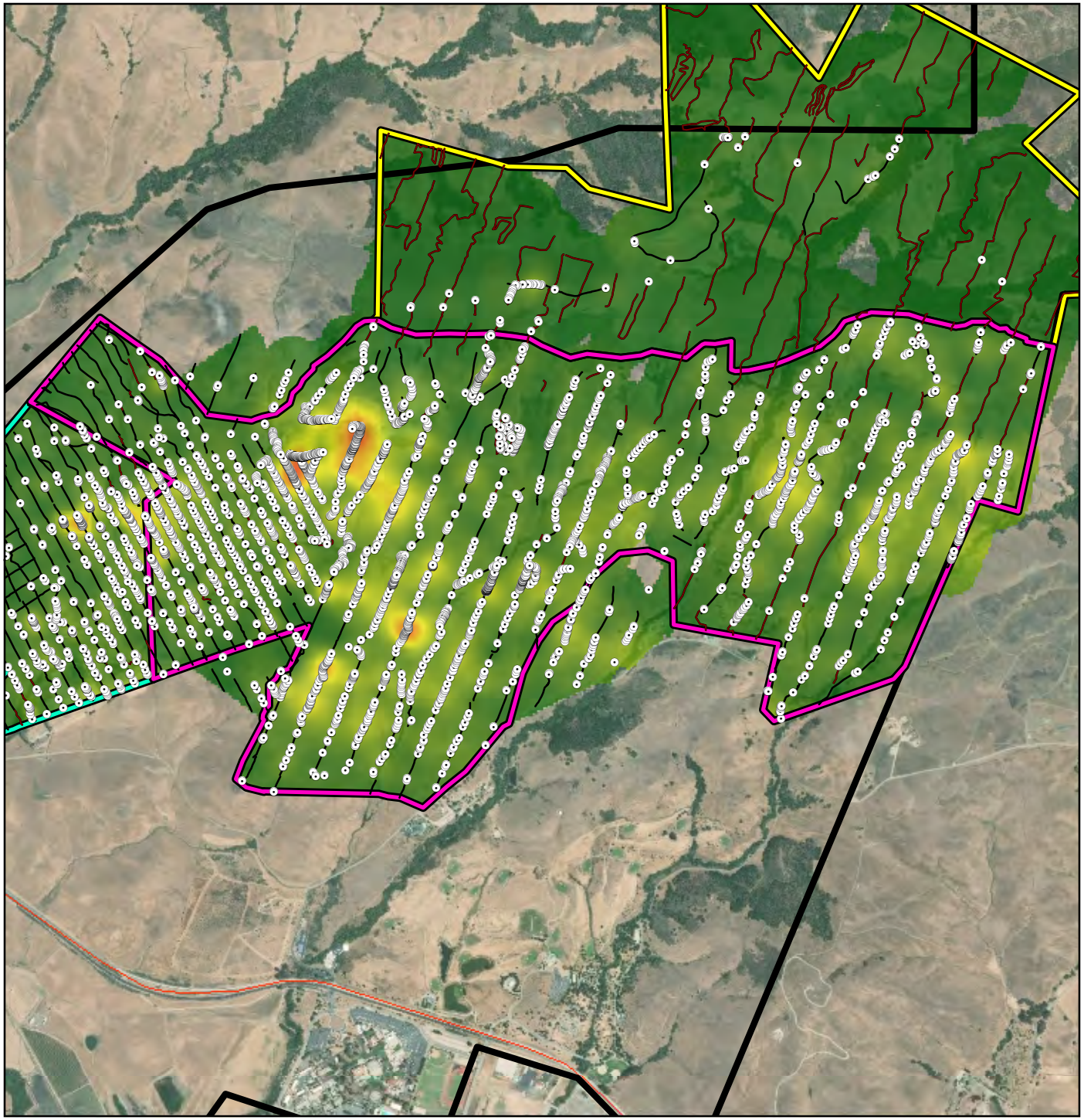
Los Angeles District

Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig5_AnomalyDenstiy_MRS_05.mxd,3/29/2019



Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California
Figure 5b
Anomaly Density for MRS 05-South

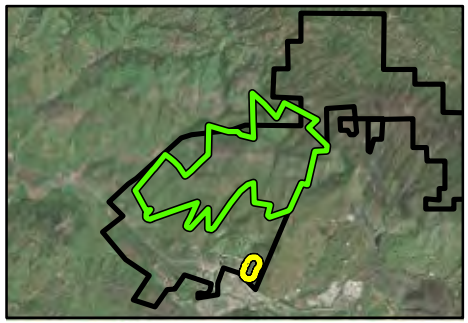
Legend

- Geophysical Targets
- DGM Transects
- Analog Geophysical Transects
- MRS 05-North
- MRS 05-SR
- MRS 05-South
- CSLO FUDS Boundary
- State Route 1

Estimated Density from Kriging (Anomalies per Ac.)

1220 — 0

Mean Anomaly Density per Acre: 184
Total Estimated Targets: 267,352



N

0 0.2 0.4 0.6 Miles

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY:	JS	Figure 5b	**FINAL**
DRAWN BY:	JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS
CHECKED BY:	JS	DATE: 3/29/2019	
SUBMITTED BY:	BH	FILE: Fig5_AnomalyDenstiy_MRS_05	

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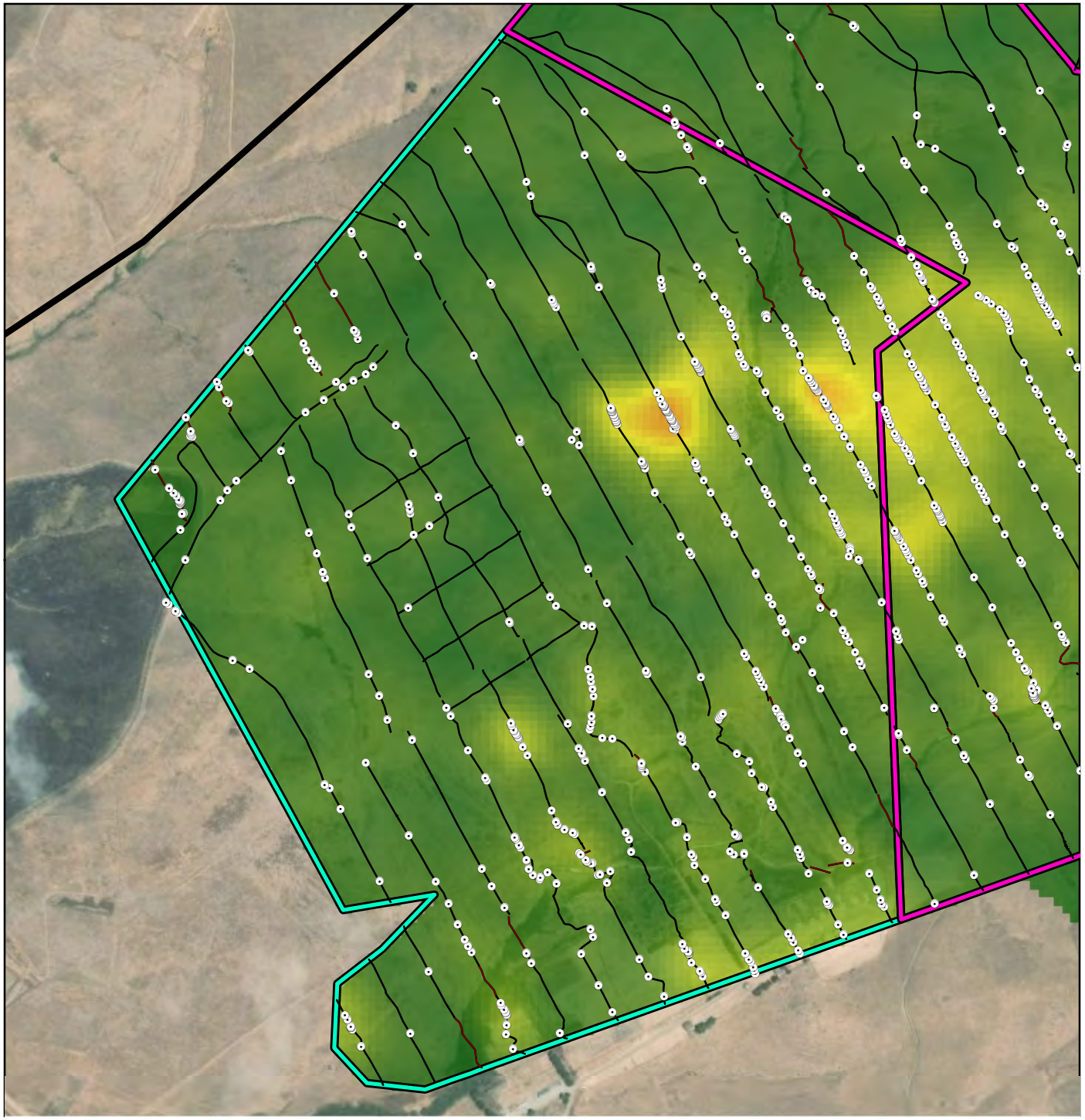
Los Angeles District

Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig5_AnomalyDenstiy_MRS_05.mxd,3/29/2019



Camp San Luis Obispo
MRS 05
Decision Document
San Luis Obispo County, California
Figure 5c
Anomaly Density for MRS 05-SR

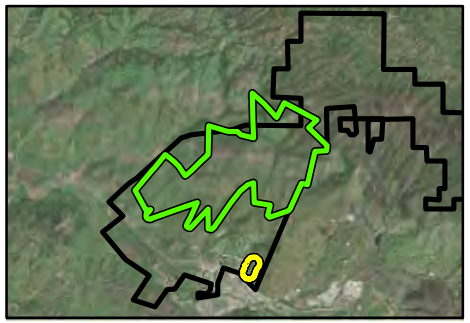
Legend

- Geophysical Targets
- DGM Transcects
- Analog Geophysical Transects
- MRS 05-North
- MRS 05-SR
- MRS 05-South
- CSLO FUDS Boundary
- State Route 1

Estimated Density from Kriging (Anomalies per Ac.)

1220 — 0

Mean Anomaly Density per Acre: 113
Total Estimated Targets: 30,510



N

0 0.06 0.12 0.18 Miles

PROJECTION: NAD 1983 UTM Zone 10N Units: Foot US

DESIGNED BY: JS	Figure 5c		**FINAL**
DRAWN BY: JS	SCALE: As Shown	PROJ NO: 10250 CSLO RI/FS	
CHECKED BY: JS	DATE: 3/29/2019		
SUBMITTED BY: BH	FILE: Fig5_AnomalyDenstiy_MRS_05		

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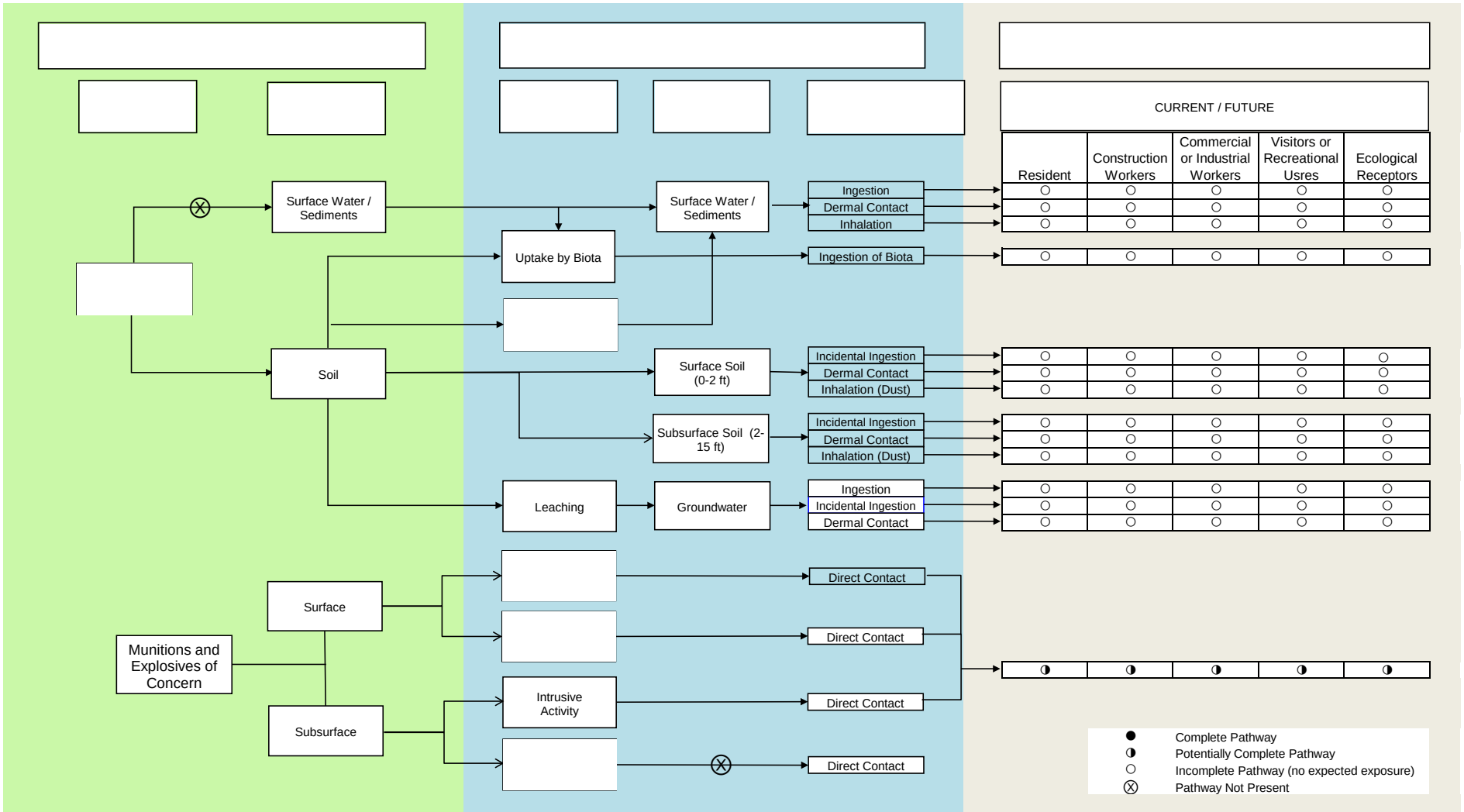
Los Angeles District

Document Path: D:\GIS\Projects\Bristol\10250_CSLO\Deliverables\DD\Fig5_AnomalyDenstiy_MRS_05.mxd,3/29/2019

MRS Name: MRS 05, Multi-Use Range Complex, Camp San Luis Obispo, CA; MRS 05-North (sub-area)

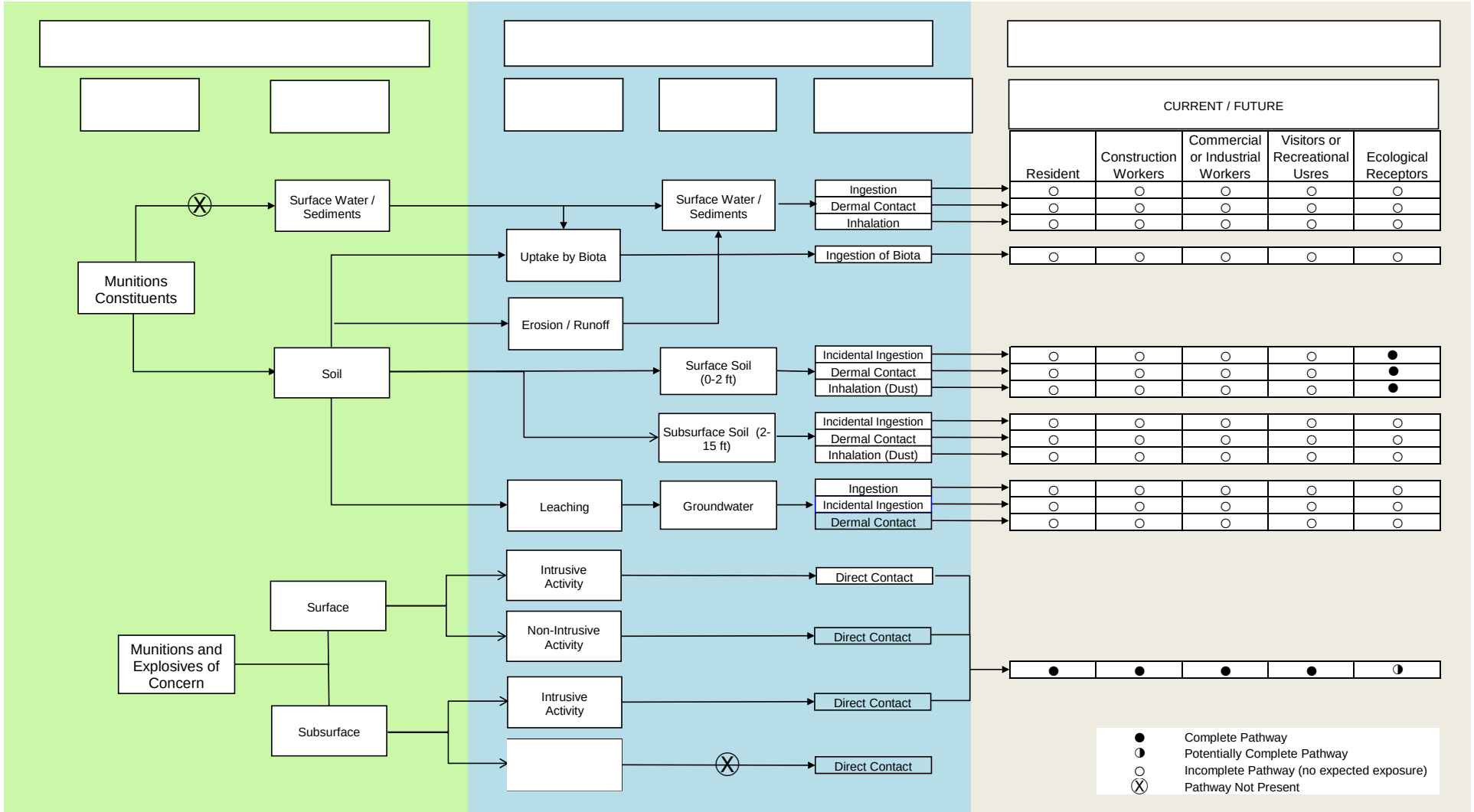
Completed By: Tom Tomczyk, Bristol Date Completed: 21 March 2013



NOTE: MC detected in sediments during the RI field effort was below Project Action Levels (and derived background levels) for metals and non-detected for explosives; therefore, the pathway for exposure to MC through surface water and sediments is not present.

MRS Name: MRS 05, Multi-Use Range Complex, Camp San Luis Obispo, CA; MRS 05-South (sub-area)

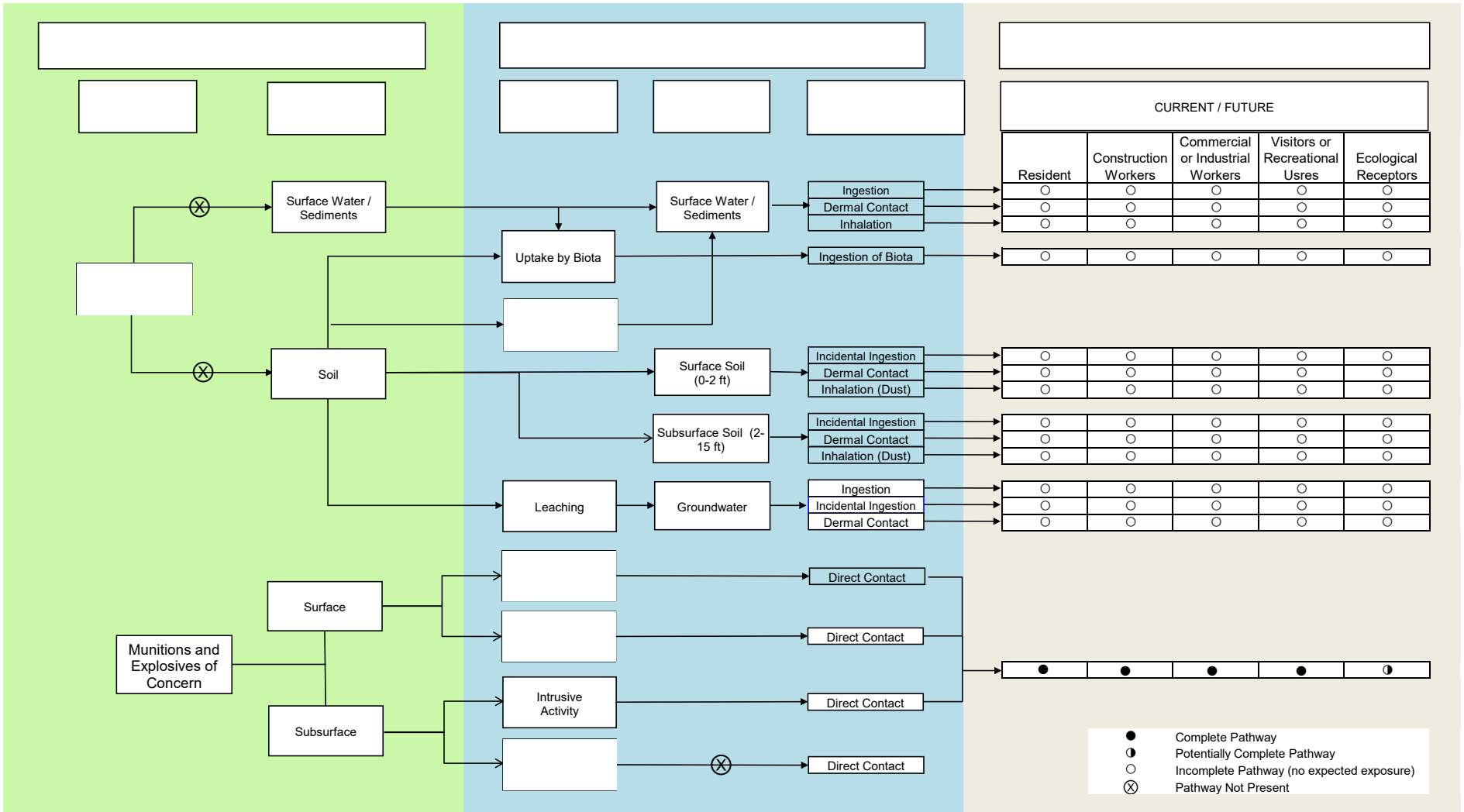
Completed By: Tom Tomczyk, Bristol Date Completed: 21 March 2013



NOTE: MC detected in sediments during the RI field effort was below Project Action Levels (and derived background levels) for metals and non-detected for explosives; therefore, the pathway for exposure to MC through surface water and sediments is not present.

MRS Name: MRS 05, Multi-Use Range Complex, Camp San Luis Obispo, CA; MRS 05-Shooting Range (sub-area)

Completed By: Tom Tomczyk, Bristol Date Completed: 21 March 2013



NOTE: MC detected during the RI field effort was below Project Action Levels (and derived background levels) for metals and non-detected for explosives, therefore the pathways for exposure to MC are not present.

Attachment 3

Administrative Record Index

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Administrative Record File Document Index
Camp San Luis Obispo, Range Complex (MRS05) - MMRP Project
FUDS Project No. J09CA203105

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
01 - Site Management Records									
	01 - Correspondence								
200-1e	J09CA203105_01.01_0501_a.pdf	Review Comments for Draft Preliminary Assessment	Briggs, Roger	CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD	Fabersunne, Mikos (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	11/16/1995	5	No	Volume 1
200-1e	J09CA203105_01.01_0502_a.pdf	Transmittal of Comments on the Preliminary Assessment	Fabersunne, Mikos	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Wells, Mike (MILITARY DEPARTMENT, OFFICE OF THE ADJUTANT GENERAL - SACRAMENTO)	12/29/1995	2	No	Volume 1
200-1e	J09CA203105_01.01_0517_a.pdf	Review Comments for the Preliminary Assessment Report	Briggs, Roger	CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD	DEPARTMENT OF TOXIC SUBSTANCE CONTROL	8/23/1996	6	No	Volume 1
200-1e	J09CA203105_01.01_0524_a.pdf	Owner for Each Property Should Participate in Upcoming Technical Project Planning Process	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	1/31/2006	1	No	Volume 1
200-1e	J09CA203105_01.01_0526_a.pdf	Transmittal of the Draft Final TPP Memorandum to Regulator	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	3/3/2006	1	No	Volume 1
200-1e	J09CA203105_01.01_0530_a.pdf	DTSC Review of Technical Project Planning Memorandum	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	--/--/----	4	No	Volume 1
200-1e	J09CA203105_01.01_0535_a.pdf	DTSC Agrees With Final TPP Memorandum	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	10/19/2006	1	No	Volume 1
200-1e	J09CA203105_01.01_0537_a.pdf	Transmittal of Draft Site Specific Work Plan to Regulator	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	11/29/2006	1	No	Volume 1
200-1e	J09CA203105_01.01_0538_a.pdf	DTSC Not Intending to Move Sample Points	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	1/23/2007	4	No	Volume 1
200-1e	J09CA203105_01.01_0541_a.pdf	DTSC Forwarding Shape Files	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	3/1/2007	2	No	Volume 1
200-1e	J09CA203105_01.01_0542_a.pdf	Transmittal of Final Site Specific Work Plan to Regulator	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	4/11/2007	1	No	Volume 1
200-1e	J09CA203105_01.01_0549_a.pdf	DTSC Review of Draft Site Specific Work Plan	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	1/11/2007	2	No	Volume 1
1200C PERM	J09CA203105_01.01_0552_a.pdf	DTSC Comments on the Draft Final Site Inspection Report	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	10/16/2007	3	No	Volume 1
1200C PERM	J09CA203105_01.01_0553_a.pdf	USACE Response to Comments on the Draft Final Site Inspection Report	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	7/10/2008	3	No	Volume 1
1200C PERM	J09CA203105_01.01_0554_a.pdf	Transmittal of the Final Site Inspection Report to DTSC	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Diebert, Donn (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL); Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	7/10/2008	2	No	Volume 1
1200C PERM	J09CA203105_01.01_0555_a.pdf	Transmittal of the Final Site Inspection Report to the U.S. Environmental Protection Agency	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Hamill, John (US ENVIRONMENTAL PROTECTION AGENCY, REGION 9)	7/10/2008	1	No	Volume 1
1200C PERM	J09CA203105_01.01_0556_a.pdf	Transmittal of the Revised Inventory Project Report and the Realignment of Project 05 into Two New Projects	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	11/7/2013	1	No	Volume 1

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
	02 - Archive Search Reports								
200-1e	J09CA203105_01.02_0500_a.pdf	Final ASR for Camp San Luis Obispo	USACE	USACE, ROCK ISLAND DISTRICT	PUBLIC	8/6/1998	312	Yes	Volume 1
200-1e	J09CA203105_01.02_0501_a.pdf	Preliminary Historical Records Review	USACE	USACE, ST. LOUIS DISTRICT	PUBLIC	6/11/2007	880	No	Volume 1
200-1e	J09CA203105_01.02_0502_a.pdf	ASR Supplement for Camp San Luis Obispo	USACE	USACE, ROCK ISLAND DISTRICT	PUBLIC	11/26/2004	53	No	Volume 2
	06 - Reference Documents								
200-1e	J09CA203105_01.06_0504_a.pdf	Preliminary Assessment Report	GEOSYSTEM CONSULTANTS, INC.	GEOSYSTEM CONSULTANTS, INC.	DIVISION OF THE STATE ARCHITECT	5/--/1996	349	No	Volume 2
200-1e	J09CA203105_01.06_0505_a.pdf	Final Report ESTCP Pilot Program Classification Approaches in Munitions Response	ENVIRONMENTAL SECURITY TECHNOLOGY CERTIFICATION PROGRAM	ENVIRONMENTAL SECURITY TECHNOLOGY CERTIFICATION PROGRAM	PUBLIC	5/--/2010	75	No	Volume 2
	08 - Inventory Project Reports (INPR)								
200-1e	J09CA203105_01.08_0500_a.pdf	South Pacific Division Authorizing HTRW and OE Projects	Madsen, Peter	USACE, SOUTH PACIFIC DIVISION (CESPD)	Commander, (USACE - WASHINGTON, DC (HEADQUARTERS)); Commander, (USACE - HUNTSVILLE DIVISION)	4/28/2000	2	No	Volume 2
200-1e	J09CA203105_01.08_0506_a.pdf	Findings and Determination of Eligibility	Madsen, Peter	USACE, SOUTH PACIFIC DIVISION (CESPD)	Unknown	4/26/2000	2	No	Volume 2
1200C PERM	J09CA203105_01.08_0507_a.pdf	Site Survey Summary Sheet	USACE	USACE	Unknown	3/29/1999	5	No	Volume 2
1200C PERM	J09CA203105_01.08_0511_a.pdf	05 OE Project Summary Sheet	USACE	USACE	Unknown	3/29/1999	1	No	Volume 2
1200C PERM	J09CA203105_01.08_0532_a.pdf	Revised Inventory Project Report Packet	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	10/1/2013	22	No	Volume 2
1200C PERM	J09CA203105_01.08_0533_a.pdf	Los Angeles District Recommending Approval of Inventory Project Report	Castens, Debra	USACE, LOS ANGELES DISTRICT (CESPL)	USACE, SOUTH PACIFIC DIVISION (CESPD)	9/21/1999	1	No	Volume 2
	09 - Abbreviated PAs (APA), Preliminary Assessments (PA), and Site Inspection (SI) Reports [and any other report done prior to RI, FS, PP, DD, and removal or remedial activities]								
1200C PERM	J09CA203105_01.09_0524_a.pdf	Final Site Inspection Report for Former Camp San Luis Obispo (J09CA203105)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	9/27/2007	458	Yes	Volume 2
	12 - Meeting Documents								
200-1e	J09CA203105_01.12_0500_a.pdf	Final Technical Project Planning Memorandum & Associated Documentation for Former Camp San Luis Obispo (J09CA203105)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	PUBLIC	10/12/2006	98	No	Volume 2
	14 - Site Assessment Work Plans								
200-1e	J09CA203105_01.14_0500_a.pdf	Final Site Specific Work Plan Addendum to the Programmatic Work Plan for Former Camp San Luis Obispo (J09CA203105)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	PUBLIC	4/3/2007	153	No	Volume 3
02 - Removal Response Records									
	01 - Correspondence								
200-1e	J09CA203105_02.01_0500_a.pdf	DTSC Review and Concurrence with Draft Action Memorandum for Time Critical Removal Action	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Goddard, Lloyd (LOS ANGELES DISTRICT (CESPL))	7/22/2009	1	No	Volume 3
200-1e	J09CA203105_02.01_0502_a.pdf	DTSC Requesting USACE Reverse Position and Perform Time Critical Surface Removal in MRS 5	Ward, Daniel	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Armentrout, Jeffery (LOS ANGELES DISTRICT (CESPL))	12/29/2009	2	No	Volume 3
200-1e	J09CA203105_02.01_0503_a.pdf	DTSC Review and Concurrence with Final Time Critical Removal Action Work Plan	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	8/18/2010	1	No	Volume 3
200-1e	J09CA203105_02.01_0504_a.pdf	New Ordnance Found During Survey	Sipult, Jesse	ENGINEERING/ REMEDIATION RESOURCES GROUP, INC. (ERRG)	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	7/21/2008	2	No	Volume 3
200-1e	J09CA203105_02.01_0505_a.pdf	Ordnance Found by Student on Cal Poly Campus	Allen, B.J.	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL); Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	1/20/2009	3	No	Volume 3

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
200-1e	J09CA203105_02.01_0509_a.pdf	Update to DTSC Regarding the TCRA Action Memorandum Revision	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	3/26/2010	2	No	Volume 3
200-1e	J09CA203105_02.01_0511_a.pdf	Review of Draft TCRA Work Plan and Invitation to Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	5/13/2010	1	No	Volume 3
200-1e	J09CA203105_02.01_0514_a.pdf	Transmittal of Draft Final Action Memorandum for Review	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	5/27/2010	2	No	Volume 3
200-1e	J09CA203105_02.01_0515_a.pdf	DTSC Review of the Draft Final Action Memorandum for Time Critical Removal Action	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	5/27/2010	1	No	Volume 3
200-1e	J09CA203105_02.01_0516_a.pdf	DTSC Design Review Comment on the Draft TCRA Work Plan	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Unknown	6/24/2010	3	No	Volume 3
200-1e	J09CA203105_02.01_0517_a.pdf	DTSC Review of the Draft TCRA Work Plan	Walker, Ed	CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	6/25/2010	2	No	Volume 3
200-1e	J09CA203105_02.01_0518_a.pdf	USACE Response to DTSC Comments on the Draft TCRA Work Plan	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	7/30/2010	3	No	Volume 3
200-1e	J09CA203105_02.01_0521_a.pdf	Approval of TCRA Explosives Safety Submission	Doyle, Clifford H.	U.S. ARMY TECHNICAL CENTER FOR EXPLOSIVES SAFETY	Becker, David (USACE - ENVIRONMENTAL AND MUNITIONS CENTER OF EXPERTISE); Zange, Walter (USACE - ENVIRONMENTAL AND MUNITIONS CENTER OF EXPERTISE)	7/22/2010	2	No	Volume 3
200-1e	J09CA203105_02.01_0522_a.pdf	Department of Defense Explosives Safety Board Approval of TCRA Explosives Safety Submission	Bowling, Curtis	DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD	Unknown	7/22/2010	2	No	Volume 3
200-1e	J09CA203105_02.01_0523_a.pdf	Invitation to Meeting to Discuss Start of Field Work for TCRA	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	7/30/2010	1	No	Volume 3
200-1e	J09CA203105_02.01_0524_a.pdf	Invitation to Meeting to Discuss the Results of the TCRA, UXO Pamphlet, and UXO Safety Presentation	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	8/12/2011	1	No	Volume 3
200-1e	J09CA203105_02.01_0525_a.pdf	Transmittal of Draft-Final TCRA Report to DTSC	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	8/17/2011	1	No	Volume 3
200-1e	J09CA203105_02.01_0526_a.pdf	Transmittal of Final TCRA Report to DTSC	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	9/11/2012	1	No	Volume 3
	04 - Corrective Action Plans, Tank or Other Removal Workplans, Tank or Other Removal Design Documents (CON/HTRW), UFP-QAPPs, Site Safety & Health Plans, Progress Reports, Sampling and Analysis Data and Plans								
200-1e	J09CA203105_02.04_0501_a.pdf	Final Time-Critical Removal Action Work Plan	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	PUBLIC	7/--/2010	480	No	Volume 3
	13 - Removal Response Reports, Tank Closure Reports/Removal Action Reports								
200-1e	J09CA203105_02.13_0501_a.pdf	Final Time Critical Removal Action Report at Munitions Response Site 05 Former Camp San Luis Obispo	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	PUBLIC	8/24/2012		No	Volume 3
200-1e	J09CA203105_02.13_0502_a.pdf	Final Removal Action Report for Camp San Luis Obispo (El Chorro Regional Park)	USACE	USACE - HUNTSVILLE DIVISION	PUBLIC	4/--/1992	328	No	Volume 3
	17 - EE/CA Action Memorandums								
200-1e	J09CA203105_02.17_0500_a.pdf	FINAL Action Memorandum for Time-Critical Removal Action at the Former Camp San Luis Obispo Munitions Response Site 05 (Jun 2010)	ENGINEERING/ REMEDIATION RESOURCES GROUP, INC. (ERRG)	ENGINEERING/ REMEDIATION RESOURCES GROUP, INC. (ERRG)	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL)); Unknown, (LOS ANGELES DISTRICT (CESPL))	6/--/2010	35	No	Volume 3
	18 - Meeting Documents								
200-1e	J09CA203105_02.18_0500_a.pdf	Time Critical Removal Action Slide Presentation for Stakeholder's Meeting	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	5/26/2010	28	No	Volume 3
200-1e	J09CA203105_02.18_0502_a.pdf	Time Critical Removal Action Slide Presentation for Stakeholder's Meeting	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	9/1/2011	13	No	Volume 3

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
03 - Remedial Investigation (RI) Records									
	01 - Correspondence								
200-1e	J09CA203105_03.01_0500_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	5/28/2010	1	No	Volume 4
200-1e	J09CA203105_03.01_0501_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Tan, Lida (UNITED STATES ENVIRONMENTAL PROTECTION AGENCY)	5/28/2010	1	No	Volume 4
200-1e	J09CA203105_03.01_0502_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	11/2/2010	1	No	Volume 4
200-1e	J09CA203105_03.01_0504_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	9/2/2011	1	No	Volume 4
200-1e	J09CA203105_03.01_0510_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to Technical Project Planning Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	6/18/2013	1	No	Volume 4
200-1e	J09CA203105_03.01_0511_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Tatoian-Cain, Carolyn (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	6/18/2013	1	No	Volume 4
200-1e	J09CA203105_03.01_0512_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Huang, Judy (U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 9)	6/18/2013	1	No	Volume 4
1200C PERM	J09CA203105_03.01_0513_a.pdf	Invitation to First Technical Project Planning Meeting for the Treatability Study	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL); Racca, Roman (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	4/7/2014	2	No	Volume 4
1200C PERM	J09CA203105_03.01_0514_a.pdf	Transmittal of the Draft Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Racca, Roman (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL); Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	5/9/2014	2	No	Volume 4
1200C PERM	J09CA203105_03.01_0515_a.pdf	Transmittal of the Final Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Racca, Roman (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL); Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	6/30/2014	2	No	Volume 4
1200C PERM	J09CA203105_03.01_0516_a.pdf	Transmittal of the Draft-Final Treatability Study Report for Review and Comment	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL); Racca, Roman (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	7/15/2015	2	No	Volume 4
	04 - Work Plans, Site Safety & Health Plans, Progress Reports, UFP-QAPPs, Sampling and Analysis Data and Plans								
200-1e	J09CA203105_03.04_0503_a.pdf	Final Remedial Investigation/Feasibility Study Work Plan	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	8/--/2011	1278	Yes	Volume 4
200-1e	J09CA203105_03.04_0504_a.pdf	Explosive Site Plan for Remedial Investigation at Camp San Luis Obispo	USACE	USACE, HUNTSVILLE ENGINEERING AND SUPPORT CENTER (CEHNC)	Unknown	8/31/2011	18	No	Volume 4
200-1e	J09CA203105_03.04_0505_a.pdf	Final Uniform Federal Policy (UFP) Quality Assurance Project Plan (QAPP) for the Treatability Study	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	6/--/2014	603	Yes	Volume 5
	10 - RI Reports (and other RI related reports)								
200-1e	J09CA203105_03.10_0502_a.pdf	Final Treatability Study Report for Former Camp San Luis Obispo	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	10/--/2015	265	Yes	Volume 5

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
	12 - Meeting Documents								
200-1e	J09CA203105_03.12_0500_a.pdf	Camp San Luis Obispo Remedial Investigation/Feasibility Study Technical Project Planning Meeting #1	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	6/16/2010	68	No	Volume 5
200-1e	J09CA203105_03.12_0501_a.pdf	Camp San Luis Obispo Remedial Investigation/Feasibility Study Technical Project Planning Meeting #2	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	11/18/2010	139	No	Volume 5
04 - Feasibility Study (FS) Records									
	09 - FS Reports								
1200C PERM	J09CA203105_04.09_0001_a.pdf	Final Remedial Investigation/Feasibility Study Report	U.S. ARMY CORPS OF ENGINEERS	U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT	Unknown	9/--/2018	1868	No	Volume 6
08 - Public Affairs/Community Relations Records									
	01 - Correspondence								
200-1e	J09CA203105_08.01_0500_a.pdf	Determination That There is No DERA Project	Salvato, C.J.	STATE OF CALIFORNIA, DEPARTMENT OF CORRECTIONS	Townsend, Paul (LOS ANGELES DISTRICT (CESPL))	3/23/1987	1	No	Volume 6
200-1e	J09CA203105_08.01_0501_a.pdf	No Intention to Request a DERA Project	Guenther, Keith	UNITED STATES DEPARTMENT OF AGRICULTURE	Townsend, Paul (LOS ANGELES DISTRICT (CESPL))	1/20/1987	1	No	Volume 6
200-1e	J09CA203105_08.01_0502_a.pdf	Site Inspection to be Performed Following Recent Discovery of Unexploded Ordnance	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Jarvis, Mary (SAN LUIS OBISPO COUNTY SCHOOLS, OFFICE OF EDUCATION)	11/29/2005	1	No	Volume 6
200-1e	J09CA203105_08.01_0503_a.pdf	Fish and Game Property Being Used as a Shooting Range	Ragsdale, David	CALIFORNIA POLYTECHNIC STATE UNIVERSITY	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	1/19/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0504_a.pdf	Invitation for Upcoming Site Inspection Meeting	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Jarvis, Mary (SAN LUIS OBISPO COUNTY SCHOOLS, OFFICE OF EDUCATION)	1/23/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0508_a.pdf	Transmittal of Advance Information Packet for Review Prior to Site Inspection Meeting	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Maduli, Ed (CUESTA COLLEGE, SAN LUIS OBISPO COMMUNITY COLLEGE DISTRICT)	1/27/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0510_a.pdf	Contact Information for San Luis Obispo County Schools	Maddalena, Caryn	SAN LUIS OBISPO COUNTY PARKS	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	1/31/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0511_a.pdf	Forest Service Will Attend Meeting	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Crain, Michael (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT); Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	2/2/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0512_a.pdf	Active National Guard Property Not Eligible for Site Inspection	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Holder, Michael (CALIFORNIA ARMY NATIONAL GUARD)	2/3/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0513_a.pdf	Los Padres National Forest's Tribal Liaison (Chumash) Contact Information	Crain, Michael	LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	2/7/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0514_a.pdf	Fenced Off Area Erected After 1992 UXO Cleanup	Philbin, Denis	SAN LUIS OBISPO COUNTY PARKS	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	2/10/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0515_a.pdf	Draft Technical Project Planning (TPP) Memorandum Reviewed and Concur	Ragsdale, David	CALIFORNIA POLYTECHNIC STATE UNIVERSITY	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	3/8/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0516_a.pdf	Property Used as Grenade Court During DoD Occupancy	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Maduli, Ed (CUESTA COLLEGE, SAN LUIS OBISPO COMMUNITY COLLEGE DISTRICT)	3/9/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0517_a.pdf	Transmittal of Final TPP Memorandum to Various Stakeholders	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various	3/6/2006	4	No	Volume 6
200-1e	J09CA203105_08.01_0520_a.pdf	Bomb Task Force was Funded by Memorandum of Understanding	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Mulhall, Jim (SAN LUIS OBISPO SHERRIFF DEPARTMENT)	4/10/2006	3	No	Volume 6
200-1e	J09CA203105_08.01_0522_a.pdf	Transmittal of Draft Site Specific Work Plan (SSWP) to Stakeholders	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various	11/29/2006	5	No	Volume 6
200-1e	J09CA203105_08.01_0523_a.pdf	Cuesta College Concurs With Proposed Technical Approach	Maduli, Ed	CUESTA COLLEGE, SAN LUIS OBISPO COMMUNITY COLLEGE DISTRICT	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	11/2/2006	1	No	Volume 6

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
200-1e	J09CA203105_08.01_0524_a.pdf	Forest Service Areas of Concern	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Martinez, Tony (U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE)	12/18/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0525_a.pdf	Forest Service Review and Comments on Draft Site Specific Work Plan	Phelps, Kathleen	LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT	Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	12/19/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0526_a.pdf	Transmittal of Requested Shape Files for Project Boundary	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Martinez, Tony (U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE)	12/19/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0527_a.pdf	Transmittal of Final Site Specific Work Plan to Stakeholders	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various	4/11/2007	7	No	Volume 6
200-1e	J09CA203105_08.01_0530_a.pdf	Transmittal of Draft Technical Project Planning (TPP) Memorandum	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS); Walker, Ed (CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL)	3/8/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0531_a.pdf	Teleconference Set with Goal of Team Concurrence	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	9/12/2006	2	No	Volume 6
200-1e	J09CA203105_08.01_0532_a.pdf	Last Minute Changes Delays Scheduled Field Work	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	2/20/2007	2	No	Volume 6
200-1e	J09CA203105_08.01_0533_a.pdf	Advance Notice to Regulator and Stakeholders that Field Work will Begin the Week of April 30th	Tran, Tawny	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	4/12/2007	3	No	Volume 6
200-1e	J09CA203105_08.01_0534_a.pdf	Request for Ordnance Investigation of Rancho El Chorro Property	Canale, Salvatore; Gurican, Joseph	SAN LUIS OBISPO COUNTY OFFICE OF EDUCATION	Townsend, Paul (LOS ANGELES DISTRICT (CESPL))	6/22/1987	8	No	Volume 6
200-1e	J09CA203105_08.01_0535_a.pdf	California Polytechnic State University Concurs with Draft Action Memorandum for TCRA	Ragsdale, David	CALIFORNIA POLYTECHNIC STATE UNIVERSITY	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	5/26/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0536_a.pdf	Design Review Comments on the Draft TCRA Work Plan	Lee, Paul	CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT	Unknown	6/30/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0537_a.pdf	San Luis Obispo County Fire Department Review of Draft TCRA Work Plan	Lee, Paul	CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT	Godard, Lloyd (LOS ANGELES DISTRICT (CESPL))	8/1/2010	2	No	Volume 6
200-1e	J09CA203105_08.01_0538_a.pdf	Response to SLO County Fire Department Comments on Draft TCRA Work Plan	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Lee, Paul (CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	7/30/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0539_a.pdf	Invitation to Attend Meeting to Discuss the Results of the TCRA, UXO Pamphlet, and Safety Presentation	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	8/12/2011	8	No	Volume 6
200-1e	J09CA203105_08.01_0540_a.pdf	Transmittal of Draft Final TCRA Report to Stakeholders	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	8/17/2011	8	No	Volume 6
200-1e	J09CA203105_08.01_0541_a.pdf	Transmittal of Final TCRA Report to Stakeholders	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	9/11/2012	10	No	Volume 6
200-1e	J09CA203105_08.01_0542_a.pdf	Invitation to Meeting to Discuss Draft TCRA Work Plan and Transmittal of Draft TCRA Work Plan for Review	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (STAKEHOLDERS)	5/13/2010	12	No	Volume 6
200-1e	J09CA203105_08.01_0543_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Dumouchelle, Richard (SAN LUIS OBISPO SPORTSMAN'S ASSOCIATION)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0544_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Hoover, Debbie (SAN LUIS OBISPO BOTANICAL GARDEN)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0545_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lee, Paul (SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0546_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Phelps, Kathleen (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0547_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Philbin, Denis (SAN LUIS OBISPO COUNTY PARKS)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0548_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Richardson, April (CITY OF SAN LUIS OBISPO)	5/28/2010	1	No	Volume 6

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
200-1e	J09CA203105_08.01_0549_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0550_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Royer, Celeste (RANCHO EL CHORRO OUTDOOR SCHOOL)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0551_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	SAN LUIS OBISPO FFS - STATION 12	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0552_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Veneris, Phill (CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0553_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Dave (SAN LUIS OBISPO BOMB TASK FORCE)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0554_a.pdf	Invitation to 1st Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Yetter, Bob (COUNTY OF SAN LUIS OBISPO)	5/28/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0555_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Bender, David (SAN LUIS OBISPO COUNTY, COURT & COMMUNITY SCHOOLS)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0556_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Dumouchelle, Richard (SAN LUIS OBISPO SPORTSMAN'S ASSOCIATION)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0557_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Hoover, Debbie (SAN LUIS OBISPO BOTANICAL GARDEN)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0558_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lee, Paul (SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0559_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Phelps, Kathleen (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0560_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Philbin, Denis (SAN LUIS OBISPO COUNTY PARKS)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0561_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0562_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Richardson, April (CITY OF SAN LUIS OBISPO)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0563_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Stafford, Bob (CALIFORNIA DEPARTMENT OF FISH AND GAME)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0564_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	SAN LUIS OBISPO FFS - STATION 12	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0565_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Veneris, Phill (CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0566_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Dave (SAN LUIS OBISPO BOMB TASK FORCE)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0567_a.pdf	Invitation to 2nd Technical Project Planning Meeting for Remedial Investigation/Feasibility Study Phase	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Yetter, Bob (COUNTY OF SAN LUIS OBISPO)	11/2/2010	1	No	Volume 6
200-1e	J09CA203105_08.01_0568_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Bender, David (SAN LUIS OBISPO COUNTY, COURT & COMMUNITY SCHOOLS)	9/8/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0569_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Cooper, Shaun (SAN LUIS OBISPO COUNTY PARKS)	9/8/2011	1	No	Volume 6

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
200-1e	J09CA203105_08.01_0570_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Dumouchelle, Richard (SAN LUIS OBISPO SPORTSMAN'S ASSOCIATION)	9/2/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0571_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lee, Paul (CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	9/2/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0572_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Hoover, Debbie (SAN LUIS OBISPO BOTANICAL GARDEN)	9/2/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0573_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Oviatt, Kim (SAN LUISITO RANCH CO., LLC)	9/8/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0574_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Phelps, Kathleen (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT)	9/8/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0575_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	9/2/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0576_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Royer, Celeste (RANCHO EL CHORRO OUTDOOR SCHOOL)	9/8/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0577_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Stafford, Bob (CALIFORNIA DEPARTMENT OF FISH AND GAME)	9/8/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0578_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Van Fleet, Linda (COUNTY OF SAN LUIS OBISPO)	9/8/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0579_a.pdf	Transmittal of Final Remedial Investigation/Feasibility Study Work Plan	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Wagner, Mark (COUNTY OF SAN LUIS OBISPO)	9/2/2011	1	No	Volume 6
200-1e	J09CA203105_08.01_0580_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Cooper, Shaun (SAN LUIS OBISPO COUNTY PARKS)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0581_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Crain, Michael (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0582_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Hoover, Debbie (SAN LUIS OBISPO BOTANICAL GARDEN)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0583_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Oviatt, Kim (SAN LUISITO RANCH CO., LLC)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0584_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Phelps, Kathleen (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0585_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Plummer, William (SAN LUIS OBISPO SPORTSMAN'S ASSOCIATION)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0586_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0587_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Stafford, Bob (CALIFORNIA DEPARTMENT OF FISH AND GAME)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0588_a.pdf	Transmittal of Draft Final Remedial Investigation/Feasibility Study Report and Invitation to TPP Meeting	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Van Fleet, Linda (COUNTY OF SAN LUIS OBISPO)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0589_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Bender, David (SAN LUIS OBISPO COUNTY, COURT & COMMUNITY SCHOOLS)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0590_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Hall, Mike (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0591_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Hill, Debi (COUNTY OF SAN LUIS OBISPO, OFFICE OF EDUCATION - LOMA VISTA SCHOOL)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0592_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Keil, Dave (COUNTY OF SAN LUIS OBISPO, OFFICE OF EDUCATION - EL CHORRO OUTDOOR SCHOOL)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0593_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Kiser, Betsy (CITY OF SAN LUIS OBISPO PARKS DEPARTMENT)	6/18/2013	1	No	Volume 6

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
200-1e	J09CA203105_08.01_0594_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lee, Paul (CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0595_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lewin, Robert (SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0596_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lichtig, Katie (CITY OF SAN LUIS OBISPO)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0597_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Lowe, Chuck (COUNTY OF SAN LUIS OBISPO PARKS DEPARTMENT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0598_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	McFarland, Becky (COUNTY OF SAN LUIS OBISPO, OFFICE OF EDUCATION - EL CHORRO OUTDOOR SCHOOL)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0599_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Mulhall, Jim (SAN LUIS OBISPO SHERRIFF DEPARTMENT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0600_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Plummer, William (SAN LUIS OBISPO SPORTSMAN'S ASSOCIATION)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0601_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	CAMP SAN LUIS OBISPO RANGE CONTROL	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0602_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Richardson, April (CITY OF SAN LUIS OBISPO)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0603_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Righello, Ltc Joseph (CAMP SAN LUIS OBISPO)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0604_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Royer, Celeste (RANCHO EL CHORRO OUTDOOR SCHOOL)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0605_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Single, Jeffrey (CALIFORNIA DEPARTMENT OF FISH AND GAME)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0606_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Stork, Gilbert (CUESTA COLLEGE)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0607_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Veneris, Phill (CAL FIRE SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0608_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Wagner, Mark (COUNTY OF SAN LUIS OBISPO)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0609_a.pdf	Invitation to Stakeholder Meeting to Discuss the Results of the Remedial Investigation Field Work	Armentrout, Jeffery	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Dave (SAN LUIS OBISPO BOMB TASK FORCE)	6/18/2013	1	No	Volume 6
200-1e	J09CA203105_08.01_0610_a.pdf	Draft Site Specific Work Plan Review Comments and Actions	Phelps, Kathleen	LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT	Unknown	12/19/2006	1	No	Volume 6
200-1e	J09CA203105_08.01_0611_a.pdf	Fenced Off Area in El Chorro County Park Needs to be Mitigated	Mulhall, Jim	SAN LUIS OBISPO SHERRIFF DEPARTMENT	Hall, Bradley (ENGINEERING/REMEDIATION RESOURCES GROUP, INC.); Tran, Tawny (LOS ANGELES DISTRICT (CESPL))	4/3/2006	2	No	Volume 6
1200C PERM	J09CA203105_08.01_0612_a.pdf	Invitation to First Technical Project Planning Meeting for the Treatability Study	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY); Hall, Mike (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	4/7/2014	2	No	Volume 6
1200C PERM	J09CA203105_08.01_0613_a.pdf	Transmittal of the Draft Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Lazanoff, Aaron (CALIFORNIA POLYTECHNIC STATE UNIVERSITY); Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	5/9/2014	2	No	Volume 6
1200C PERM	J09CA203105_08.01_0614_a.pdf	Transmittal of the Draft Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	5/9/2014	3	No	Volume 6
1200C PERM	J09CA203105_08.01_0615_a.pdf	Transmittal of the Draft Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Dave (COUNTY OF SAN LUIS OBISPO SHERIFF'S DEPARTMENT)	5/9/2014	1	No	Volume 6
1200C PERM	J09CA203105_08.01_0616_a.pdf	Transmittal of the Final Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY); Lazanoff, Aaron (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	6/30/2014	2	No	Volume 6
1200C PERM	J09CA203105_08.01_0617_a.pdf	Transmittal of the Final Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Various, (SAN LUIS OBISPO COUNTY FIRE DEPARTMENT)	6/30/2014	4	No	Volume 6

ARIMS	File Name	Document Title/Description	Author(s)	Author Affiliation	Recipient(s)	Date	Approx No. of Pages	Redacted	Location
1200C PERM	J09CA203105_08.01_0618_a.pdf	Transmittal of the Final Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP)	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Walker, Dave (COUNTY OF SAN LUIS OBISPO SHERIFF'S DEPARTMENT)	6/30/2014	1	No	Volume 6
1200C PERM	J09CA203105_08.01_0619_a.pdf	Transmittal of the Draft-Final Treatability Study Report for Review and Comment	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY); Lazanoff, Aaron (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	7/15/2015	2	No	Volume 6
1200C PERM	J09CA203105_08.01_0620_a.pdf	Transmittal of the Final Site Inspection Report	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Ragsdale, David (CALIFORNIA POLYTECHNIC STATE UNIVERSITY); Hall, Mike (CALIFORNIA POLYTECHNIC STATE UNIVERSITY)	7/10/2008	2	No	Volume 6
1200C PERM	J09CA203105_08.01_0621_a.pdf	Transmittal of the Final Site Inspection Report to Forest Service	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	Crain, Michael (LOS PADRES NATIONAL FOREST SANTA LUCIA RANGER DISTRICT)	7/10/2008	1	No	Volume 6
1200C PERM	J09CA203105_08.01_0622_a.pdf	Transmittal of the Final Remedial Investigation/Feasibility Study Report to Stakeholders	Unknown	Unknown	Unknown	9/26/2018	2	No	Volume 6
	10 - Public Meeting Minutes/Announcements/Transcripts/Restoration Advisory Boards (RAB) and Technical Review Committee (TRC) Meetings								
200-1e	J09CA203105_08.10_0500_a.pdf	Camp SLO November 2005 Slide Presentation for Cal Poly San Luis Obispo	Unknown	Unknown	Unknown	11/8/2005	10	No	Volume 6
200-1e	J09CA203105_08.10_0501_a.pdf	Presentation for Public Informational Meeting	Godard, Lloyd	USACE, LOS ANGELES DISTRICT (CESPL)	PUBLIC	6/16/2010	31	No	Volume 6
	11 - Fact Sheets/Newsletters								
200-1e	J09CA203105_08.11_0500_a.pdf	Fact Sheet for Former Camp San Luis Obispo	USACE	USACE, LOS ANGELES DISTRICT (CESPL)	Unknown	--/--/2010	2	No	Volume 6
	13 - Public Notices								
200-1e	J09CA203105_08.13_0500_a.pdf	Community Information Meeting for the Former Camp SLO	Unknown	Unknown	PUBLIC	--/--/----	1	No	Volume 6

Attachment 4

Newspaper Publications

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Public Comment Period & Public Meeting

for Camp San Luis Obispo

a Formerly Used Defense Site

US Army Corps of Engineers®

More Info

Public Comment Period

Proposed Plan for Camp San Luis Obispo Formerly Used Defense Site

The U.S. Army Corps of Engineers invites the public to review and comment on the Proposed Plan for the Camp San Luis Obispo Formerly Used Defense Site, located northwest of the city of San Luis Obispo along Highway 1. The Plan presents the preferred alternatives for remediating potential munitions and explosives of concern that are a result of past military training.

The U.S. Army Corps of Engineers encourages you to comment on the Proposed Plan during the public comment period from May 1 to June 7, 2019. The plan is available at the San Luis Obispo Public Library located at 995 Palm Street, San Luis Obispo, CA 93401. The plan will also be discussed during a public meeting on May 22, 2019, at 5:30 p.m., at the Ludwick Community Center, 864 Santa Rosa St., San Luis Obispo.

US Army Corps of Engineers®
Los Angeles District

Comments may be emailed to *bruce.r.james@usace.army.mil* or mailed and postmarked no later than June 7, to:

Bruce James
Project Manager
U.S. Army Corps of Engineers, LA District
915 Wilshire Blvd, Suite 930
Los Angeles, CA 90017-3401

Comments received during this period will be considered in the final decision.
https://www.spl.usace.army.mil/Missions/Formerly-Used-Defense-Sites/Camp-San-Luis-Obispo/

Public Meeting

Camp San Luis Obispo
Formerly Used Defense Site

The U.S. Army Corps of Engineers invites you to a public meeting regarding recommendations for munitions remediation at the Camp San Luis Obispo Formerly Used Defense Site, located northwest of the city of San Luis Obispo along Highway 1.

May 22, 2019 at 5:30 pm
Ludwick Community Center
864 Santa Rosa St, San Luis Obispo, CA 93401

During the meeting, the Army Corps of Engineers will discuss the Proposed Plan and environmental recommendations for the site. As part of the public comment period from May 1 to June 7, 2019, community comments and questions will be accepted during the meeting. The plan is available at the San Luis Obispo Public Library located at 995 Palm Street, San Luis Obispo, CA 93401.

US Army Corps of Engineers®
Los Angeles District

Additional Information

U.S. Army Corps of Engineers
Public Affairs Office at 213-452-3921 or
publicaffairs.spl@usace.army.mil

Comments received during this period will be considered in the final decision.
https://www.spl.usace.army.mil/Missions/Formerly-Used-Defense-Sites/Camp-San-Luis-Obispo/

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Attachment 5

CSLO MRSs Public Meeting Transcript

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PROPOSED PLAN PUBLIC MEETING

FOR THE CAMP SAN LUIS OBISPO FORMERLY USED DEFENSE SITE

SAN LUIS OBISPO, CALIFORNIA

WEDNESDAY, MAY 22, 2019

5:36 P.M.

REPORTED BY CAROLYNN E. SPERE, CSR #10091

APPEARANCES:

BRUCE JAMES - USACE FUDS PROJECT MANAGER

JONATHAN WHIPPLE - USACE PROJECT CHEMIST

JIM LUKASKO - USACE TECHNICAL TEAM LEAD

CHERYL WEBSTER - USACE GEOPHYSICIST

DENA O'DELL - USACE PUBLIC AFFAIRS

SYLVESTER WILLIS - USACE ORDNANCE/EXPLOSIVES SAFETY SPECIALIST

MARY FRANQUEMONT, BRISTOL PROJECT MANAGER

HEATHER PFEIFFER - BRISTOL COMMUNITY RELATIONS PROJECT MANAGER

WEDNESDAY, MAY 22, 2019

5:36 P.M.

MR. JAMES: Okay. Welcome to our public meeting for Camp San Luis Obispo. We're talking about the proposed plan, what we propose to do out there. Hopefully clean it up.

This is what we are going to be doing. We are going to introduce the team and talk about where we are going, the history, what we found in -- "RI" means -- you'll see these later -- remedial investigation. Then talk about the Feasibility Study. That's FS. Our alternatives. Our community participation, which is everybody here. And our schedule, safety reminders, and then points of contact.

So our acronyms, if you have any questions, please ask and we'll answer them. And I know you are probably -- we will see this a lot, as well as this one.

So the project team, I'm the FUDS project manager, Bruce James. Our Ordnance and Safety Specialist, Jim Hug, is not here, but J.R. is here. We have got our biologist, Robin Rosenau. We have an archaeologist, she is not here today. Public affairs is being represented by Dena O'Dell. Our geophysicist, Cheryl Webster, is in the back here. Our risk assessor is up in Sacramento. He got

pulled into something else, he didn't really want to go to. Our environmental engineer, Mr. Jim Lukasko, back there, smiley guy. And then quality control and our chemist, Jonathan Whipple, is behind you.

So we've been working with the California Department of Toxic Substances Control. Their project manager is Mr. Steven Pay. He is up out of Sacramento. Our project team with our contractor, Bristol Services. Project manager is Mary Franquemont. And then public relations specialist, Heather, back there. And their scientist is Mr. Jeff Speck on the computer. And their geophysicists and a risk assessor.

And our other project stakeholders, U.S. EPA, Fish and Wildlife, both state and federal. Forest Service, County of San Luis Obispo. You might recognize some of these names. Obviously, you are from here, right? Good. And so the college, National Guard, what's left of Camp SLO, the University, Cuesta College, everybody and their brother. We're not doing this in a vacuum.

So this is our process, RI/FS, Remedial Investigation/Feasibility Study Process. First we identify -- we have an inventory. We do a preliminary assessment and site investigation, and that tells us if there is something out here and we think we want to do more stuff. So then we do the investigation where we

actually get out here and we go out and investigate. Geophysicists go out there and walk the place, check to see what's underground, check those out. And then we write up a Feasibility Study, which is this part right here, and we put together a Proposed Plan of what we would like to do. I think you have a copy of it right there.

And now we are soliciting public comment. And then we will do a Decision Document. That's drafted, but depending on what comes out of this meeting and the public comments, will potentially change what we want to do. And then we go into the design, the remedial, what we are going to do. We will do the design. Then we will do it. Obviously, we will tell you what we're going to do, then we'll do it, and we'll tell you what we did type of thing. And then we will do response complete, pardon me.

And then management, if this were groundwater, we would be monitoring the groundwater and every five years, we would come back and say, "Is what we put in place protective of what we want to do for human health and the environment?" And we may end up finding no action indicated, if we are really lucky.

So here we are. This is the old Camp SLO. We are going to be talking about this area here and that area right there. So the yellow part is 1 and 2, and the other slide is the other one. And I'll tell you what those are

in a little bit.

So description, located 5 miles northwest. The Site 2 is the grenade courts, 52 acres. No. 5 was the multi-use range complex, 2600 acres. And now this land is owned by the federal government, state, local, and there is a private entity out there, a little ranch. So the state -- SLO, Cal Poly owns part of it, Cuesta College. Botanical Garden is on part of it.

And response, current land use, we can go into that. Here is the boundary that we are looking at and then this one down here. This is public and this is recreation.

Short history was Cal Guard site back in the '20s. Army took it over because they needed some training areas. Expanded it and then used it for a couple of training sites for several years. Put a lot of ranges on there, so they could train -- artillery, small arms, all kinds of fun stuff. Deactivated it and then reactivated it for Korea. And then they shut it down and finally relinquished it.

So fieldwork, we went out -- initial fieldwork was back in 2011. They did geophysical surveys where they mapped everything digitally, as well as analog.

And Mary, can you describe the difference or should I ask Jim or Jonathan?

MS. FRANQUEMONT: Cheryl.

MR. JAMES: I didn't see her. She was hiding.

MS. WEBSTER: Geophysical mapping is basically using a -- it's called a electro-magnetometer, and going over the site, mapping the electrical signal. And the analog is more like waving a stick, like you would at the beach. So the difference is one is recorded and the other is not. And you use analog in places where you can't physically move the digital instrument.

MR. JAMES: Some of the digital instruments are about this big. It's not real light.

So then they dug up some of the metal to see what was there, whether it was a piece of metal or I will say shrapnel or a live round. And if they found a live round, they exploded it.

So Munitions Constituent Characterization, so they look for metals, antimony, copper, lead, zinc in the soil and stuff. Sampling, have it analyzed to see the concentrations both there and they picked a background outside the area that they were investigating so we could compare them, see if the inside was raised higher than outside.

So the Remedial Investigation Fieldwork Results, they did 8 miles of digital, 2 miles of analog and, basically, this is what they found. Instead of trying to

read it all to you, they found five items that they exploded, and they will tell you, here is what they -- three hand grenades, a mine fuze. And the depth, actually they were fairly shallow. It was less than a foot.

And you can see here where they -- these were the finds, the ones where they found it. And the yellow is debris, just pieces. And then other debris, you know, that wasn't related to munitions at all. There's a lot of information stuck into a small spot.

And then sampling, they took soil samples here. Sediment is usually from a water -- if there was a creek, or a pond, or something like that, as opposed to -- that's the difference between a soil sample. Am I right?

MR. WHIPPLE: Sediment, yeah.

MR. JAMES: Okay. I guess so. So they did 33 acres, UXO and munitions debris was identified during the RI. The exposure pathways for humans to be exposed to this were considered complete, that means it definitely could happen. They further evaluated during the Feasibility Study. And the same thing with the Site B, so they didn't go further in that area, 19 acres of it, because there was no pathway to get -- to be exposed.

So the sub-areas, this is the area, let's say, A and B. Yeah, this is A and this is B, so we are not going to be doing more here but you can see this is where

the unexploded ordnance was, most areas of concern right there.

So Response Site 5 is a much larger site. They did all their analog and their digital, their investigation. And they found 14 items of UXO that they exploded -- practice mine, mortars, projectiles, small rockets. And the deepest was 30 inches, which is almost 3 feet below ground.

And you can see here is the ones that they found, the spots, unexploded ordnances, and did what they could do everywhere here. So there is the boundary here which is why this is clear.

Fieldwork, and you can see the boundary again. So here is the old SLO boundary, but this is our boundary that we are looking at, so it goes outside in some cases. And the soil samples are green. Those sediments, those are taken prior. Those were the -- site investigations was taken earlier, and so we are looking -- and blue is sediment samples.

And conclusions, basically, here we go, is divided into three sub-areas -- North, South, and then a Shooting Range that's out there.

So we determined that 05-North needed further evaluation, as well as the South, and also the Shooting Range area, so we describe those in the Proposed Plan.

And you can see the sub-areas -- North, the South, and then the Shooting Range right here.

So they brought up and they looked at it in the Feasibility Study, so that North, no further actions were recommended in 2B, the Feasibility Study process. So A, we are doing; B not.

And the Remedial Action Objectives for specific goals. And in a study, we evaluate each one of these Remedial Action Alternatives to see if they meet the objectives that we are looking for.

And we went through Munitions Response Site 01/02A. The objective is to prevent human interaction with surface and subsurface munitions and under current and reasonably anticipated future activities. And the same with the North and the South. And so you can see that we went 3 feet here below ground surface, agricultural. And this one for 05-South is 2 feet, and the Shooting Range is 2 feet. So we are looking at different depths and whatnot.

So the Feasibility Study Summary, Remedial Action Alternatives. Alternative 1 was no further action, we just leave it like it is. We put in institutional controls, basically a fence or a sign, or something like that. 3 is where we go in and remove the surface, the munitions surface and put in institutional controls. 4,

we would actually do the surface and subsurface removal to the depth of 36 inches, and then put in institutional controls, the signage, or we go through and pretty much strip mine the area out there.

The criteria threshold, first off, it has to meet these two, or else we don't do much, go any further. Balancing factors, long-term effectiveness, reduction in toxicity, mobility or volume through treatment. And then modifying factors, community acceptance or in the end, state/regulatory acceptance.

So for Site 01/02A, as you can see, 1 and 5 does not meet the threshold criteria. 2 through 4 meet the threshold criteria. 2 and 3 did not meet our objectives, so 4 has a lower qualitative assessment with regard to short-term effectiveness. We feel that Alternative 4 provides a permanent solution with regard to the munitions hazards out there. And we anticipate -- we're talking the Botanical Garden wants to expand, so we are looking at that that will help them a little bit.

So we did the same comparison to Site 05-North and came down, we are looking at 3 and 4 have the best assessment for long-term effectiveness; that is, however, based on the MEC covered, there is no acceptable hazard there. And we talk about these more in the Proposed Plan that we are doing.

Here is what we came through with Site 05-South, and we talk about those. And we feel 4 looks like it provides a better solution, more permanent.

For the Shooting Range, it looks like Alternative 4, again, provides a better solution. So here is our preferred alternatives in the plan that you have got is on Site 01/02A, we are looking at Site -- or Alternative 4. On 05-North, we are looking at Alternative 2 for institutional control signage. If you have been out there, you might have seen some of those signs. For 05-South, we are looking at Alternative 4. For the Shooting Range, again Alternative 4, which is removal of the surface and subsurface of that stuff that we've got out there.

Here is our implementation time line, and there is days, but we don't know when this is going to be funded so there is no years on here. We are hoping it will be funded the next year or the year after. And as you can see, we are probably not going to be out there during the February-to-August time frame because of migratory birds. Those are a big deal. And then as soon as we are done with the remedial action, every five years for about thirty years, we will be out there doing our five-year review to make sure that the remedy that we put in place is effective. If we find out that it's not, then we will

change something.

The Proposed Plan has been prepared. We're in the public comment period right now, if you would please provide us with your comments. And it will be finalized. And after it's been finalized, we'll finalize the Decision Documents that we will be sending up. And that will be our determination of what we are going to be doing.

Your input, the public's input, is a key element. Our experts, our technical experts that are here, plus the State, have provided their inputs on the proposed alternatives through -- we've had public meetings and we have administrative record, and we encourage the public to gain a comprehensive idea of what we are doing. Again, the comment period ends on June 7th. And if you have got any comments, please either today or send them to us to myself or the website we will give you -- or the e-mail, pardon me. And here is where the administrative record is, if you choose to go in and look at all the documents we have and all the information we've compiled.

And Remedy Selection, here is how we do it. So the Preferred Alternatives, make sure that they meet the requirements of -- the special requirements. And we will describe those in the Decision Documents, which will be available for review in the administrative record.

And here is our schedule right now. We have --

we are down here right now, which is Proposed Plan Public Review. And later on this year, we will have the Decision Documents put together based on everything we have in the Proposed Plan.

And if you are out there and you see something, here's the Three R's -- Recognize, Retreat and Report.

Any questions? I went through that rather quickly.

MR. PIPER: My name is Kevin Piper. I'm the director of agriculture operations at Cal Poly and work on that ground quite a bit. My question is, can you go into a little more detail about Alternative 4, and what that is going to entail out on the landscape as far as any, you know, disturbance or changing of the ground area.

MR. JAMES: We're going to go out and just destroy everything, take a tank and just run over it and leave it like a moonscape.

MR. PIPER: No, I understand that, but it would be nice to just hear a little bit more about how you are going to approach that.

MR. JAMES: Mary and I talked about that, Alternative 4.

MR. PIPER: Basically, on the Cal Poly ground where we have the Escuela and Walter's Creek Ranch. I think you spent time with Aaron today.

MS. FRANQUEMONT: Mary Franquemont with Bristol, the current Remedial Investigation project manager. When this project moves forward into the remedial action, it will be a different contractor, probably, working with the Corps. But the approach that will be used is that they would go back out with the DGM equipment or advanced classification, which is similar but just a little bit more kind of up-to-date sort of equipment, and they would -- instead of just walking that transect lines, they would walk the whole thing, a hundred percent coverage, to map all the subsurface anomalies they had out there.

And then based on what their readings were, they would identify what needed to be dug up. And it would not be with big, heavy equipment. It would just actually be manual digging. If they found a debris area where there was a really high density of items, they would maybe clear it and then dig it up that way. But generally, it's just individual holes. So they would really go out and they dig, you know, a hole this big until they find the item that set off the metal detector, and then they move on to the next one.

So what we talked about with Aaron is trying to plan it when the grasses are the best for reseeding for purposes of maintaining the grass culture out there. And then also we talked about the roads and not doing it

during the really wet season where the roads would be damaged. And we encouraged him to participate in the future because those are all things that the next contractor, along with the Corps of Engineers, would need to plan for in the process.

MR. PIPER: Aaron and I work together on a lot of that stuff, so either one of us to address those things that Aaron brought up to you. We've worked really hard on implementing a program during the winter where we don't like to access those roads with vehicles because we have tried to put those -- some of those roads to bed and reduce the erosion coming off because we've been working with the Morro Bay Estuary Program. So just coordinating things with people when they want access to do things would be great.

MS. FRANQUEMONT: Yeah. And it would be very important to the Corps to work through all that, talking about where the cattle are and the different grazing plots and all that kind of stuff.

MR. PIPER: And then sometimes we have labs and classes scheduled, so we'd have to do some workarounds and whatnot, but that's great.

MR. JAMES: Also, if you have a particular seed mix or something that you can give us or the contractor, we'll work very hard with you to make sure that those

seeds go back, because I have done that in other places. We can do that. We ask the base for a preferred seed mix for stuff, and they gave us a laundry list of -- a mix of this, this and that.

MR. PIPER: We can identify several species. Our grazing program is kind of based on promoting the perennial grasses out there. And the annuals are going to -- that's a whole other -- there is a lot of them.

MR. JAMES: Again, if we have a seed mix and after they actually dig the hole up, they throw some down and whatever.

MR. PIPER: Replace your divot and seed it.

MR. JAMES: Just like you do on the golf course.

MR. PIPER: Great. Thank you.

MR. JAMES: Any other questions?

MS. LOR: I'm Chanda Lor. I'm the executive director for the Botanical Garden. I was just informed of this today, so getting up to speed and thinking that the area that's already been surveyed and logged is not the full area that the garden intends to develop. So in our master plan, we actually have plans to develop and plant at least 80 of the acres, the 150 that we occupy. And seeing that there is going to be a need for further investigation on our property, seeing that we had five unexploded ordnances, and we intend to be digging, and

planting within that 30-inch subsurface, it's very much going to be a priority in my mind to get you guys back out there.

MR. JAMES: Yeah. And if you will remain in contact with the Corps, we will be glad to help you with that.

MS. LOR: Thank you.

And also, I was wondering what the funding and funding sources that you guys had.

MR. JAMES: Funding source is Department of Defense, so we are not going to levy a tax on you. So it's going to be funded by the Formerly Used Defense Sites that's programmed separately under budgets for this.

MS. LOR: And also we have a lot of sensitive vegetation that's very rare on the property too, many species actually that we would have to work closely with you guys to identify and make sure that you are well aware of before you go up there.

MR. JAMES: Yeah. And there is no reason we shouldn't coordinate with you. And if we don't, if something happens and somebody comes out, then just get ahold of us, the Corps.

MS. FRANQUEMONT: Is this vegetation that's already out there already? I don't know if it's planted yet or not.

MR. JAMES: No, they are trying to plant.
MS. LOR: Well, some of it is out there already. That is the native sensitive and endangered vegetation we just discovered also, which is very exciting.
MR. JAMES: Well, not so much for us.
MS. LOR: I know, but very exciting for us to have some rare species out there that only blooms every once in a while, and it just happens to be blooming right now.
MR. JAMES: What is it?
MS. LOR: Dudleya, there is a species of Dudleya. There's a species of Dudleya that's buried.
MR. JAMES: Another project you have got, two species of a plant, one is rare and one isn't, and you can't tell them until they flower. It is so much fun. We will work around those as much as we can. Sometimes in the case of -- let's say there is endangered Dudleya, non-endangered, and they find right in between them something that has to be dug up, they will do everything they can to protect it, the plant. But in some cases, there is a take, if you will, and --
MS. LOR: We are okay transplanting species. That's been done before, and we have done that for the golf course.
MR. JAMES: So when we get done, there is a

follow on, another project is going to do what we just finished here for area -- what they call Area 9, which is another area. So there is a potential that everything -- that the follow-on will effect you, well everybody to some extent, that is out there. Some a little more; some a little less. And the idea is to make sure that the long-term effects are taken care of and you don't have the impact, but sometimes, we can't always. You know, when we are trying to clean up something that's dangerous, we do the best we can.

MS. LOR: Well, I am excited that this program is going forward because it's been interesting to learn, surprisingly, actually.

MR. JAMES: And if you've got any questions, e-mail there, and you can call or e-mail me.

MS. LOR: So I have another question about what the chances are -- I know you can't guarantee anything and their probability is pretty -- I don't know the percentage. I am a stats person, so statistically speaking, if where we've got interns and volunteers and we are trying to scope out and scout out a new pathway, new further trails this year, likelihood of hitting anything dangerous beyond the site that's already been surveyed, because we are planning on going beyond the site that's been surveyed.

MS. FRANQUEMONT: You mean outside of that kind of figure 8 boundary?

MS. LOR: Yes.

MS. FRANQUEMONT: That's where the grenade courts and the historical ground for the grenade courts were. So when the army used that area, that's where the ranges were. Outside now, Cheryl, you were showing her another site that might be close --

MS. WEBSTER: No. It's further away.

MS. FRANQUEMONT: Based on historical information, we don't anticipate that outside of that figure 8 shape, that there is an issue because the area wasn't used for anything else other than those grenade courts. That being said --

MR. WHIPPLE: There is always a chance --

MS. FRANQUEMONT: I mean, in World War II, they trained heavily and extensively, and so they could have chosen to use places that aren't on historical maps, and people should always proceed with caution in proximity to historical ranges.

MS. LOR: In the meantime, though, are you planning on posting any signage up or should we, as a garden, educate our members and visitors on what you have found?

MR. JAMES: I would suggest until we get started

on doing the remedial action, which is --

MS. LOR: A couple years.

MR. JAMES: -- we do design first and then the action, and that you educate your members. We can help you with posters, like the three R's. And I would also recommend that if you are going to be out there doing any moving of dirt or digging, that you maybe get a UXO specialist that has experience, that has some experience.

MS. LOR: Would you like to join the board?

MR. JAMES: I am not coming down from Sacramento.

MS. LOR: Anyone else here?

MR. JAMES: I'm not UXO trained. J.R. is. He actually was trained by the EOD in the Army. He's an air force guy with military training. I was the tanker. I used to shoot big guns, which is part of the problem out here now. And then I used to supply the ammunition and the food and everything else to keep the troops going when I was -- later when I wasn't jumping out of airplanes, so I am not experienced like J.R., but it would be a good idea -- we might be able to provide some resources of who you could contact, but we can't come out and do it unless the contractors are there.

MS. LOR: Okay. All right. So I can get some posters immediately?

MR. JAMES: Yes. Well, immediately, I don't know about immediately.

But Dena, do you have the resource for the posters?

MS. O'DELL: We will talk after.

MS. LOR: Okay.

MR. JAMES: So any more questions or further questions?

MS. LOR: Thank you.

MR. JAMES: That's fine. These aren't stupid questions because you just found out about this today.

And so the Forest Service, are you going to report back to Belinda?

MS. HARTMAN: Oh, absolutely. Ours is a small area, but we do have people that hike in there and we do have cattle grazing in there, so we are wondering if signs are going to be enough.

MR. JAMES: Well, they haven't kept the people out of the Chumash Wilderness Area from driving all through it, so I don't think -- if they're going to be there, they're going to be there.

MS. HARTMAN: It's in the 05-North, so the odds are pretty low.

MR. JAMES: Well, and the cows can't read it anyway.

MS. HARTMAN: Cows can't read it, but the people that hike in the hills can.

MR. JAMES: I don't worry about people some days.

MS. HARTMAN: No. We're good.

MR. JAMES: Any questions?

MR. FEATHERSTONE: Tom Featherstone. I'm also with the Cal Poly Environmental Health and Safety Office. And just by way of letting everyone know, Bruce and Mary and I have spent a couple of times on conference call recently. We've had people wanting to do academic work in a couple of those spaces and we helped process that. At one time, we wound up discouraging them from using that space until after this is over.

And so that was in the form of if they wished to dig pits to evaluate soil, which is what the soil scientists do, right? And so, thank you for that, and thank you for your commitment to be willing to work with us and our people whose career work is creating these natural environments for cattle grazing and for what have you. We appreciate that and respect for our roads and erosion and stuff like that. So certainly for many of my folks, the academics, the munitions are of concern and kind of an abstract concept. Yeah, we may be able to put a picture of one up, but even that's not what they are

worried about, to be honest. It's the road. It's the soils. It's their livelihood.

MR. JAMES: Well, and that's like the chemistry student in the dorm mixing chemicals together to make a bomb, just to see if he can do it, then he blows off his hand. Then it becomes nonacademic, unfortunately, and that's what we are trying to prevent. We can lessen the exposure, but we can't remove it completely. Or I should say not the exposure, the risk. We can get you to 99 percent, but that's about as far as we are going to go.

MR. FEATHERSTONE: But I just wanted to express gratitude for your willingness to talk with us, to help us with education materials and what have you going forward.

MR. JAMES: We're not here to -- as I say, I was joking when I say "strip mine." That's not what we are here for. We are here to take care of the hot spots, if you will, and try to leave it as we left it -- or leave it as we found it, I'm sorry. But with the right seed mix, you know, not take out an endangered species, avoid taking the birds, because we don't go out in the February to August area because of migratory birds. And I have worked extensively with that.

I used to work for the Air Force, worked for the Air Force, the Army and the Navy installations around the Western United States. And we're out there to try and

make sure that the birds, if there is a nest, we don't go bother it. If we can, unless there is an absolute necessity -- and I have actually gotten permits that say, "You can do this, but only two." One air base, we had a bird problem, and we were out there taking out raptors because they were flying across the base. We even had -- we were able to take what we call a take with an eagle. That doesn't mean we kill them. It just means we scare them off, but we had permits from agriculture folks that said "You can do this, so many of this, so many of that," what we could and couldn't do. And the idea here is the same thing, we will go out there and do what we can do and then try to leave it the way we found it.

MR. FEATHERSTONE: And I am sure with the open communication that we've enjoyed so far, we'll both get what we want.

MR. JAMES: I hope so. And I may not be the project manager when we do the next couple of phases, but the same thing, they should be talking to you. If they don't, then you need to speak up and let people know.

MR. FEATHERSTONE: You presented a slide that had a schedule, kind of a Microsoft schedule looking thing. Can I get that one? I think it was that one.

MS. HARTMAN: The one you can't read.

MR. JAMES: And it's what we call notional. We

aren't sure when the funding will come for the next phase.

MR. FEATHERSTONE: I recall you saying that.

MR. JAMES: And I'm not sure when we are programmed for this, so I have got this project with a couple of others that are driving me crazy right now, so I am not paying attention to the out years on these things, but you can have a copy of this. And I believe it's not in the Proposed Plan, but I don't see why we couldn't share these slides.

MS. FRANQUEMONT: Yeah. It doesn't specifically -- it's a little misleading because that's just how long each alternative would take. It's just showing the comparison between the implementation of Alternative 2, which is institutional controls, versus Alternative 4, which is --

MR. JAMES: Surface and subsurface.

MR. FEATHERSTONE: So perhaps that wouldn't be helpful as I am talking to my people.

MR. JAMES: Well, as Mary says, it will start here and take X number of days or months, whatever. So this is not how we figure when it will happen or anything like that.

MR. FEATHERSTONE: We'll just look forward to getting something like that as it's available. Again, Kevin and I will have people we need to advise how it's

going to play out. Thank you.

MR. JAMES: And Tom, if you will send me an e-mail, I will check the schedule and see what is programmed for the next year. And I can, maybe, let you know when we are going to do the remedial design portion of that, and then you can go back and say, "Well, in two years, they are planning to come back out here, look at it, design it, and then start preparing the remedy next year," or something like that.

And also, we're doing -- there's another MRS called 09 that we are going to be awarding the contract this year before the end of September, so we will come back out and be doing a little more work out there, so I will let you know about that one too.

Any further questions? We are only a phone call away or an e-mail away.

So in that case, that concludes my presentation. And I would encourage you to check out the administrative record, and that will give you much further information of what we have found in the past up to now and give you probably interesting history. I am sure that there is some of that in there too.

(Hearing concluded at 6:20 p.m.)

CERTIFICATE

OF

CERTIFIED SHORTHAND REPORTER

* * * * *

I, THE UNDERSIGNED CERTIFIED SHORTHAND REPORTER IN AND FOR THE STATE OF CALIFORNIA, DO HEREBY CERTIFY:

THAT, THE FOREGOING PROCEEDINGS WERE TAKEN BEFORE ME AT THE TIME AND PLACE HEREIN SET FORTH; THAT A RECORD OF THE PROCEEDINGS WAS MADE BY ME USING MACHINE SHORTHAND, WHICH WAS THEREAFTER TRANSCRIBED UNDER MY DIRECTION; THAT THE FOREGOING IS A TRUE AND ACCURATE RECORD OF THE PROCEEDING.

IN WITNESS WHEREOF, I HAVE SUBSCRIBED MY NAME ON THIS DATE:_____.

Carolyn Elsee

_____

CSR NO. 10091

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05-south 10:17 12:1,11

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2 5:24 6:3 7:24 10:17,18 11:12,13 12:9

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20s 6:14

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2600 6:4

2B 10:5

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3 9:7 10:16,24 11:13,21

30 9:7

30-inch 18:1

33 8:16

36 11:2

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access 16:10,14

acres 6:3,4 8:16,21 17:22

acronyms 3:16

action 5:20 10:7,9,21 12:22 15:3 22:1,4

actions 10:4

activities 10:14

address 16:7

administrative 13:12,17,24

advanced 15:6

affairs 3:23

agricultural 10:17

agriculture 14:10

ahold 18:22

air 22:14 25:23,24

airplanes 22:19

Alternative 10:21 11:15 12:5,8, 9,11,12 14:12,22

alternatives 3:13 10:9,21 12:6 13:11,21

ammunition 22:17

analog 6:23 7:6,8,24 9:4

analyzed 7:18

annuals 17:7

anomalies 15:11

anticipate 11:17 21:11

anticipated 10:14

antimony 7:17

approach 14:20 15:5

archaeologist 3:22

area 5:23 7:20 8:21,23 9:25 11:4 14:14 15:15 17:19,20 20:2,3 21:6, 12 23:15,19 25:21

areas 6:15 9:1

arms 6:17

army 6:14 21:6 22:14 25:24

artillery 6:17

assessment 4:23 11:14,22

assessor 3:25 4:12

August 25:21

avoid 25:19

aware 18:17

B

back 3:25 4:2,10 5:18 6:13,22 15:6 17:1 18:2 23:13

background 7:19

Balancing 11:7

base 17:2

based 11:23 14:3 15:12 17:6 21:10

basically 7:3,25 9:20 10:23 14:23

Bay 16:13

beach 7:7

bed 16:11
Belinda 23:13
big 7:11 12:21 15:14,19 22:16
biologist 3:22
birds 12:20 25:20,21
bit 6:1 11:19 14:11,19 15:7
blooming 19:8
blooms 19:7
blows 25:5
blue 9:18
board 22:9
bomb 25:5
Botanical 6:8 11:18 17:17
boundary 6:10 9:11,13,14 21:2
Bristol 4:8 15:1
brother 4:19
brought 10:3 16:8
Bruce 3:20 24:9
budgets 18:13
buried 19:12

C

Cal 6:7,13 14:10,23 24:8
California 4:5
call 20:2,15 24:10
called 7:4
Camp 3:5 4:18 5:22
care 20:7 25:16
career 24:19
case 19:17
cases 9:15 19:20
cattle 16:18 23:16 24:20
caution 21:19
chance 21:15
chances 20:17
Chanda 17:16
change 5:10 13:1
changing 14:14
Characterization 7:16
check 5:2,3
chemicals 25:4
chemist 4:4
chemistry 25:3
Cheryl 3:24 7:1 21:7
choose 13:18
chosen 21:18
Chumash 23:19
classes 16:21
classification 15:7
clean 3:7 20:9
clear 9:12 15:16
close 21:8
closely 18:16
college 4:17,18 6:7
comment 5:7 13:3,14
comments 5:10 13:4,15
commitment 24:18
community 3:13 11:9
compare 7:21
comparison 11:20
compiled 13:19
complete 5:15 8:18
completely 25:8
complex 6:4
comprehensive 13:13
computer 4:11
concentrations 7:19
concept 24:24
concern 9:1 24:23
conclusions 9:20
conference 24:10
considered 8:18
Constituent 7:16
contact 3:15 18:5 22:22
contractor 4:8 15:4 16:4,24
contractors 22:23
control 4:3,6 12:9
controls 10:23,25 11:3
coordinate 18:20
coordinating 16:13
copper 7:17
copy 5:6
Corps 15:5 16:4,17 18:5,22
County 4:15
couple 6:15 22:2 24:10,12
courts 6:3 21:5,14
coverage 15:10
covered 11:23
cows 23:24 24:1
creating 24:19
creek 8:11 14:24
criteria 11:5,12,13
Cuesta 4:18 6:7
culture 15:24
current 6:9 10:13 15:2

D

damaged 16:2
dangerous 20:9,23
days 12:16 24:4
Deactivated 6:18
deal 12:21
debris 8:7,16 15:15
Decision 5:8 13:5,23 14:2
deepest 9:7
Defense 18:11,12
Dena 3:24 23:3
density 15:16
Department 4:6 18:10

depending 5:9
depth 8:3 11:2
depths 10:19
describe 6:24 9:25 13:23
description 6:2
design 5:11,12 22:3
destroy 14:16
detail 14:12
detector 15:20
determination 13:7
determined 9:23
develop 17:20,21
DGM 15:6
difference 6:24 7:7 8:13
dig 15:17,19 17:10 24:16
digging 15:15 17:25 22:7
digital 7:9,10,24 9:4
digitally 6:23
director 14:10 17:17
dirt 22:7
discouraging 24:13
discovered 19:4
disturbance 14:14
divided 9:21
divot 17:12
Document 5:8
documents 13:6,19,23 14:3
dorm 25:4
drafted 5:8
driving 23:19
Dudleya 19:11,12,17
dug 7:12 15:13 19:19

E

e-mail 13:17 20:15
earlier 9:18
educate 21:23 22:4
education 25:13
effect 20:4
effective 12:25
effectiveness 11:7,15,22
effects 20:7
electrical 7:5
electro-magnetometer 7:4
element 13:9
encourage 13:12
encouraged 16:2
end 5:20 11:9
endangered 19:3,17 25:19
ends 13:14
engineer 4:2
Engineers 16:4
entail 14:13
entity 6:6
environment 5:20
environmental 4:2 24:8
environments 24:20
EOD 22:14
EPA 4:13
equipment 15:6,8,14
erosion 16:12 24:22
Escuela 14:24
Estuary 16:13
evaluate 10:8 24:16
evaluated 8:19
evaluation 9:24
excited 20:11
exciting 19:4,6
executive 17:16
expand 11:18
Expanded 6:15
experience 22:8
experienced 22:20
experts 13:9
exploded 7:15 8:2 9:6
exposed 8:17,22
exposure 8:17 25:8,9
express 25:11
extensively 21:17 25:22
extent 20:5

F

factors 11:7,9
fairly 8:4
Feasibility 3:12 5:4 8:20 10:4,5, 20
Featherstone 24:7 25:11
February 25:20
February-to-august 12:20
federal 4:14 6:5
feel 11:15 12:2
feet 9:8 10:16,17,18
fence 10:23
fieldwork 6:21 7:23 9:13
figure 21:2,12
finalize 13:5
finalized 13:4,5
finally 6:19
find 12:25 15:19 19:18
finding 5:20
finds 8:6
fine 23:10
finished 20:2
Fish 4:14
five-year 12:23
flower 19:15
folks 24:23
follow 20:1
follow-on 20:4
food 22:18

foot 8:4
force 22:15 25:23,24
Forest 4:14 23:12
form 24:15
forward 15:3 20:12 25:13
found 3:10 7:14,25 8:1,6 9:5,10 15:15 21:24 23:11 25:18
frame 12:20
Franquemont 4:9 7:1 15:1 16:16 18:23 21:1,4,10,16
FS 3:12
FUDS 3:19
full 17:20
fun 6:18 19:15
funded 12:16,18 18:12
funding 18:8,9,10
future 10:14 16:3
fuze 8:3

G

gain 13:13
garden 6:8 11:18 17:17,20 21:23
gave 17:3
generally 15:17
geophysical 6:22 7:3
geophysicist 3:24
geophysicists 4:12 5:2
give 13:16 16:24
glad 18:5
goals 10:8
golf 17:13 19:24
good 4:17 22:20 24:5
government 6:5
grass 15:24
grasses 15:23 17:7
gratitude 25:12
grazing 16:18 17:6 23:16 24:20
great 16:15,22 17:14
green 9:16
grenade 6:3 21:4,5,13
grenades 8:3
ground 9:8 10:16 14:11,14,23 21:5
groundwater 5:16,17
guarantee 20:17
Guard 4:17 6:13
guess 8:15
guns 22:16
guy 4:3 22:15
guys 18:2,9,17

H

hand 8:3 25:6
happen 8:19
hard 16:8,25
HARTMAN 23:14,22 24:1,5
hazard 11:23
hazards 11:17
health 5:19 24:8
hear 14:19
Heather 4:10
heavily 21:17
heavy 15:14
helped 24:12
hiding 7:2
high 15:16
higher 7:21
hike 23:15 24:2
hills 24:2
historical 21:5,10,18,20
history 3:10 6:13
hitting 20:22
hole 15:19 17:10
holes 15:18
honest 25:1
hoping 12:17
hot 25:16
Hug 3:21
human 5:19 10:12
humans 8:17
hundred 15:10

I

idea 13:13 20:6 22:21
identified 8:16
identify 4:22 15:13 17:5 18:17
II 21:16
immediately 22:25 23:1,2
impact 20:8
implementation 12:15
implementing 16:9
important 16:17
inches 9:7 11:2
individual 15:18
information 8:9 13:19 21:11
informed 17:17
initial 6:21
input 13:8
inputs 13:10
inside 7:21
installations 25:24
institutional 10:22,25 11:2 12:9
instrument 7:9
instruments 7:10
intend 17:25
intends 17:20
interaction 10:12
interesting 20:12
interns 20:20
introduce 3:9

inventory 4:22
investigate 5:1
investigating 7:20
investigation 3:11 4:23,25 7:23 9:5 15:2 17:24
Investigation/feasibility 4:21
investigations 9:17
issue 21:12
item 15:19
items 8:1 9:5 15:16

J

J.R. 3:21 22:13,20
James 3:4,20 7:2,10 8:15 14:15, 21 16:23 17:9,13,15 18:4,10,19 19:1,5,10,13,25 20:14 21:25 22:3, 10,13 23:1,7,10,18,24 24:3,6 25:3,14
Jeff 4:11
Jim 3:21 4:2 6:25
join 22:9
joking 25:15
Jonathan 4:4 6:25
jumping 22:19
June 13:14

K

Kevin 14:9
key 13:8
kind 15:8 16:19 17:6 21:1 24:24
kinds 6:18
Korea 6:19

L

labs 16:20
land 6:4,9
landscape 14:13
larger 9:3
laundry 17:3
lead 7:17
learn 20:12
leave 10:22 14:17 25:17
left 4:17 25:17
lessen 25:7
letting 24:9
levy 18:11
light 7:11
likelihood 20:22
lines 15:9
list 17:3
live 7:14
livelihood 25:2
local 6:5
located 6:2
logged 17:19
long-term 11:7,22 20:7
looked 10:3
Lor 17:16 18:7,14 19:2,6,11,22 20:11,16 21:3,21 22:2,9,12,24 23:6,9
lot 3:18 6:16 8:8 16:6 17:8 18:14
low 23:23
lower 11:14
lucky 5:21
Luis 3:5 4:15
Lukasko 4:2

M

maintaining 15:24
make 12:24 13:21 16:25 18:17 20:6 25:4
management 5:16
manager 3:20 4:7,9 15:2
manual 15:15
map 15:10
mapped 6:23
mapping 7:3,5
maps 21:18
Mary 4:9 6:24 14:21 15:1 24:9
master 17:21
materials 25:13
means 3:10 8:18
meantime 21:21
MEC 11:23
meet 10:9 11:6,12,13 13:21
meeting 3:4 5:9
meetings 13:11
members 21:23 22:4
metal 7:12,13 15:20
metals 7:17
migratory 12:20 25:21
miles 6:2 7:24
military 22:15
mind 18:2
mine 8:3 9:6 11:4 25:15
mix 16:24 17:2,3,9 25:18
mixing 25:4
mobility 11:8
modifying 11:9
monitoring 5:17
moonscape 14:17
Morro 16:13
mortars 9:6
move 7:9 15:20
moves 15:3
moving 22:7
multi-use 6:4
munitions 7:16 8:8,16 10:11,13, 25 11:16 24:23

N

names 4:16
National 4:17

native 19:3
natural 24:20
Navy 25:24
needed 6:14 9:23 15:13
nice 14:19
non-endangered 19:18
nonacademic 25:6
North 9:21 10:1,4,15
northwest 6:2

O

O'DELL 3:24 23:5
Obispo 3:5 4:15
objective 10:12
objectives 10:7,10 11:13
occupy 17:22
odds 23:22
Office 24:8
operations 14:10
opposed 8:12
ordnance 3:20 9:1
ordnances 9:10 17:25
owned 6:5
owns 6:7

P

P.M. 3:2
pardon 5:15 13:17
part 5:4,24 6:7,8 22:16
participate 16:2
participation 3:13
pathway 8:22 20:21
pathways 8:17
Pay 4:7
people 16:14 21:19 23:15,18 24:1,3,11,19
percent 15:10 25:10
percentage 20:19
perennial 17:7
period 13:3,14
permanent 11:16 12:3
person 20:19
physically 7:9
picked 7:19
picture 24:25
piece 7:13
pieces 8:7
Piper 14:9,18,23 16:6,20 17:5,12, 14
pits 24:16
place 5:2,19 12:24
places 7:8 17:1 21:18
plan 3:6 5:5 9:25 11:24 12:6 13:2 14:1,4 15:23 16:5 17:21
planning 20:24 21:22
plans 17:21
plant 17:21 19:1,14,20
planted 18:24
planting 18:1
plots 16:18
points 3:15
Poly 6:7 14:10,23 24:8
pond 8:12
posters 22:5,25 23:4
posting 21:22
potential 20:3
potentially 5:10
practice 9:6
preferred 12:6 13:21 17:2
preliminary 4:22
prepared 13:2
pretty 11:3 20:18 23:23
prevent 10:12 25:7
prior 9:17
priority 18:2
private 6:6
probability 20:18
problem 22:16
proceed 21:19
process 4:20,21 10:5 16:5 24:12
program 16:9,13 17:6 20:11
programmed 18:13
project 3:19 4:6,8,9,13 15:2,3 19:13 20:1
projectiles 9:6
promoting 17:6
property 17:24 18:15
propose 3:6
proposed 3:6 5:5 9:25 11:24 13:2,11 14:1,4
protect 19:20
protective 5:19
provide 13:4 22:21
provided 13:10
proximity 21:19
public 3:4,23 4:9 5:7,9 6:11 13:3, 11,13 14:1
public's 13:8
pulled 4:1
purposes 15:24
put 5:5,18 6:16 10:22,25 11:2 12:24 14:3 16:11 24:24

Q

qualitative 11:14
quality 4:3
question 14:11 20:16
questions 3:16 14:7 17:15 20:14 23:7,8,11 24:6
quickly 14:8

R

R's 14:6 22:5
raised 7:21
ranch 6:6 14:24
range 6:4 9:22,25 10:2,18 12:4, 12
ranges 6:16 21:7,20
rare 18:15 19:7,14
reactivated 6:18
read 8:1 23:24 24:1
readings 15:12
real 7:11
reason 18:19
recently 24:11
recognize 4:15 14:6
recommend 22:6
recommended 10:5
record 13:12,18,24
recorded 7:7
recreation 6:12
reduce 16:12
reduction 11:7
regard 11:14,16
related 8:8
relations 4:10
relinquished 6:20
remain 18:4
remedial 3:11 4:20 5:11 7:23 10:7,9,20 12:22 15:2,3 22:1
remedy 12:24 13:20
reminders 3:14
removal 11:1 12:13
remove 10:24 25:8
Replace 17:12
report 14:6 23:13
represented 3:23
requirements 13:22
reseeding 15:23
resource 23:3
resources 22:21
respect 24:21
response 5:15 6:9 9:3 10:11
Results 7:23
Retreat 14:6
review 12:24 13:24 14:2
RI 3:10 8:17
RI/FS 4:20
risk 3:25 4:12 25:9
road 25:1
roads 15:25 16:1,10,11 24:21
Robin 3:22
rockets 9:7
Rosenau 3:22
round 7:14,15
run 14:16

S

Sacramento 3:25 4:7 22:11
safety 3:14,20 24:8
sample 8:13
samples 8:10 9:16,19
sampling 7:18 8:10
San 3:5 4:15
schedule 3:14 13:25
scheduled 16:21
scientist 4:11
scientists 24:17
scope 20:21
scout 20:21
season 16:1
sediment 8:11,14 9:19
sediments 9:16
seed 16:23 17:2,9,12 25:18
seeds 17:1
Selection 13:20
send 13:15
sending 13:6
sensitive 18:14 19:3
separately 18:13
Service 4:15 23:12
Services 4:8
set 15:20
shallow 8:4
shape 21:12
shoot 22:16
Shooting 9:22,24 10:2,18 12:4, 12
Short 6:13
short-term 11:15
showing 21:7
shrapnel 7:14
shut 6:19
sign 10:23
signage 11:3 12:9 21:22
signal 7:5
signs 12:11 23:16
similar 15:7
site 4:23 6:3,13 7:5 8:20 9:3,17 10:11 11:11,20 12:1,7 20:23,24 21:8
sites 6:16 18:12
slide 5:25
SLO 4:18 5:22 6:7 9:14
small 6:17 8:9 9:6 23:14
smiley 4:3
soil 7:18 8:10,13 9:16 24:16
soils 25:2
soliciting 5:7
solution 11:16 12:3,5
sort 15:8

source 18:10
sources 18:9
South 9:21,24 10:1,15
space 24:14
spaces 24:12
speaking 20:20
special 13:22
specialist 3:20 4:10 22:8
species 17:5 18:16 19:7,11,12, 14,22 25:19
specific 10:7
Speck 4:11
speed 17:18
spent 14:25 24:10
spot 8:9
spots 9:10 25:16
stakeholders 4:13
started 21:25
state 4:14 6:5,7 13:10
state/regulatory 11:10
States 25:25
statistically 20:19
stats 20:19
Steven 4:7
stick 7:6
strip 11:4 25:15
stuck 8:9
student 25:4
study 3:12 4:21 5:4 8:20 10:4,5, 8,20
stuff 4:25 6:18 7:18 12:13 16:7, 19 17:3 24:22
stupid 23:10
sub-areas 8:23 9:21 10:1
Substances 4:6
subsurface 10:13 11:1 12:13 15:11 18:1
suggest 21:25
Summary 10:20
supply 22:17
surface 10:13,16,24,25 11:1 12:13
surprisingly 20:13
surveyed 17:19 20:23,25
surveys 6:22

T

taking 25:19
talk 3:9,12 11:24 12:2 23:5 25:12
talked 14:21 15:22,25
talking 3:5 5:23 11:17 16:17
tank 14:16
tanker 22:15
tax 18:11
team 3:9,19 4:8
technical 13:9
tells 4:23
thing 5:14 8:20 15:10
things 16:3,7,14
thinking 17:18
thirty 12:23
threshold 11:5,12,13
throw 17:10
time 12:15,20 14:25 24:13
times 24:10
today 3:23 13:15 14:25 17:18 23:11
Tom 24:7
Toxic 4:6
toxicity 11:8
trails 20:22
train 6:17
trained 21:17 22:13,14
training 6:14,16 22:15
transect 15:9
transplanting 19:22
treatment 11:8
troops 22:18
type 5:14

U

U.S. 4:13
underground 5:3
understand 14:18
unexploded 9:1,10 17:25
United 25:25
University 4:18
up-to-date 15:8
UXO 8:16 9:5 22:7,13

V

vacuum 4:19
vegetation 18:15,23 19:3
vehicles 16:10
visitors 21:23
volume 11:8
volunteers 20:20

W

walk 5:2 15:10
walking 15:9
Walter's 14:24
wanted 25:11
wanting 24:11
War 21:16
water 8:11
waving 7:6
website 13:16
Webster 3:24 7:3 21:9
WEDNESDAY 3:1
Western 25:25

wet 16:1

whatnot 10:19 16:22

Whipple 4:4 8:14 21:15

Wilderness 23:19

Wildlife 4:14

willingness 25:12

winter 16:9

wished 24:15

wondering 18:8 23:16

work 14:10 16:6,17,25 18:16 19:16 24:11,18,19 25:23

workarounds 16:21

worked 16:8 25:21,23

working 4:5 15:4 16:12

World 21:16

worried 25:1

worry 24:3

wound 24:13

write 5:4

Y

year 12:18 14:2 20:22

years 5:18 6:16 12:17,22,23 22:2

yellow 5:24 8:6

Z

zinc 7:17

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