Addendum to Final Quality Assurance Project Plan Former Fort Ord, California Volume II, Appendix A Munitions and Explosives of Concern Remedial Action Unit 5

FORT ORD MEC INTERIM SUPPORT SATOC

Contract Number: W9123820D0004

Delivery Order: W9123821F0077 (KEMRON TO 03)

December 2021

Draft

Prepared for



U.S. Army Corps of Engineers, Sacramento District

1325 J Street

Sacramento, California 95814

Prepared by



TABLE OF CONTENTS

List of Figures	i
Abbreviations and Acronyms	ii
Executive Summary	i\
List of Changes	۱
1.0 Project Management	1
1.1 Title and Approval Page (QAPP Worksheets #1 and 2)	1
1.2 Project Organization and Distribution (QAPP Worksheets #3 & 5)	4
1.3 Personnel Qualifications and Sign-off Sheet (QAPP Worksheets #4, 7, & 8)	5
1.4 Communications Pathways (QAPP Worksheet #6)	11
2.0 Project Quality Objectives	13
2.2 Data Quality Objectives (QAPP Worksheet #11)	13
6.0 Data Management and Data Review	13
6.2 Assessments and Corrective Action (QAPP Worksheets #31, 32, &33)	13
6.6 Data Usability and Assessment (QAPP Worksheet #37)	13
Attachment D Points of Contact (Unit 5 Remedial Action)	15
LIST OF FIGURES	
Figure 1-1 Organizational Structure	Z

Addendum to Final Quality Assurance Project Plan Munitions and Explosives of Concern Remedial Action Former Fort Ord, California Unit 5

ABBREVIATIONS AND ACRONYMS

BCT BRAC Cleanup Team

BLM Bureau of Land Management
BRAC Base Realignment and Closure

CAP Corrective Action Plan
CAR Corrective Action Report

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CQCM Contractor Quality Control Systems Manager

CQM Construction Quality Management
DGM Digital Geophysical Mapping
DQO Data Quality Objective
EOD Explosive Ordnance Disposal
GIS Geographic Information System

HAZWOPER Hazardous Waste Operations and Emergency Response

KEMRON KEMRON Environmental Services, Inc
MEC Munitions and Explosives of Concern
MMRP MIlitary Munitions Response Program

MRA Munitions Response Area
PE Professional Engineer

PWS Performance Work Statement

QA Quality Assurance

QAPP Quality Assurance Project Plan

QC Quality Control RCA Root Cause Analysis

SSDM Site Specific Data Manager

SUXOS Senior Unexploded Ordnance Supervisor
USACE United States Army Corps of Engineers

UXO Unexploded Ordnance

UXOQCS Unexploded Ordnance Quality Control Specialist

UXOSO Unexploded Ordnance Safety Officer

Addendum to Final Quality Assurance Project Plan Munitions and Explosives of Concern Remedial Action Former Fort Ord, California Unit 5

EXECUTIVE SUMMARY

This document is the Unit 5 Addendum to the Final Quality Assurance (QA) Project Plan (QAPP), Former Fort Ord, California, Volume II, Appendix A, Munitions and Explosives of Concern (MEC) Remedial Action referred to as the MEC QAPP (KEMRON, 2016). This document is also referred to as the MEC QAPP Unit 5 Addendum. This document has been prepared in support of the United States Army Corps of Engineers (USACE), Sacramento District, as part of the ongoing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial actions at the former Fort Ord, Monterey, California, contract number W9123820D0004. This Addendum addresses changes to the MEC QAPP Worksheets that apply to the remedial action in Unit 5 within the Impact Area Munitions Response Area (MRA), such as identifying the current project personnel, organizational structure, and emergency contacts. KEMRON Environmental Services, Inc. (KEMRON) will follow technical procedures and standards, including quality control procedures, described in the MEC QAPP as directed by USACE. This document is intended for use by field operators, supervisors, data managers, and other technical experts responsible for implementing and coordinating field activities in Unit 5 only. The MEC QAPP may be found in the Fort Ord Cleanup Administrative Record, Document Number OE-0884A.

The organizational structure shown on Figure 1-1 meets the requirements of the Performance Work Statement (PWS) and is applicable to the project organization throughout this document. It should be noted that the PWS for the contract did not include the Contractor Quality Control (QC) Systems Manager (CQCSM) position. The Unexploded Ordnance (UXO) Quality Control Specialist (UXOQCS) will assume all of the responsibilities of the CQCSM. Additionally, the responsibilities of the MEC Remediation Manager will be assumed by the KEMRON Project Manager. The Points of Contacts listed in Attachment D are the appropriate contacts for the planned Unit 5 remedial action.

Procedures for the collection, transfer, verification, validation, and storage of field data have evolved since the publication of the MEC QAPP (KEMRON, 2016). Contractor and subcontractor company names should be disregarded. Personnel involved with the data collection, transfer, analysis, verification, validation, and storage activities performed in accordance with the MEC QAPP Unit 5 Addendum are shown in Figure 1-1. The Base Realignment and Closure (BRAC) Geographic Information System (GIS) Specialist / Military Munitions Response Program (MMRP) Database Administrator is responsible for data management procedures and data validation. All personnel involved in data collection, transfer, analysis, verification, validation, and storage activities will coordinate with the BRAC GIS Specialist / MMRP Database Administrator to ensure data quality and project objectives are met.

The List of Changes shows the QAPP Worksheet updates for the Unit 5 remedial action.

LIST OF CHANGES

MEC QAPP Section	MEC QAPP Unit 5 Addendum Section	QAPP Worksheet Update
Section 1.1 Title and Approval Page	Section 1.1 Title and Approval Page	Updated Title and Approval Page (QAPP Worksheets #1 and #2)
Plans and Reports from Previous Investigations Relevant to this Project	Section 1.0	Listed reports relevant to Unit 5.
Section 1.2 Project Organization and QAPP Distribution	Section 1.2 Project Organization and QAPP Distribution	Updated Figure 1-1 Project Organization and QAPP Distribution chart with current Unit 5 remedial action personnel (QAPP Worksheets #3 and #5)
Section 1.3 Personnel Qualifications and Sign-off Sheet	Section 1.3 Personnel Qualifications and Sign-off Sheet	Updated QAPP Worksheet #4, #7, and # 8 with current Unit 5 remedial action personnel listed by supporting organization
Section 1.4 Communication Pathways	Section 1.4 Communication Pathways	Updated QAPP Worksheet # 6 with current Unit 5 remedial action roles and personnel
Section 1.5 Project Planning Session Summary	N/A	No update to QAPP Worksheet #9
Section 2.1 Conceptual Site Model	N/A	No update to QAPP Worksheet # 10
Section 2.2 Data Quality Objectives	Section 2.2 Data Quality Objectives	Added to QAPP Worksheet #11 which MRA Units and Bureau of Land Management (BLM) Areas have undergone remedial action since publication of Final QAPP
Section 2.3 Measurement Performance Criteria	N/A	No update to QAPP Worksheet # 12
Section 2.4 Secondary Data Uses and Limitations Table	N/A	No update to QAPP Worksheet # 13
Section 2.5 Project Tasks and Schedule	N/A	No update to QAPP Worksheets #14 and #16
Section 2.6 Project Action Limits and Laboratory-Specific Limits	N/A	QAPP Worksheet #15 is not applicable to surface or subsurface MEC Removal or Digital Geophysical Mapping (DGM)

MEC QAPP Section	MEC QAPP Unit 5 Addendum	QAPP Worksheet Update
	Section	
Section 3.0 Sample Design	N/A	No update to Section QAPP
		Worksheets #17 and #18
Section 4.0 Sampling	N/A	No update to Section QAPP
Requirements		Worksheets # 19, #30, #20, #21, and #22
Section 5.0	N/A	No update to Section QAPP Worksheets #23, #24, #25, #26, #27, and #28 are not applicable to surface or subsurface MEC Removal of DGM
Section 6.1 Project Documents and Records Table	N/A	No update to QAPP Worksheet #29
Section 6.2 Assessments and Corrective Action	Section 6.2 Assessments and Corrective Action	No update to Worksheets #31, #32, and #33; however, notes are being added for clarification.
Section 6.3 Data Verification and Validation Inputs	N/A	No update to QAPP Worksheet #34
Section 6.4 Data Verification Procedures	N/A	No update to QAPP Worksheet #35
Section 6.5 Data Validation Procedures	N/A	No update to QAPP Worksheet #36
Section 6.6 Data Usability Assessment	Section 6.6 Data Usability Assessment	Update to QAPP Worksheet #37 reflecting current Unit 5 remedial action personnel responsible for participating in the data usability assessment preparation or review

1.0 PROJECT MANAGEMENT

Update to MEC QAPP Section 1.0 QAPP Worksheets #1 and 2, Figure 1-1 Organizational Structure, Worksheets #3 and 5, Worksheets #4, 7, & 8, and Worksheet #6.

1.1 Title and Approval Page (QAPP Worksheets #1 and 2)

Site Name Fort Ord Impact Area Munitions Response Area Unit 5

Site Location Former Fort Ord, California

Document Title Addendum to Final Quality Assurance Project Plan, Former Fort Ord,

California, Volume II, Appendix A, Munitions and Explosives of Concern

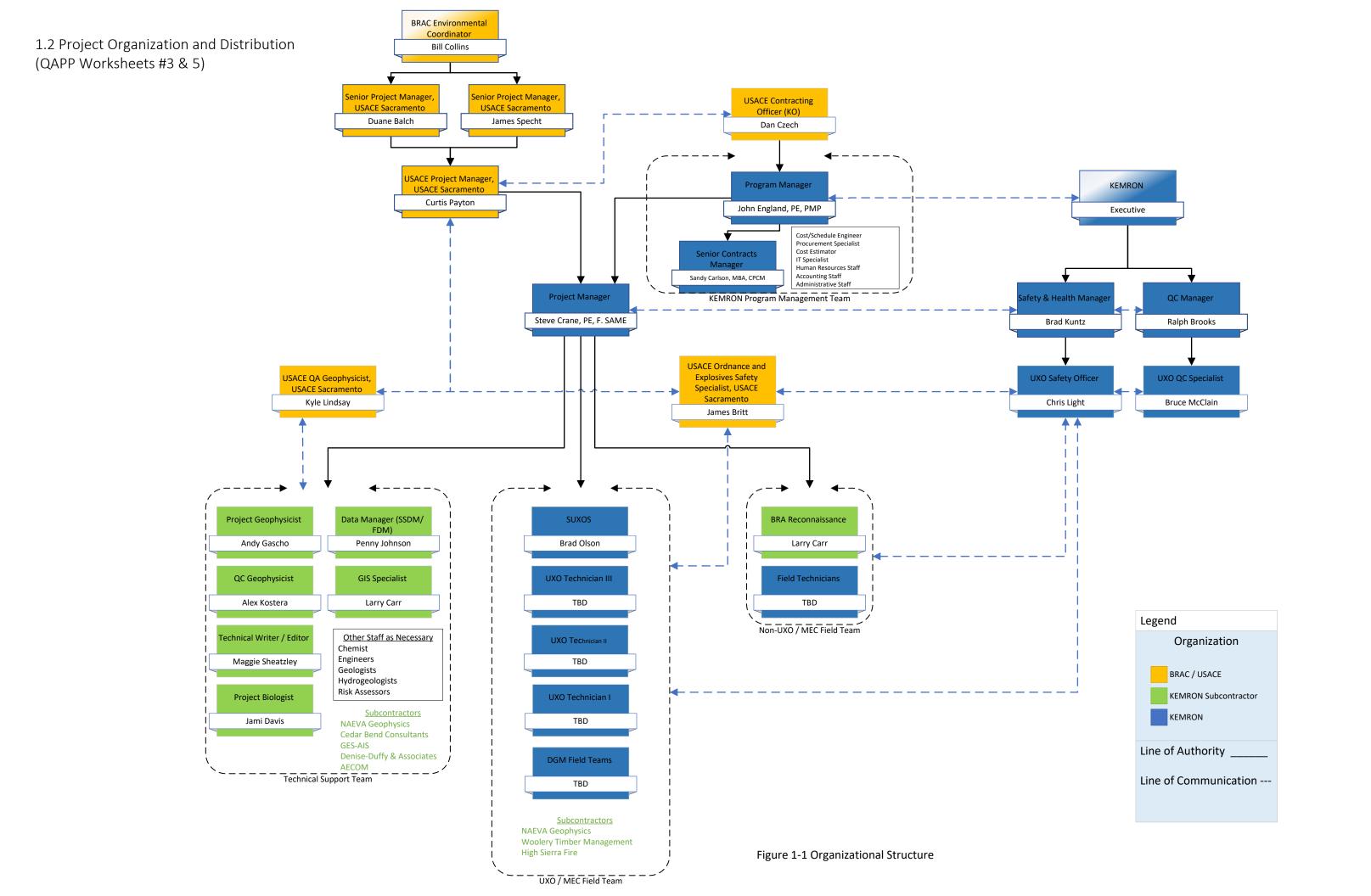
Remedial Action Unit 5

Contract Number W9123820D0004

Inves	tigative Organization		
AUTH	IOR SIGNATURE		
	Margaret Sheatzley Cedar Bend Consultants, Technical Writer/Editor	Date	
REVIE	EW SIGNATURES		
	Steve Crane, P.E., F.SAME KEMRON Project Manager	Date	
	Brad Olson KEMRON Senior Unexploded Ordnance Supervisor	Date	
CONT	RACTING ORGANIZATION		
	Curtis Payton USACE Project Manager	Date	

Plans and reports from previous investigations relevant to this project:

Title	Company	Date	AR#
Final 4' OE Removal Action Report Inland Range Contract Former Fort Ord, California Site OE-15 (Roads and Trails)	USA Environmental, Inc.	1997	OE-0316
Final After Action Report 100% Grid Sampling Inland Range Contract Former Fort Ord, California Site OE-15B	USA Environmental, Inc.	2000	OE-0287A
Final Remedial Action Completion Report Site 39 Inland Ranges Habitat Reserve Former Fort Ord, California	ITSI Gilbane	Updated 2014	RI-047C
MRS-BLM Units 7, 10, and 33 MEC Remedial Action Technical Memorandum Former Fort Ord, California	Gilbane	2015	OE-0842
Final DGM Survey of Vernal Pond 21 at Former Fort Ord Monterey, California	USACE	2021	OE-1003



1.3 Personnel Qualifications and Sign-off Sheet (QAPP Worksheets #4, 7, & 8)

Organization: KEMRON

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Ralph Brooks	QC Manager	AS Military Technology, BS General Studies, 46 years of combined military and MMRP with Senior UXO Supervisor (SUXOS), UXOQCS, project and program management experience	Naval Explosive Ordnance Disposal (EOD) School, Hazardous Waste Operations and Emergency Response (HAZWOPER), Construction Quality Management (CQM)	
Sandy Carlson	Director of Contracts and Procurement	MBA, Business Concentration, Averett University BBA, Accounting Concentration Averett University AA, Accounting and Business, College of DuPage. 20+ years of contract management experience	CPCM, (Certified Professional Contracts Manager) NCMA Master's Certificate in Government Contracting, ESI International / GWU School of Business and Public Management	

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Steve Crane	Project Manager	MS Civil and Environmental	Registered Civil	
	(Including the	Engineering, BS Civil Engineering, 40	Engineer	
	MEC Remediation	years of combined experience in	(Professional	
	Manager	environmental engineering, project	Engineer) [PE]	
	responsibilities)	management, program management,	{Arizona} USACE;	
	,	and business unit management;	Architect - Engineer	
		Previous Project Manager (2015-2020)	(A-E) Contracting	
		for the \$87 million Fort Ord MEC	Short Course, USACE-	
		Removal and Soil Remediation WERS	Huntsville; Program	
		task order (KEMRON) and the \$60	for Manager	
		million Fort Ord MEC Removal and	Development, Univ.	
		Soil Remediation WERS task order	of North Carolina –	
		(Gilbane, 2010-2014)	Chapel Hill Graduate	
			Business School	
John England	Program Manager	BS Civil Engineering with 20 years of	Registered Civil	
		experience in Program Management	Engineer with PE in	
		for environmental and MEC	Colorado. Project	
		investigation and remediation.	Management	
		Program Manager for MEC clearance	Professional since	
		at Ft Ord since 2010 under three	2009.	
		contracts.		
Brad Kuntz	Safety and Health	BS Environmental Science, 23 years	Certified Industrial	
	Manager	overall experience in industry	Hygienist, Certified	
			Safety Profession,	
			Certified Hazardous	
			Materials Manager,	
			,	
			Materials Manager, Safety Management Specialist	

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Bruce McClain	UXOQCS	DDESB TP-18-Qualified UXOQCS, 35	Naval EOD School,	
	(including the	years of EOD and UXO experience	USACE CQM,	
	CQCSM		HAZWOPER,	
	responsibilities)		HAZWOPER	
	,		Supervisor, 30-Hour	
			Construction Safety,	
			10-Hour Construction	
			Safety	
Brad Olson	SUXOS	DDESB TP-18-Qualified SUXOS, 35	Naval EOD School,	
		years of EOD and UXO experience	USACE CQM,	
			HAZWOPER,	
			HAZWOPER	
			Supervisor, 30-Hour	
			Construction Safety,	
			10-Hour Construction	
			Safety	

Organization: Cedar Bend Consultants, LLC

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Maggie Sheatzley	Technical Writer/Editor	BS Marine Engineering 6 Years MMRP Experience	HAZWOPER	

Organization: GES-AIS

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Larry Carr	(GIS) Specialist	BS Geology, 21 years of experience in GIS (26 years overall experience in industry)	HAZWOPER	

Organization: NAEVA Geophysics, Inc

Name	Project Title/Role	Education/Experience	Specialized	Signature/Date
			Training	
Penny Johnson	Site Specific Data	BS Geology, 20 years of MMRP	Microsoft Access,	
	Manager (SSDM)	geophysics experience, 15 years	Intermediate/SQL,	
		database management experience on	Oasis Montaj,	
		MMRP projects	Geophysical Data	
			Processing for UXO,	
			HAZWOPER	

Organization: Denise Duffy & Associates

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Jami Davis	Project Biologist	BS Earth Systems Science and Policy – California State University of Monterey Bay; Senior Environmental Scientist / GIS Analyst, DD&A Staff Biologist, Zander Associates; Field Ecologist/Supervisor for the Parker Flats Burn Project, Lars Pierce/Fort Ord Reuse Authority	USFWS Federal Recovery Permit TE-091857-0: California tiger salamander and California red-legged frog; CDFW Scientific Collecting permit 801136-04: Mammals, Reptiles, Amphibians, Freshwater/ Terrestrial Invertebrates; Managing Habitats for California Red-legged Frog Workshop (Elkhorn Slough Coastal Training Program); Rare Pond Species Workshop (The Laguna Foundation); Wetland Delineation Training (Wetland Training Institute); Arctostaphylos Workshop (Jepson Herbarium); Basic Botany Workshop (Jepson Herbarium); Poaceae Workshop (Jepson Herbarium); Flora of San Luis Obispo County (Jepson Herbarium); 40 Hr HAZWOPER Certification & 8-Hr refresher; CEQA Basics Workshop (AEP)	

Organization: AECOM, Inc

Name	Project Title/Role	Education/Experience	Specialized Training	Signature/Date
Andy Gascho	Project Geophysicist	MS Geophysics 19 years of MMRP geophysics experience 8 years of geophysical classification experience on 11 geophysical classification projects	Oasis Montaj Geophysical Data Processing for UXO ESTCP Geosoft UX- Analyze Training HAZWOPER 30-Hour Construction Safety	
Alex Kostera	QC Geophysicist	BS Geology 19 years of MMRP geophysics experience 6 years of geophysical classification experience on 6 geophysical classification projects	Professional Geologist (Virginia) Oasis Montaj Geophysical Data Processing for UXO HAZWOPER	

1.4 Communications Pathways (QAPP Worksheet #6)

Communication Drivers	Organization	Name	Procedure (Timing, Pathways, Documentation, etc.)
Regulatory agency interface	USACE	Curtis Payton	USACE Fort Ord Project Manager provides routine project updates to the BRAC Cleanup Team (BCT) and stakeholders, including work variances and corrective actions
Progress reports	KEMRON NAEVA	Steve Crane Penny Johnson	KEMRON Project Manager e-mails monthly progress reports to USACE Fort Ord Project Manager and others on the Fort Ord project delivery team; SSDM delivers daily progress reports (update maps) to the USACE Project Manager and others on the Fort Ord project delivery team while field activities ongoing
Stop work due to safety	KEMRON	Chris Light	UXO Safety Officer informs the KEMRON Project Manager and Health and Safety Manager of critical safety issues and develops a report. The Ordnance and Explosives Safety Specialist (OESS) and USACE Fort Ord Project Manager are informed of the issue and receive the report. Anyone can stop work if they observe an unsafe act or unsafe condition.
MEC QAPP and work plan variances during project execution	Cedar Bend Consultants	Maggie Sheatzley	Technical Writer/Editor submits the MEC QAPP and work plan variance to the KEMRON Project Manager for review and approval within 72 hours of the required change being identified. The KEMRON Project Manager will submit the variance to the USACE Project Manager for review and approval. Signed variances will be provided to the Fort Ord BRAC Office, regulatory agencies, and interested stakeholders, regardless of whether the change is procedural or material.

Communication	Organization	Name	Procedure	
Drivers	Organization	Name	(Timing, Pathways, Documentation, etc.)	
Field Corrective Actions	KEMRON AECOM	Bruce McClain Alex Kostera	UXOQCS and QC Geophysicist (as applicable) prepare a Root-Cause Analysis (RCA), Corrective Action Request (CAR), and Corrective Action Plan (CAP). Forms are provided to the KEMRON Program QC Manager for review and approval. KEMRON Program QC Manager then provides forms to USACE Fort Ord Project Manager for review and approval.	
EM61MK2 data and anomaly selection	AECOM	Andy Gascho	Project Geophysicist reviews DGM data and anomalies generated by NAEVA and provides the data / target list to the USACE QA Geophysicist for review and approval.	
Blind seeding	KEMRON AECOM	Bruce McClain Alex Kostera	UXOQCS and QC Geophysicist communicate directly with USACE QA Geophysicist and USACE OESS regarding blind seeding information in accordance with the Blind Seed Firewall Plan (MEC QAPP - Attachment A).	
QC variances	KEMRON AECOM	Bruce McClain Alex Kostera	UXOQCS and QC Geophysicist prepare (as applicable) an RCA, CAR, and CAP. Forms are provided to USACE QA Geophysicist, USACE OESS and USACE Fort Ord Project Manager for review and approval.	
Data verification issues (e.g., incomplete records)	AECOM	Andy Gascho	Project Geophysicist prepares (as applicable) and RCA, CAR, and CAP. Forms are provided to USACE QA Geophysicist, USACE OESS, and USACE Fort Ord Project Manager for review and approval.	
DGM data review corrective actions	AECOM	Alex Kostera	QC Geophysicist prepares (as applicable) an RCA, CAR, and CAP. Forms are provided to USACE QA Geophysicist, USACE OESS, and USACE Fort Ord Project Manager for review and approval	

2.0 PROJECT QUALITY OBJECTIVES

Update to MEC QAPP Section 2.0 QAPP Worksheet #11.

2.2 Data Quality Objectives (QAPP Worksheet #11)

Data Quality Objectives (DQOs) have been developed based on the Conceptual Site Model for potential contact with MEC described in Section 2.1 of the MEC QAPP. The DQOs described in QAPP Worksheet #11 continue to apply for the Unit 5 remedial action.

The MEC remedial action is complete in the Impact Area MRA Units 1, 2, 3, 4, 5A, 6, 7, 9, 10, 11, 12, 14, 14A, 15, 18, 19, 21, 22, 23,25, 28, 32, 33, 34, Watkins Gate Burn Area, and Ranges 43-48 South. Remedial action remains in Impact Area MRA Units 5, 13, 17, 20, and 31. The MEC remedial action is complete in BLM Area B Units B, B-2A, B-3E, B-3E-NE, B-3W, and C. Remedial action remains in BLM Area B Unit A.

6.0 DATA MANAGEMENT AND DATA REVIEW

Update to MEC QAPP Section 6.0 QAPP Worksheets #31, 32, 33, & 37.

- 6.2 Assessments and Corrective Action (QAPP Worksheets #31, 32, &33) Worksheets #31, #32, and #33 remain applicable; however, it should be noted that the feature classes in the GIS enterprise geodatabase have been updated since the publication of the MEC QAPP. The BRAC GIS Manager maintains the current featured class list. The MMRP Database and all hosting software is now being hosted on the cloud servers by the BRAC GIS Manager. All backups and data validation are performed by the BRAC GIS Manager.
 - 6.6 Data Usability and Assessment (QAPP Worksheet #37)

This worksheet in the MEC QAPP documents procedure that will be used to perform the data usability assessment and involves a qualitative and quantitative evaluation of the collected data to determine if the project data are of the right type, quality, quantity to support the decisions that need to be made. QAPP Worksheet #37 continues to apply for the Unit 5 remedial action.

Personnel responsible for participating in the data usability assessment preparation or review:

Name	Position /Title	Organization	Role in Usability Assessment
Curtis Payton	Project Manager	USACE Project Team	Reviewer
James Britt	OESS	USACE Project Team	Reviewer
Kyle Lindsay	QA Geophysicist	USACE Project Team	Reviewer
Steve Crane	Project Manager	KEMRON	Preparation
Brad Olson	SUXOS	KEMRON	Preparation
Bruce McClain	UXOQCS	KEMRON	Preparation
Chris Light	UXOSO	KEMRON	Preparation
Maggie Sheatzley	Technical Writer/Editor	Cedar Bend	Preparation
Larry Carr	GIS Specialist	GES-AIS	Preparation
Penny Johnson	Site Specific Data Manager	NAEVA	Preparation
Andy Gascho	Project Geophysicist	AECOM	Preparation
Alex Kostera	QC Geophysicist	AECOM	Preparation

ATTACHMENT D POINTS OF CONTACT (UNIT 5 REMEDIAL ACTION)

Emergency Services / Agency	Point of Contact	Telephone Number			
Community Hospital of the Monterey Peninsula, Monterey, CA	Main number (24 Hours)	(831) 624-5311			
Salinas Valley Memorial Hospital	Main number (24 Hours)	(831) 757-4333			
Santa Clara Valley Medical Center (County Hospital), San Jose, CA	Main number (24 Hours)	(408) 885-5000			
Doctors on Duty on South Main St, Salinas	N/A	(831) 422-7777			
Cal-Star Air MedEvac / Reach Air (Emergency MedEvac)	Dispatch	(800) 252-5050			
Presidio of Monterey Fire Department	Deputy Chief David Wilcox	Emergency: 911 Station Numbers: (831) 242-7701; (831) 242-7702; (831) 242-7545			
Presidio of Monterey Police Department	Chief Chris Norlund	Emergency: 911 Non-Emergency Dispatch: 831-242-7851			
	Other Agencies				
Fort Ord BRAC Environmental Coordinator	William K. Collins	(831) 242-7920; (202) 815-0645 (cell)			
Fort Ord BRAC Biologist	Bart Kowalski (Chenega)	(831) 242-7918. (832) 595-5569 (cell)			
Fort Ord BRAC Community Relations Office	TBD (Chenega)	(831) 393-1284			
BLM - Fort Ord National Monument	Eric Morgan	(831) 206-2505 (cell)			
Federal Aviation Administration	Bill Fleischer	(831) 277-0377			
USACE OE Safety Specialist	James Britt	(831) 521-3720 (cell)			
USACE Fort Ord Program Manager	James Specht	(916) 557-6796			
USACE Fort Ord Project Manager	Curtis Payton	(831) 393-9692; (916) 267-1246 (cell)			
Travis Air Force Base EOD	Command Post 24 Hr	(707) 424-5517			
20th Chemical, Biological, Radiological, Nuclear and Explosives Command, Aberdeen Proving Ground, MD	Operations and Intelligence Center 24 Hr	(410) 306-4100			