Final Remedial Investigation/Feasibility Study Report
Former Camp Maxey, Paris, Texas
Appendix F

APPENDIX F: MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL MILITARY MUNITIONS RESPONSE PROGRAM REMEDIAL INVESTIGATION/FEASIBILITY STUDY

FORMER CAMP MAXEY
Paris, Texas

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is

available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary , briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.								
Con	Munitions Response Site Name: Western Range Area A Component: U.S. Army Installation/Property Name: Camp Maxey FUDS							
		State): <u>Paris, Lamar</u>						
		e (Project No.): Form		xev (K06	STX0305) PRDF/F	FRMD:		
Poir		ed/Updated: <u>Decemb</u> /Phone): <u>Layne Youn</u> nly one): RI/FS		<u>1806)</u>				
Ī	□PA	□ SI	✓ RI		✓ FS	□ RD		
	□ RA-C	□ RIP	□ RA-O		□RC	□ LTM		
		as created in coordination P will be included in a p				dditional project stakehold w.	lers. Prior	
Med	Media Evaluated (check all that apply):.							
	☐ Groundwater ☐ Sediment (human receptor)							
	☐ Surface soil			☐ Surfa	ace Water (ecological	receptor)		
	□Sediment (ecologi	cal receptor)		☐ Surfa	nce Water (human rec	eptor)		
MRS Summary: MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type:								

This MRS includes 1,310 acres located in the northwest portion of Camp Maxey. It is on private property primarily used for agriculture. There was no access granted to this area during the RI. Historical data indicated that it includes firing points and portions of artillery ranges fans for several ranges. Additional data is still needed to characterize the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for residents, trespassers, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; **Section 5.1.2)**

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability.	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

No munitions or evidence of munitions (MD) has been found in the MRS; however, very limited , if any, investigations have been conducted. (RI/FS Report [EOTI, 2014]; Table 4-1)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description		
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 		
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8	
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6	
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5	
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5	
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4	
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4	
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2	
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2	
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1	
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0	
SOURCE OF HAZARD	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10	

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms confirmed, surface, subsurface, small arms ammunition, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description		
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 		
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20	
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15	
Suspected (physical evidence)	 There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS. 	10	
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5	
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2	
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1	
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0	
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	0	

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

No UXO or evidence of munitions use (MD) has been found in the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description		
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10	
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8	
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5	
• There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.		0	
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10	

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

The MRs is located on privately owned property. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number

of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The MRS is used for agricultural purposes (pasture land) and surrounding property is part of the Pat Mayse WMA. Residential properties are located within 2 miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	
Ecological resources present	There are ecological resources present on the MRS.	
Cultural resources present	There are cultural resources present on the MRS.	
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value			
Explosive Hazard Factor Data Elements						
Munitions Type	Table 1	0	10			
Source of Hazard	Table 2	10	10			
Accessibility Factor Data Eler	ments					
Location of Munitions	Table 3	0				
Ease of Access	Table 4	10	15			
Status of Property	Table 5	5				
Receptor Factor Data Elemen	ts					
Population Density	Table 6	1				
Population Near Hazard	Table 7	5	44			
Types of Activities/Structures	Table 8	5	11			
Ecological and/or Cultural Resources	Table 9	0				
EI	HE MODULI	MODULE TOTAL 36				
EHE Module Total	EHE	Module R	ating			
92 to 100		Α				
82 to 91		В				
71 to 81		С				
60 to 70		D				
48 to 59		E				
38 to 47		F				
less than 38		G				
	Eva	Evaluation Pending				
Alternative Module Ratings	No	No Longer Required				
		No Known or Suspected Explosive Hazard				
EHE MODULE RATIN		G				

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elemer	nts		
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		O
Accessibility Factor Data Elemen	nts		
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19	-	
СНЕ	MODULE	TOTAL	0
CHE Module Total	CHE	Module R	ating
92 to 100		Α	
82 to 91		В	
71 to 81		С	
60 to 70		D	
48 to 59		E	
38 to 47		F	
less than 38		G	
	Evaluation Pendin		ding
Alternative Module Ratings	No I	₋onger Requ	uired
	cted CWM		
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
	Groundwater samples w	vere not collected.		
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl	
	` '		iriniant _j	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw	vav Factor		
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.	
Classification	Description			
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.			
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely to	actor o the groundwater receptors at the MRS.		
Classification	Des	cription	Value	
Identified		dient of the source and the groundwater is a current	Н	
Potential	There is no threatened water supply well downgr or potentially usable for drinking water, irrigation, aquifer).	adient of the source and the groundwater is currently or agriculture (equivalent to Class I, IIA, or IIB	М	
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).			
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios		
	Surface water samples w	vere not collected.			
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]		
2 > CHF	L (Low)	[Comparison Value for Conta	minantl		
CONTAMINANT	DIRECTIONS: Record the CHF Value	- '	minantj		
HAZARD FACTOR	(maximum value = H).				
	· ·	the surface water migratory pathway at the			
Classification		ription	Value		
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н		
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).				
DIRECTIONS: Circle t	Receptor Face with the value that corresponds most closely to	actor the surface water receptors at the MRS.			
Classification	Desc	ription	Value		
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface move.	water to which contamination has moved or can	М		
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard			

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

with number endpoints present in the sediment, select the box at the bottom of the table.					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment Samples we	ere not collected			
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	ontaminant1			
100 > CHF > 2	M (Medium) CHF = [Maximum Concentration of Concentration				
2 > CHF	L (Low)	. ,	iiiiiaiiij		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right			
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined		Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to				
Classification		cription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedime	nt to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.				
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard			

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)					
	Surface water samples	were not collected.				
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl			
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{index}} \) [Maximum Concentration of	· ·			
2 > CHF	L (Low)	[Comparison Value for Conta	iminant]			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.						
Classification		Description				
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.					
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contami to a potential point of exposure (possibly due to controls).	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).				
DIRECTIONS: Circle to	Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.					
Classification	Des	cription	Value			
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н			
Potential	move.	water to which contamination has moved or can	М			
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).				
	No Known or Suspected Surfa	ce Water (Ecological Endpoint) MC Hazard				

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

. With ec	ological eliupolitis present in the sedim	ent, select the box at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment samples w	ere not collected.			
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High) M (Medium) CHF = [Maximum Concentration of Con				
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{indicated}} \sum_{\text{order}} \sum_{o	······································		
2 > CHF	L (Low)	[Comparison Value for Contai	minantj		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined		inant migration from the source via the sediment to a presence of geological structures or physical controls).	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).				
DIRECTIONS: Circle the	Receptor he value that corresponds most closely				
Classification	De	scription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	ss to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).			
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard			

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

nazard present in the surface soil, select the box at the bottom of the table.					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio		
	es were collected from the MRS. All analyti ormer Camp Maxey. There is no human he	cal data detected below levels of concern in other a alth or ecological risk associated with MC.	reas of the		
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ntaminant]		
2 > CHF	L (Low)	[Comparison Value for Contar	minant]		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in surface soil has moved only s move but is not moving appreciably, or informa or Confined.	М			
Confined	Information indicates a low potential for contam a potential point of exposure (possibly due to the controls).	L			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value	ghest value from above in the box to the e = H).			
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.			
Classification		scription	Value		
Identified	Identified receptors have access to surface soi	I to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the e = H).			
No Known or Suspected Surface Soil MC Hazard					

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)	-1			1	
Surface Water/Human Endpoint (Table 22)	1			1	
Sediment/Human Endpoint (Table 23)		_			
Surface Water/Ecological Endpoint (Table 24)	1	1	-	-	
Sediment/Ecological Endpoint (Table 25)	1		-	-	
Surface Soil (Table 26)	-				

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only) Combination Rating HHH Α HHM В HHL С HMM **HML** D MMM HLL E MML MLL F LLL G **Evaluation Pending** No Longer Required Alternative Module Ratings No Known or Suspected MC Hazard

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS Rating at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
		Α	1			
Α	2	В	2	A 2		
В	3	С	3	В	3	
С	4	D	4	C	4	
D	5	E	5	D	5	
E	6	F	6	E	6	
F	7	G	7	F	7	
G	8			G	8	
Evaluation	Pending	Evaluation	Pending	Evaluation Pending		
No Longer	Required	No Longer	Required	No Longer Required		
No Known or Suspected Explosive Hazard No Known or Suspected CWM Hazard				No Known or Suspected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING				;	В	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene)

	found at map of th		tentially exp	osed hun	nan and ecolo	gical rec	eptors. If possible, inc	clude a
Cor Inst Loc	nponent: <u>U.S. Army</u> allation/Property Na ation (City, County,	te Name: Western R Ime: Camp Maxey FL State): Paris, Lamar e (Project No.): Form	JDS County, TX		STX0305)	PRDF/F	RMD:	
Date	e Information Entere	ed/Updated: Decemb	er 2013					
Poi	nt of Contact (Name	/ Phone) : <u>Layne Youn</u>	ig (410.332.4	4806)				
Pro	ject Phase (check o	nly one): RI/FS						-
	□ PA	□ SI	✓ RI		✓ FS		□ RD	
	□ RA-C	□ RIP	□ RA-O		□ RC		□ LTM	
		as created in coordination P will be included in a p					dditional project stakehol w.	ders. Prior
Med	dia Evaluated (check	call that apply):.						
	☐ Groundwater			☐ Sedi	ment (human	receptor)	
	☐ Surface soil			☐ Surfa	ace Water (ec	ological r	receptor)	1
	□Sediment (ecologi	cal receptor)		☐ Surfa	ace Water (hu	ıman rece	eptor)	
MRS the This	UXO, DMM, or MC kr s MRS includes 2,166 ge fans. It is located p	nown or suspected to acres located in the virimarily within a wildli	be present. western port fe managem	When position of Casternt area	ossible, identi mp Maxey an that is Goveri	fy munition Include nment ov	n, the dates of operations, CWM, and MC by ed portions of several avned but accessed by	type: artillery the
	public for surface recreational activities, such as hiking and hunting. It is a noncontiguous area located east Western Range Area A and along the north and east side of the lake within the West Range Area. No MEC was identified during							

Description of Pathways for Human and Ecological Receptors:

was on the edge of the main impact/target area. (RI/FS Report [EOTI, 2014]; Table 4-1)

Potentially complete pathways exist for recreational users, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; Section 5.1.2)

the RI or during previous investigations. The MRS primarily includes area with low MD density. This may indicate that it

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

Suspected munitions include 75mm, 90mm, and 105mm projectiles. (RI/FS Report [EOTI, 2014]; Table 4-1)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	 There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS. 	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 25).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

MD associated with 75mm, 90mm, and 105mm projectiles have been found at the MRS. (RI/FS Report [EOTI, 2014]; Section 1.5)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **Status of Property** classification in the space provided.

The MRS is located on property owned by the USACE and managed by the State at Pat Mayse WMA. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html).

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses. 	4
Agricultural, forestry	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry. 	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The MRS is part of the Pat Mayse WMA used for hunting and other recreational activities. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
Explosive Hazard Factor Data Elements				
Munitions Type	Table 1	25	35	
Source of Hazard	Table 2	10	33	
Accessibility Factor Data Elemen	nts			
Location of Munitions	Table 3	10		
Ease of Access	Table 4	10	20	
Status of Property	Table 5	0		
Receptor Factor Data Elements				
Population Density	Table 6	1		
Population Near Hazard	Table 7	5	44	
Types of Activities/Structures	Table 8	5	11	
Ecological and/or Cultural Resources	Table 9	0		
EHE	MODULE	E TOTAL	66	
EHE Module Total	EHE	Module R	ating	
92 to 100		Α		
82 to 91	В			
71 to 81	С			
60 to 70	_	D		
48 to 59		E		
38 to 47	F			
less than 38	G			
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
	No Known or Suspected Explosive Hazard			
EHE MODULE RATING		D		

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elemer	nts		
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		O
Accessibility Factor Data Elemen	nts		
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19	-	
СНЕ	MODULE	TOTAL	0
CHE Module Total	CHE	Module R	ating
92 to 100		Α	
82 to 91		В	
71 to 81		С	
60 to 70		D	
48 to 59		E	
38 to 47		F	
less than 38		G	
	Eva	lluation Pen	ding
Alternative Module Ratings	No I	₋onger Requ	uired
	No Know	n or Suspec Hazard	cted CWM
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios			
	Groundwater samples w	vere not collected.				
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]			
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl			
	` '		iriniant,			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right				
Migratory Pathway Factor						
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.			
Classification	Description					
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.					
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).				
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely to	actor o the groundwater receptors at the MRS.				
Classification	Des	cription	Value			
Identified		dient of the source and the groundwater is a current	Н			
Potential	There is no threatened water supply well downgr or potentially usable for drinking water, irrigation, aquifer).	adient of the source and the groundwater is currently or agriculture (equivalent to Class I, IIA, or IIB	М			
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).					
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).				
	No Kno	wn or Suspected Groundwater MC Hazard				

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios			
	Surface water samples w	vere not collected.				
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]			
2 > CHF	L (Low)	[Comparison Value for Conta	minantl			
CONTAMINANT	DIRECTIONS: Record the CHF Value	- '	minantj			
HAZARD FACTOR	(maximum value = H).					
	Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.					
Classification		ription	Value			
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н			
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contamina a potential point of exposure (possibly due to the controls).	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =					
DIRECTIONS: Circle t	Receptor Face with the value that corresponds most closely to	actor the surface water receptors at the MRS.				
Classification	Desc	ription	Value			
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface move.	water to which contamination has moved or can	М			
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)					
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard				

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

With Hu	man endpoints present in the sediment, .	select the box at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment Samples we	ere not collected			
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	ontaminant]			
100 > CHF > 2	M (Medium)	minantl			
2 > CHF	L (Low)	[Comparison Value for Conta	iiiiiaiiij		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right			
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification		cription	Value		
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н		
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to				
Classification		cription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedime	nt to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard			

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)				
	Surface water samples	were not collected.			
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl		
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{index}} \) [Maximum Concentration of	· ·		
2 > CHF	L (Low)	[Comparison Value for Conta	iminant]		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right			
		o the surface water migratory pathway at the			
Classification		cription	Value		
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).			
DIRECTIONS: Circle to	Receptor F he value that corresponds most closely t	actor o the surface water receptors at the MRS.			
Classification	Des	cription	Value		
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н		
Potential	move.	water to which contamination has moved or can	М		
Limited	Little or no potential for receptors to have access or can move.	s to surface water to which contamination has moved	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).			
	No Known or Suspected Surfa	ce Water (Ecological Endpoint) MC Hazard			

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's sediment and their comparison

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

. With ec	ological eliupolitis present in the sedim	ent, select the box at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment samples w	ere not collected.			
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	ntaminantl			
100 > CHF > 2	H (High) M (Medium) CHF = [Maximum Concentration of Co				
2 > CHF	L (Low)	[Comparison Value for Contai	minantj		
CONTAMINANT HAZARD FACTOR	<u> </u>				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in sediment has moved only slig but is not moving appreciably, or information is Confined.	htly beyond the source (i.e., tens of feet), could move not sufficient to make a determination of Evident or	М		
Confined		inant migration from the source via the sediment to a presence of geological structures or physical controls).	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	ghest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor he value that corresponds most closely				
Classification	De	scription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	ss to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).			
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard			

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

. IIazaiu	present in the surface soil, select the b	ox at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio		
	es were collected from the MRS. All analyti ormer Camp Maxey. There is no human he	cal data detected below levels of concern in other a alth or ecological risk associated with MC.	reas of the		
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ntaminant]		
2 > CHF	L (Low)	[Comparison Value for Contar	minant]		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value	ghest value from above in the box to the e = H).			
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.			
Classification		scription	Value		
Identified	Identified receptors have access to surface soi	I to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the e = H).			
	No K	nown or Suspected Surface Soil MC Hazard			

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)	-1			1	
Surface Water/Human Endpoint (Table 22)	1			1	
Sediment/Human Endpoint (Table 23)		_			
Surface Water/Ecological Endpoint (Table 24)	1	1	-	-	
Sediment/Ecological Endpoint (Table 25)	1		-	-	
Surface Soil (Table 26)	-				

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only) Combination Rating HHH Α HHM В HHL С HMM **HML** D MMM HLL E MML MLL F LLL G **Evaluation Pending** No Longer Required Alternative Module Ratings No Known or Suspected MC Hazard

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS Rating at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority		
		Α	1				
Α	2	В	2	A 2			
В	3	С	3	В	3		
С	4	D	4	C	4		
D	5	E	5	D	5		
E	6	F	6	E	6		
F	7	G	7	F	7		
G	8			G	8		
Evaluation	Pending	Evaluation	Pending	Evaluation Pending			
No Longer	Required	No Longer	Required	No Longer Required			
No Known or Susp Haza		No Known or Su Haza	-	No Known or Suspected MC Hazard			
MRS PRIORITY or ALTERNATIVE MRS RATING					5		

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary, briefly describe the UXO,

	DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.							
Con Inst Loc	Munitions Response Site Name: Western Range Area C Component: U.S. Army Installation/Property Name: Camp Maxey FUDS Location (City, County, State): Paris, Lamar County, TX Site Name/Project Name (Project No.): Former Camp Maxey (K06TX0305) PRDF/FRMD:							
Date	Information Entere	ed/Updated: Decemb	er 2013					
Poir	nt of Contact (Name	/ Phone) : <u>Layne Youn</u>	ng (410.332.4	<u>4806)</u>				
Proj	ject Phase (check oi	nly one): RI/FS						
	□ PA	□ SI	✓ RI		✓ FS		□ RD	
·	□ RA-C	□ RIP	□ RA-O		□ RC		□ LTM	
		as created in coordination P will be included in a p					dditional project stakeholo v.	lers. Prior
Med	dia Evaluated (check	call that apply):.						
	☐ Groundwater			☐ Sedir	ment (humar	n receptor))	
Ī	✓ Surface soil			□ Surface Water (ecological receptor)				
	□Sediment (ecologi	cal receptor)		☐ Surfa	ice Water (hi	uman rece	eptor)]
This cons loca active and	MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type: This MRS includes 1,104 acres located in the North-Central and South-Central sections of the Western Range Area and consists of firing point and portions of artillery range fans located immediately adjacent to the central impact area. It is located within a wildlife management area that is Government owned but accessed by the public for recreational activities, such as hiking, camping, and hunting. No MEC was located in this MRS, however there are areas with medium and high MD densities that is consistent with potential target areas within impact areas. (RI/FS Report [EOTI, 2014]; Table 4-1)							

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for recreational used, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

Suspected munitions include but are not limited to 75mm projectiles and rifle grenades. (RI/FS Report [EOTI, 2014]; Table 3-2)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	 The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system). 	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Section 1.4)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms confirmed, surface, subsurface, small arms ammunition, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	 There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS. 	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

MD associated with 75mm projectiles and rifle grenades have been found at the MRS. (RI/FS Report [EOTI, 2014]; Table 3-2)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	 There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

The MRS is located on property owned by the USACE and managed by the State at Pat Mayse WMA. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	 There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located. 	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	 There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located. 	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term inhabited structures is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	 There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	2
1 to 5 inhabited structures	 There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the Population Near Hazard classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the Types of Activities/Structures classifications in the space provided.

The MRS is part of the Pat Mayse WMA used for hunting and other recreational activities. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- 1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
Explosive Hazard Factor Data Elements				
Munitions Type	Table 1	25	35	
Source of Hazard	Table 2	10	33	
Accessibility Factor Data Elemen	nts			
Location of Munitions	Table 3	10		
Ease of Access	Table 4	10	20	
Status of Property	Table 5	0		
Receptor Factor Data Elements				
Population Density	Table 6	1		
Population Near Hazard	Table 7	5	44	
Types of Activities/Structures	Table 8	5	11	
Ecological and/or Cultural Resources	Table 9	0		
EHE	MODULE	TOTAL	66	
EHE Module Total	EHE	Module R	ating	
92 to 100	А			
82 to 91	В			
71 to 81	С			
60 to 70	D			
48 to 59	E			
38 to 47	F			
less than 38	G			
	Evaluation Pending		ding	
Alternative Module Ratings	No Longer Required			
	No Known or Suspected Explosive Hazard			
EHE MODULE RATING		D		

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *CWM Configuration* classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
CWM Hazard Factor Data Elements				
CWM Configuration	Table 11	0	0	
Sources of CWM	Table 12		O	
Accessibility Factor Data Elemen	nts			
Location of CWM	Table 13			
Ease of Access	Table 14			
Status of Property	Table 15			
Receptor Factor Data Elements				
Population Density	Table 16			
Population Near Hazard	Table 17			
Types of Activities/Structures	Table 18			
Ecological and/or Cultural Resources	Table 19	-		
СНЕ	MODULE	TOTAL	0	
CHE Module Total	CHE Module Rating		ating	
92 to 100		Α		
82 to 91	В			
71 to 81		С		
60 to 70	D			
48 to 59	E			
38 to 47	F			
less than 38	G			
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
	No Known or Suspected CWM Hazard		cted CWM	
CHE MODULE RATING	ATING No Known or Suspected CWM Hazard		cted CWM	

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
	Groundwater samples w	vere not collected.		
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl	
	` '		iriniant,	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw	vav Factor		
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.	
Classification	Description			
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.			
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely to	actor o the groundwater receptors at the MRS.		
Classification	Des	cription	Value	
Identified		dient of the source and the groundwater is a current	Н	
Potential	There is no threatened water supply well downgr or potentially usable for drinking water, irrigation, aquifer).	adient of the source and the groundwater is currently or agriculture (equivalent to Class I, IIA, or IIB	М	
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).			
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios			
	Surface water samples w	vere not collected.				
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]			
2 > CHF	L (Low)	[Comparison Value for Conta	minantl			
CONTAMINANT	DIRECTIONS: Record the CHF Value	- '	minantj			
HAZARD FACTOR	(maximum value = H).					
	Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.					
Classification		ription	Value			
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н			
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contamina a potential point of exposure (possibly due to the controls).	ant migration from the source via the surface water to presence of geological structures or physical	L			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =					
DIRECTIONS: Circle t	Receptor Face with the value that corresponds most closely to	actor the surface water receptors at the MRS.				
Classification	Desc	ription	Value			
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface move.	water to which contamination has moved or can	М			
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)					
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard				

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

With Hu	man endpoints present in the sediment, .	select the box at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment Samples we	ere not collected			
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant1		
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minantl		
2 > CHF	L (Low)	. ,	iiiiiaiiij		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right			
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.			
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to				
Classification		cription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedime	nt to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.				
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard			

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)				
	Surface water samples	were not collected.			
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl		
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{index}} \) [Maximum Concentration of	· ·		
2 > CHF	L (Low)	[Comparison Value for Conta	iminant]		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right			
		o the surface water migratory pathway at the	MRS.		
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).			
DIRECTIONS: Circle to	Receptor F he value that corresponds most closely t	actor o the surface water receptors at the MRS.			
Classification	Des	cription	Value		
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н		
Potential	move.	water to which contamination has moved or can	М		
Limited	Little or no potential for receptors to have access or can move.	Little or no potential for receptors to have access to surface water to which contamination has moved			
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).			
	No Known or Suspected Surfa	ce Water (Ecological Endpoint) MC Hazard			

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

. With ec	ological eliupolitis present in the sedim	ent, select the box at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment samples w	ere not collected.			
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High) [Maximum Concentration of Co				
100 > CHF > 2	M (Medium)	CHF = \(\sum_{[Maximum Concentration of Content	······································		
2 > CHF	L (Low)	[Comparison Value for Contai	minantj		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification	Description				
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in sediment has moved only slig but is not moving appreciably, or information is Confined.	htly beyond the source (i.e., tens of feet), could move not sufficient to make a determination of Evident or	М		
Confined		inant migration from the source via the sediment to a presence of geological structures or physical controls).	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	ghest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor he value that corresponds most closely				
Classification	De	scription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	ss to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).			
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard			

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

	,				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio		
All analytical data detect	ed below levels of concern at this MRS and health or ecological risk	d in other areas of the Former Camp Maxey. There associated with MC.	is no human		
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	ntaminant1			
100 > CHF > 2 2 > CHF	M (Medium) CHF = [Maximum Concentration of Co [Comparison Value for Contar				
	L (Low)	• •	milant		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS. Classification Description Value					
Classification	Description Analytical data or observable evidence indicates that contamination in the surface soil is present at,				
Evident	moving toward, or has moved to a point of exp	Н			
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hi right (maximum value	ghest value from above in the box to the e = H).			
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.			
Classification	De	scription	Value		
Identified	Identified receptors have access to surface soil	I to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single hi right (maximum value	ghest value from above in the box to the e = H).			
	No K	nown or Suspected Surface Soil MC Hazard	✓		

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)				1	
Surface Water/Human Endpoint (Table 22)			-	1	
Sediment/Human Endpoint (Table 23)		-	Į	1	
Surface Water/Ecological Endpoint (Table 24)			1	ı	
Sediment/Ecological Endpoint (Table 25)			1	1	
Surface Soil (Table 26)	-				No Known or Suspected MC Hazard

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for referer	ice only)
Combination	Rating
ННН	Α
ННМ	В
HHL	
НММ	С
HML	
MMM	D
HLL	_
MML	E
MLL	F
LLL	G
	Evaluation Pending
Alternative Module Ratings	No Longer Required
	No Known or Suspected MC Hazard

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS **Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
		Α	1			
Α	2	В	2	Α	2	
В	3	С	3	В	3	
С	4	D	4	С	4	
D	5	E	5	D	5	
E	6	F	6	E	6	
F	7	G	7	F	7	
G	8			G	8	
Evaluation	Pending	Evaluation	Pending	Evaluation Pending		
No Longer	Required	No Longer Required		No Longer Required		
No Known or Susp Haza		No Known or Su Haza		No Known or Suspected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING					5	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is

	FUDS pr DMM, or environm	operty information sho MC that are known onent), any other incide the MRS, and any po	ould be subst r suspected t ental nonmuni	ituted. I o be pre tions-rel	n the MRS S sent, the exp ated contami	ummary osure se nants (e.	JDS property, the suita , briefly describe the U tting (the MRS's physic g., benzene, trichloroe eptors. If possible, inc	XO, cal thylene)
Con	nponent: <u>U.S. Army</u>	te Name: Western R	-					
		ime: Camp Maxey FU						
		State): Paris, Lamar		······ (ICOG	TV0205)		DMD.	
Site	Name/Project Name	e (Project No.): Form	ier Camp ivia	xey (Kuc	1 XU3U5)	PRDF/F	·RMD:	
Poir	Date Information Entered/Updated: December 2013 Point of Contact (Name/Phone): Layne Young (410.332.4806) Project Phase (check only one): RI/FS							
·	□PA	□ SI	✓ RI		√ FS		□RD	
İ	□ RA-C	□RIP	□ RA-O		□ RC		□ LTM	
Note to be	: This Draft MRSPP wa	as created in coordination P will be included in a p	on with the U.S ublic notice an	. Army C	orps of Engine available for pu	ers and adultion	dditional project stakeholo w.	ders. Prior
Med	lia Evaluated (check	all that apply):.						
	☐ Groundwater			☐ Sedir	ment (human	receptor)	
	✓ Surface soil			☐ Surfa	ice Water (ed	cological	receptor)	
	□Sediment (ecologi	cal receptor)		☐ Surfa	ice Water (hu	ıman rec	eptor)	
_								-
MRS	•						n, the dates of operatio	•

This MRS includes 1,870 acres located in what is believed to be the central impact area for the west ranges. It is located within a wildlife management area that is Government owned but accessed by the public for recreational activities, such as hiking, camping, and hunting. RI results include UXO located on or just below the ground surface and several areas with high or medium MD density. (RI/FS Report [EOTI, 2014]; Table 4-1)

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for recreational users, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; **Section 5.1.2)**

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

16 UXO were found at the MRS during the RI to include 76mm APHE, 2,36-inch rockets, 155mm HE, and a 105mm smoke canister. (RI/FS Report [EOTI, 2014]; Table 3-2)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	
Former range	The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones.	
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	
Former firing points	 The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range. 	
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present. 	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	
Suspected (physical evidence)	There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 25).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

UXO were found on the ground surface and in the subsurface during the RI. (RI/FS Report [EOTI, 2014]; Table 3-2)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

The MRS is located on property owned by the USACE and managed by the State at Pat Mayse WMA. No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the **Population Near Hazard** classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	
Residential, educational, commercial, or subsistence		
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The MRS is part of the Pat Mayse WMA used for hunting and other recreational activities. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- 1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data El	ements		
Munitions Type	Table 1	25	35
Source of Hazard	Table 2	10	30
Accessibility Factor Data Elemen	nts		
Location of Munitions	Table 3	25	
Ease of Access	Table 4	10	35
Status of Property	Table 5	0	
Receptor Factor Data Elements			
Population Density	Table 6	1	
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	11
Ecological and/or Cultural Resources	Table 9	0	
EHE	MODULE	E TOTAL	81
EHE Module Total	EHE Module Rating		ating
92 to 100		Α	
82 to 91		В	
71 to 81	_	С	
60 to 70		D	
48 to 59		E	
38 to 47		F	
less than 38		G	
	Eva	luation Pend	ding
Alternative Module Ratings	No I	_onger Requ	uired
		nown or Susp plosive Haza	
EHE MODULE RATING		С	

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20
Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
CWM Hazard Factor Data Elemer	nts			
CWM Configuration	Table 11	0	0	
Sources of CWM	Table 12		O	
Accessibility Factor Data Elemen	nts			
Location of CWM	Table 13			
Ease of Access	Table 14			
Status of Property	Table 15			
Receptor Factor Data Elements				
Population Density	Table 16			
Population Near Hazard	Table 17			
Types of Activities/Structures	Table 18			
Ecological and/or Cultural Resources	Table 19	1		
CHE MODULE TOTAL				
CHE Module Total	CHE Module Rating			
92 to 100		Α		
82 to 91		В		
71 to 81		С		
60 to 70		D		
48 to 59		Е		
38 to 47		F		
less than 38		G		
	Eva	lluation Pen	ding	
Alternative Module Ratings	No Longer Required		uired	
	No Known or Suspected CW Hazard			
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM	

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios				
	Groundwater samples w	vere not collected.					
CHF Scale	CHF Value	Sum The Ratios					
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]				
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl				
	` '		iriniant,				
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).						
Migratory Pathway Factor							
DIRECTIONS: Circle th	DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.						
Classification	Classification Description						
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.						
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.						
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).						
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).					
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely to	actor o the groundwater receptors at the MRS.					
Classification	Des	cription	Value				
Identified		dient of the source and the groundwater is a current	Н				
Potential	There is no threatened water supply well downgr or potentially usable for drinking water, irrigation, aquifer).	adient of the source and the groundwater is currently or agriculture (equivalent to Class I, IIA, or IIB	М				
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).						
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).					
	No Kno	wn or Suspected Groundwater MC Hazard					

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios			
	Surface water samples w	vere not collected.				
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ontaminant]			
2 > CHF	L (Low)	[Comparison Value for Conta	minant1			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	•	,			
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS. Classification Description Value						
Classification		hat contamination in the surface water is present at,	Value			
Evident	moving toward, or has moved to a point of exposu	re.	Н			
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined		Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =					
DIRECTIONS: Circle t	Receptor Fa he value that corresponds most closely to	actor the surface water receptors at the MRS.				
Classification	Desc	ription	Value			
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.					
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)					
No Known or Suspected Surface Water (Human Endpoint) MC Hazard						

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

	man endpoints present in the sediment, s				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment Samples we	ere not collected			
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	ontaminant]			
100 > CHF > 2	M (Medium) L (Low) [Maximum Concentration of Concentrat				
2 > CHF	L (Low)		тппапц		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right			
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification		cription	Value		
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).			
DIRECTIONS: Circle th	Receptor Former value that corresponds most closely to				
Classification		cription	Value		
Identified	Identified receptors have access to sediment to v	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sediment	nt to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.				
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum val		_		
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard			

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)						
	Surface water samples v	vere not collected.					
CHF Scale	CHF Value	Sum the Ratios					
CHF > 100	H (High)	CHF = [Maximum Concentration of Concentr	ontaminantl				
100 > CHF > 2	M (Medium)	· "					
2 > CHF	L (Low)	[Comparison Value for Conta	minantj				
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right					
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.							
Classification		cription	Value				
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.						
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.						
Confined	Information indicates a low potential for contamir to a potential point of exposure (possibly due to t controls).	nant migration from the source via the surface water the presence of geological structures or physical	L				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).					
DIRECTIONS: Circle th	Receptor Former value that corresponds most closely to	actor the surface water receptors at the MRS.					
Classification	Des	cription	Value				
Identified	Identified receptors have access to surface water	r to which contamination has moved or can move.	Н				
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.						
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.						
RECEPTOR FACTOR		DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).					
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard							

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios				
Sediment samples were not collected.							
CHF Scale	CHF Value	Sum the Ratios					
CHF > 100 100 > CHF > 2	H (High)	CHF = [Maximum Concentration of Co	ontaminant]				
2 > CHF	M (Medium) L (Low)	minant]					
CONTAMINANT HAZARD FACTOR		DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).					
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.							
Classification Description							
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.						
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.						
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).						
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).					
DIRECTIONS: Circle to	Receptor he value that corresponds most closely						
Classification		scription	Value				
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н				
Potential	Potential for receptors to have access to sedime	ent to which contamination has moved or can move.	М				
Limited	Little or no potential for receptors to have access can move.	s to sediment to which contamination has moved or	L				
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).					
No Known or Suspected Sediment (Ecological Endpoint) MC Hazard							

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio				
All analytical data detect	ted below levels of concern at this MRS and health or ecological risk	d in other areas of the Former Camp Maxey. There associated with MC.	is no human				
CHF Scale	CHF Value Sum the Ratios						
CHF > 100	H (High)						
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Co	oritariii aritj				
2 > CHF	L (Low)	[Comparison Value for Conta	minantj				
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)						
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.							
Classification		escription	Value				
Evident	Analytical data or observable evidence indicate moving toward, or has moved to a point of exp	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.					
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.						
Confined		ninant migration from the source via the surface soil to he presence of geological structures or physical	L				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the e = H).					
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.					
Classification	De	scription	Value				
Identified	Identified receptors have access to surface soi	I to which contamination has moved or can move.	Н				
Potential		ce soil to which contamination has moved or can move.	М				
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L				
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the e = H).					
	No K	nown or Suspected Surface Soil MC Hazard	✓				

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)				1	
Surface Water/Human Endpoint (Table 22)			-	1	
Sediment/Human Endpoint (Table 23)		-	Į	1	
Surface Water/Ecological Endpoint (Table 24)			1	ı	
Sediment/Ecological Endpoint (Table 25)			1	1	
Surface Soil (Table 26)	-				No Known or Suspected MC Hazard

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only)					
Combination	Rating				
ННН	Α				
ННМ	В				
HHL					
НММ	С				
HML					
MMM	D				
HLL	_				
MML	E				
MLL	F				
LLL	G				
	Evaluation Pending				
Alternative Module Ratings	No Longer Required				
	No Known or Suspected MC Hazard				

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS **Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
		Α	1			
Α	2	В	2	A 2		
В	3	С	3	В	3	
С	4	D	4	С	4	
D	5	E	5	D	5	
E	6	F	6	E	6	
F	7	G	7	F	7	
G	8			G	8	
Evaluation	Pending	Evaluation	Pending	Evaluatio	ı Pending	
No Longer	No Longer Required		No Longer Required		r Required	
No Known or Susp Haza		No Known or Su Haza	-	No Known or Suspected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING				(3	

Table A

MRS Background Information

DIR	ECTIONS:	Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary , briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.								
	nitions Res nponent: <u>U</u>	ponse Site Nam .S. Army	e: Western R	ange Area E	_					
Inst	tallation/Pro	operty Name: <u>Ca</u>	amp Maxey FL	<u>JDS</u>						
Loc	ation (City	County, State):	Paris, Lamar	County, TX						
Site	Name/Pro	ject Name (Proj	ect No.): Form	ner Camp Ma	exey (K06	TX0305)	PRDF/F	RMD:		
Poi	nt of Conta	on Entered/Upd ct (Name/Phone (check only one	e): <u>Layne Your</u>		<u>4806)</u>					
	□ PA	□ SI		✓ RI		✓ FS		□ RD		
	□ RA-C	□ RIF		□ RA-O		□ RC		□ LTM		
to b	eing finalized	MRSPP was creat the MRSPP will be ed (check all tha	e included in a p						stakehold	ers. Prior
	☐ Ground	water			☐ Sedir	ment (human	receptor)		
	□ Surface	soil			☐ Surface Water (ecological receptor)					
	□Sedimer	nt (ecological rec	eptor)		☐ Surface Water (human receptor)					
MRithe This was 201	UXO, DMM MRS inclustrates not provides 4]; Table 4- ceription of F	n: Describe the , or MC known or des 133 acres of ed to this area du	r suspected to private, undev ring the RI. Ad nan and Ecolo	be present. veloped prop lditional data gical Recept	When po erty in the is require ors:	essible, ident e southern po ed for site ch	ify munition ortion of the aracteriza	ons, CWM, an ne West Rang ition. (RI/FS F	nd MC by t ge Area. A Report [EC	type: Access DTI,
		ace and subsurfa								

Report [EOTI, 2014]; Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

While no UXO has been found at this MRS, it is located within the boundaries of numerous HE ranges and munitions debris has been found. (RI/FS Report [EOTI, 2014]; Section 1.5

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Section 1.5)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms confirmed, surface, subsurface, small arms ammunition, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

While no UXO has been found at this MRS, it is located within the boundaries of numerous HE ranges and munitions debris has been found. (RI/FS Report [EOTI, 2014]; Section 1.5)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	 There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	 The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year. 	0
STATUS OF PROPERTY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the **Status of Property** classification in the space provided.

The MRS is located on privately owned property. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	 There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the **Population Near Hazard** classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses. 	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing. 	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The MRS is mostly undeveloped forest land; however, surrounding property is part of the Pat Mayse WMA. Residential properties are located within 2 miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
Explosive Hazard Factor Data Elements				
Munitions Type	Table 1	25	25	
Source of Hazard	Table 2	10 35		
Accessibility Factor Data Elemen	nts			
Location of Munitions	Table 3	10		
Ease of Access	Table 4	10	25	
Status of Property	Table 5	5		
Receptor Factor Data Elements				
Population Density	Table 6	1		
Population Near Hazard	Table 7	5	44	
Types of Activities/Structures	Table 8	5	11	
Ecological and/or Cultural Resources	Table 9	0		
EHE MODULE TO		E TOTAL	71	
EHE Module Total	EHE	Module R	ating	
92 to 100		Α		
82 to 91		В		
71 to 81 C				
60 to 70		D		
48 to 59	E			
38 to 47 F				
less than 38		G		
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
	No Known or Suspected Explosive Hazard			
EHE MODULE RATING		С		

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value		
CWM Hazard Factor Data Elements					
CWM Configuration	Table 11	0	0		
Sources of CWM	Table 12				
Accessibility Factor Data Elements					
Location of CWM	Table 13				
Ease of Access	Table 14				
Status of Property	Table 15				
Receptor Factor Data Elements					
Population Density	Table 16				
Population Near Hazard	Table 17				
Types of Activities/Structures	Table 18				
Ecological and/or Cultural Resources	Table 19	-			
CHE MODULE TOTAL 0					
CHE Module Total	CHE Module Rating				
92 to 100	A				
82 to 91	В				
71 to 81	С				
60 to 70	D				
48 to 59	E				
38 to 47	F				
less than 38	G				
	Eva	Evaluation Pendi			
Alternative Module Ratings	No Longer Required				
	No Known or Suspected CWM Hazard				
CHE MODULE RATING	No Known or Suspected CWM Hazard				

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios		
Groundwater samples were not collected.					
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]		
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Contaminant			
	` ,				
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right			
Migratory Pathway Factor					
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.		
Classification	Des	cription	Value		
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos	evidence indicates that contamination in the groundwater is present at,			
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).				
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.					
Classification	Description		Value		
Identified		dient of the source and the groundwater is a current	Н		
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).				
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).				
RECEPTOR FACTOR	DIRECTIONS: Record the single high	hest value from above in the box to the = H).			
	No Kno	wn or Suspected Groundwater MC Hazard			

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)					
	Surface water samples w	vere not collected.				
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ontaminant]			
2 > CHF	L (Low)	[Comparison Value for Conta	minant1			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	•	,			
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.						
Classification		cription hat contamination in the surface water is present at,	Value			
Evident	moving toward, or has moved to a point of exposu	re.	Н			
Potential	Contamination in surface water has moved only s move but is not moving appreciably, or informatio or Confined.	ightly beyond the source (i.e., tens of feet), could n is not sufficient to make a determination of Evident	М			
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).					
DIRECTIONS: Circle t	Receptor Fa he value that corresponds most closely to	actor the surface water receptors at the MRS.				
Classification	Desc	ription	Value			
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.					
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)					
No Known or Suspected Surface Water (Human Endpoint) MC Hazard						

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

	man endpoints present in the sediment, s			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
	Sediment Samples we	ere not collected		
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	■ IMaximum Concentration of Co	ontaminant]	
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr	minant1	
2 > CHF	L (Low)		тппапц	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right		
DIRECTIONS: Circle th	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS	S.	
Classification		cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н	
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor Former value that corresponds most closely to			
Classification		cription	Value	
Identified	Identified receptors have access to sediment to v	which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to sediment	nt to which contamination has moved or can move.	М	
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)		_	
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard		

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)					
	Surface water samples v	were not collected.				
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	- Maximum Concentration of Co	ontaminantl			
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr				
2 > CHF	L (Low)	[Comparison Value for Conta	iminantj			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right				
DIRECTIONS: Circle th	Migratory Pathy ne value that corresponds most closely t	vay Factor o the surface water migratory pathway at the	MRS.			
Classification		cription	Value			
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expose	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure				
Potential		Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident				
Confined		nant migration from the source via the surface water the presence of geological structures or physical	L			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).				
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely t	actor o the surface water receptors at the MRS.				
Classification	Des	cription	Value			
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н			
Potential	move.	water to which contamination has moved or can	М			
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value					
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard						

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios				
	Sediment samples w	ere not collected.					
CHF Scale	CHF Value	Sum the Ratios					
CHF > 100 100 > CHF > 2	H (High)	CHF = [Maximum Concentration of Co	ontaminant]				
2 > CHF	M (Medium) L (Low)	[Comparison Value for Contain	minant]				
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).						
	Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.						
Classification		scription	Value				
Evident		Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.					
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.						
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).						
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).					
DIRECTIONS: Circle to	Receptor he value that corresponds most closely						
Classification		scription	Value				
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н				
Potential	Potential for receptors to have access to sedime	Potential for receptors to have access to sediment to which contamination has moved or can move.					
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.						
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).					
No Known or Suspected Sediment (Ecological Endpoint) MC Hazard							

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC

hazard present in the surface soil, select the box at the bottom of the table.						
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio			
	es were collected from the MRS. All analyti ormer Camp Maxey. There is no human he	cal data detected below levels of concern in other an alth or ecological risk associated with MC.	reas of the			
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	- IMaximum Concentration of Co	ntaminantl			
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Co	· · · · · · · · · · · · · · · ·			
2 > CHF	L (Low)	[Comparison Value for Contar	ninantj			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)					
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.						
Classification		escription	Value H			
Evident		Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single hi</u> right (maximum value	ghest value from above in the box to the e = H).				
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.				
Classification		escription	Value			
Identified	Identified receptors have access to surface soi	I to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М			
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record <u>the single hi</u> right (maximum value	ghest value from above in the box to the e = H).				
	No K	nown or Suspected Surface Soil MC Hazard				

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)				1	
Surface Water/Human Endpoint (Table 22)			-	1	
Sediment/Human Endpoint (Table 23)			1		
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)	1		-	1	
Surface Soil (Table 26)					

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only)				
Combination	Rating			
ННН	Α			
ННМ	В			
HHL	0			
НММ	С			
HML	5			
MMM	D			
HLL	E			
MML	E			
MLL	F			
LLL	G			
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
	No Known or Suspected MC Hazard			

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS **Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
		Α	1			
Α	2	В	2	Α	2	
В	3	С	3	В	3	
С	4	D	4	С	4	
D	5	E	5	D	5	
E	6	F	6	Е	6	
F	7	G	7	F	7	
G	8			G	8	
Evaluation	Pending	Evaluation Pending		Evaluation Pending		
No Longer	Required	No Longer Required		No Longer Required		
No Known or Suspected Explosive Hazard No Known or Suspected CWM Hazard No Known or Suspected CWM Hazard			pected MC Hazard			
MRS PRIORITY or ALTERNATIVE MRS RATING					4	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable

	DMM, or environm	roperty information she MC that are known on the that are known onent), any other incident the MRS, and any poole MRS.	r suspected t ental nonmun	to be pres itions-rela	sent, the exated contar	kposure set minants (e.	ting (the MRS's phys g., benzene, trichloro	ical ethylene)
Cor Inst	mponent: <u>U.S. Army</u> callation/Property Na cation (City, County,	te Name: Eastern Ranne: Camp Maxey Fl State): Paris, Lamar e (Project No.): Form	JDS County, TX	xey (K06	TX0305)	PRDF/F	RMD:	
Poi		ed/Updated: <u>Decemb</u> /Phone): <u>Layne Your</u> nly one): RI/FS		<u>1806)</u>				
	□ PA	□ SI	✓ RI		✓ FS		□RD	
	□ RA-C	□ RIP	□ RA-O		□ RC		□ LTM	
		as created in coordination P will be included in a p						Iders. Prior
Med	dia Evaluated (check	c all that apply):.		<u> </u>				
	☐ Groundwater				•	an receptor	,	_
	✓ Surface soil □Sediment (ecologi	ical recentor)			•	ecological r human rece	•	_
	a Sediment (ecologi	ical receptor)		□ Sulla	ce water (numan rece	эртог)	
MR: the This inclu acc rem area enc	UXO, DMM, or MC kills MRS includes 1,124 udes area primarily wessing the lake. It includes action. The preverse and then selected	ibe the munitions-relanown or suspected to acres located along thin a state park, use ludes the dam area arious removal action ir grids were cleared in during the RI and onl	be present. the North and d for recreati nd former ran acluded the u order to redu	When poor to be a second which a second which a second with a second when poor to be a second when poor the poo	essible, iden ore of the land or may inclu were inves ophysical tra otential for o	ntify munition ake within to de activities tigated and ansects to le exposure to	ons, CWM, and MC be the East Range Area. s such as camping, he partially cleared in a locate potential forme of MEC. No MEC was	y type: It iking and previous er target
Pote sub	entially complete path	for Human and Ecolo nways exist for recreat nathways exist for all h	ional users,	outdoor s				

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	30

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

Numerous UXO has been found in the MRS to include 2.36-inch HEAT rockets, M9 rifle grenades, and MK II hand grenades. A 37mm projectile was found on the ground surface during the RI. (RI/FS Report [EOTI, 2014]; Table 3-2)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

Throughout the years thousands of UXO have been found in on the surface and in the subsurface at the MRS. A 37mm projectile was found during the RI was on the ground surface. (RI/FS Report [EOTI, 2014]; Table 3-2)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	 There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the **Status of Property** classification in the space provided.

The MRS is located on property owned and managed by the USACE. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Classification Description	
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses. 	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing. 	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

There are residential, recreational (Pat Mayse WMA and State Park), agricultural, and commercial land uses within two miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Ele	ements		
Munitions Type	Table 1	30	40
Source of Hazard	Table 2	10	40
Accessibility Factor Data Elemen	nts		
Location of Munitions	Table 3	25	
Ease of Access	Table 4	10	35
Status of Property	Table 5	0	
Receptor Factor Data Elements			
Population Density	Table 6	1	
Population Near Hazard	Table 7	5	44
Types of Activities/Structures	Table 8	5	11
Ecological and/or Cultural Resources	Table 9	0	
EHE MODULE T		E TOTAL	86
EHE Module Total EHE Module Rati		ating	
92 to 100	А		
82 to 91	В		
71 to 81	С		
60 to 70 D			
48 to 59	Е		
38 to 47	F		
less than 38	G		
	Evaluation Pending		ding
Alternative Module Ratings	No Longer Required		
	No Known or Suspected Explosive Hazard		
EHE MODULE RATING B			

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- From Tables 11–19, record the data element scores in the Score boxes to the right.
- Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
CWM Hazard Factor Data Elements				
CWM Configuration	Table 11	0	0	
Sources of CWM	Table 12	-	0	
Accessibility Factor Data Elemen	nts			
Location of CWM	Table 13			
Ease of Access	Table 14	1		
Status of Property	Table 15			
Receptor Factor Data Elements				
Population Density	Table 16			
Population Near Hazard	Table 17			
Types of Activities/Structures	Table 18			
Ecological and/or Cultural Resources	Table 19	-		
CHE MODULE TOTAL		0		
CHE Module Total	CHE	Module R	ating	
92 to 100		Α		
82 to 91	В			
71 to 81		С		
60 to 70		D		
48 to 59	E			
38 to 47	F			
less than 38	G			
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
	No Known or Suspected CWM Hazard			
CHE MODULE RATING	No Known or Suspected CWM Hazard		cted CWM	

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)		Ratios
	Groundwater samples w	vere not collected.	
CHF Scale	CHF Value	Sum The Ratios	
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl
	` '		minantj
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right	
	Migratory Pathw	vay Factor	
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.
Classification	Des	cription	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.		
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.			
Classification	Des	cription	Value
Identified	There is a threatened water supply well downgra source of drinking water or source of water for ot (equivalent to Class I or IIA aquifer).	dient of the source and the groundwater is a current her beneficial uses such as irrigation/agriculture	Н
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).		
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).		
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).	
	No Kno	wn or Suspected Groundwater MC Hazard	

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	ntration (μg/L) Comparison Value (μg/L)				
	Surface water samples w	vere not collected.				
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]			
2 > CHF	L (Low)	[Comparison Value for Conta	minantl			
CONTAMINANT	DIRECTIONS: Record the CHF Value	- '	minantj			
HAZARD FACTOR	(maximum value = H).					
	· ·	the surface water migratory pathway at the				
Classification		ription	Value			
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н			
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).					
DIRECTIONS: Circle t	Receptor Face with the value that corresponds most closely to	actor the surface water receptors at the MRS.				
Classification	Desc	ription	Value			
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.					
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)					
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard				

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

With Hu	man endpoints present in the sediment, .	select the box at the bottom of the table.				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios			
Sediment Samples were not collected						
CHF Scale	CHF Value	Sum The Ratios				
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant1			
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minantl			
2 > CHF	L (Low)	. ,	iiiiiaiiij			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right				
	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS				
Classification		cription	Value			
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н			
Potential	Contamination in sediment has moved only sligh but is not moving appreciably, or information is n Confined.	М				
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).				
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to					
Classification		cription	Value			
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.					
Limited	Little or no potential for receptors to have access can move.	L				
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)					
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard				

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)					
Surface water samples were not collected.						
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl			
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{index}} \) [Maximum Concentration of	· ·			
2 > CHF	L (Low)	[Comparison Value for Conta	iminant]			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right				
		o the surface water migratory pathway at the				
Classification		cription	Value			
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expo	Н				
Potential	Contamination in surface water has moved only move but is not moving appreciably, or informati or Confined.	М				
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value					
DIRECTIONS: Circle to	Receptor F he value that corresponds most closely t	actor o the surface water receptors at the MRS.				
Classification	Des	cription	Value			
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface move.	М				
Limited	Little or no potential for receptors to have access or can move.	L				
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value					
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard						

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

. With ec	ological eliupolitis present in the sedim	ent, select the box at the bottom of the table.		
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
	Sediment samples w	ere not collected.		
CHF Scale	CHF Value	Sum the Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ntaminantl	
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{indicated}} \sum_{indicated	······································	
2 > CHF	L (Low)	[Comparison Value for Contai	minantj	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)			
DIRECTIONS: Circle the	Migratory Path he value that corresponds most closely	to the sediment migratory pathway at the MRS	S.	
Classification		scription	Value	
Evident	moving toward, or has moved to a point of expo		Н	
Potential	Contamination in sediment has moved only slig but is not moving appreciably, or information is Confined.	htly beyond the source (i.e., tens of feet), could move not sufficient to make a determination of Evident or	М	
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	ghest value from above in the box to the = H).		
DIRECTIONS: Circle the	Receptor he value that corresponds most closely			
Classification	De	scription	Value	
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М	
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).		
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard		

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio		
All analytical data detected below levels of concern at this MRS and in other areas of the Former Camp Maxey. There is no human health or ecological risk associated with MC					
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	- Maximum Concentration of Co	ntaminant]		
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Co	- in a 17		
2 > CHF	L (Low)	[Comparison Value for Contar	ninantj		
CONTAMINANT	DIRECTIONS: Record the CHF Valu				
HAZARD FACTOR	(maximum value = H)).			
DIRECTIONS: Circle th	Migratory Path ne value that corresponds most closely	nway Factor to the surface soil migratory pathway at the MI	RS.		
Classification	De	scription	Value		
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in surface soil has moved only move but is not moving appreciably, or information Confined.	М			
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hi right (maximum value	ghest value from above in the box to the e = H).			
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.			
Classification	De	escription	Value		
Identified		I to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single hi right (maximum value	ghest value from above in the box to the e = H).			
	No K	nown or Suspected Surface Soil MC Hazard	✓		

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)	1			1	
Surface Water/Human Endpoint (Table 22)	1		1	-	
Sediment/Human Endpoint (Table 23)	-	-	Ţ		
Surface Water/Ecological Endpoint (Table 24)			1		
Sediment/Ecological Endpoint (Table 25)	-				
Surface Soil (Table 26)					No Known or Suspected MC Hazard

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE Ratings (for reference only)

HHE MODULE RATING

Title readings (for referen	3 ,	
Combination	Rating	
ННН	Α	
ННМ	В	
HHL		
НММ	С	
HML		
MMM	D	
HLL	F	
MML	E	
MLL	F	
LLL	G	
	Evaluation Pending	
Alternative Module Ratings	No Longer Required	
	No Known or Suspected MC Hazard	

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS **Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		Α	1		
Α	2	В	2	Α	2
В	3	С	3	В	3
С	4	D	4	С	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation	Pending	Evaluation	tion Pending Evaluation Pending		n Pending
No Longer	Required	No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard No Known or Suspected CWM Hazard No Known or Suspected MC			pected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING			;	3	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable

DMM, or environm found at	MC that are known onent), any other incide the MRS, and any po	r suspected ntal nonmun	to be pre nitions-rel	sent, the exposu ated contaminan	re setting (the MRS's plats (e.g., benzene, trichle	hysical oroethylene)
mponent: <u>U.S. Army</u> tallation/Property Na tation (City, County,	ıme: <u>Camp Maxey FL</u> State): <u>Paris, Lamar</u>	JDS County, TX		<u>STX0305)</u> PF	RDF/FRMD:	
nt of Contact (Name	/Phone): <u>Layne Youn</u>		<u>4806)</u>			
□ PA	□ SI	✓ RI		✓ FS	□ RD	
□ RA-C	□ RIP	□ RA-O		□ RC	□ LTM	
eing finalized the MRSP	P will be included in a p					eholders. Prior
☐ Groundwater			☐ Sedi	ment (human rec	ceptor)	
☐ Surface soil			☐ Surfa	ace Water (ecolo	gical receptor)	
□Sediment (ecologi	ical receptor)		☐ Surfa	ace Water (huma	in receptor)	
S Description: Descri UXO, DMM, or MC kr s MRS includes 540 a ne East Range Area. S are primarily on the vities. Although no ME	nown or suspected to cres located on the po The property is used surface but there ma EC was located within	be present. eninsula that for camping y be some si this MRS du	When post extends and other hallow su uring the	into the south single recreational actions. RI, previous investigations investigated in the second control of	nunitions, CWM, and Mode of Pat Mayse Lake in tivities. Recreational acure associated with som	C by type: In the center tivities in this e camping
	DMM, or environm found at map of the map of	DMM, or MC that are known o environment), any other incide found at the MRS, and any pormap of the MRS. Initions Response Site Name: Eastern Ramponent: U.S. Army Italiation/Property Name: Camp Maxey FU. Italiation (City, County, State): Paris, Lamar	DMM, or MC that are known or suspected environment), any other incidental nonmur found at the MRS, and any potentially expense of the MRS. Initions Response Site Name: Eastern Range Area B mponent: U.S. Army Italiation/Property Name: Camp Maxey FUDS Italiation/Property Name: Camp Maxey FUDS Italiation (City, County, State): Paris, Lamar County, TX Italiation (Project Name (Project No.): Former Camp Maxes Italiation (City, County, State): Paris, Lamar County, TX Italiation (City, County, TX Italiation (City, County, TX Italiation (City, County, TX Italiati	DMM, or MC that are known or suspected to be preenvironment), any other incidental nonmunitions-rel found at the MRS, and any potentially exposed hum map of the MRS. Initions Response Site Name: Eastern Range Area B mponent: U.S. Army Italiation/Property Name: Camp Maxey FUDS Italiation (City, County, State): Paris, Lamar County, TX Italiation (Property Name: Eastern Range Area (Note) Italiation (Property Name:	DMM, or MC that are known or suspected to be present, the exposus environment), any other incidental nonmunitions-related contaminar found at the MRS, and any potentially exposed human and ecologic map of the MRS. Initions Response Site Name: Eastern Range Area B mponent: U.S. Army tallation/Property Name: Camp Maxey FUDS (action (City, County, State): Paris, Lamar County, TX (as Name/Project Name (Project No.): Former Camp Maxey (K06TX0305) Property Interest (Project No.): Former Camp Maxey (K06TX0305) Property Interest (Project No.): Promer Camp Maxey (K06TX0305) Property Name (Pro	Initions Response Site Name: Eastern Range Area B Imponent: U.S. Army tallation/Property Name: Camp Maxey FUDS cation (City, County, State): Paris, Lamar County, TX Pame/Project Name (Project No.): Former Camp Maxey (K06TX0305). PRDF/FRMD: e Information Entered/Updated: December 2013 Int of Contact (Name/Phone): Layne Young (410.332.4806) iject Phase (check only one): RI/FS PA

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for recreational users, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	30

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided. Numerous UXO has been found in the MRS to include 37mm APHE and HE projectiles. (RI/FS Report [EOTI, 2014]; Section 1.5.8)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	 There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS. 	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	20

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

Numerous UXO were found in the subsurface during a 2001 clearance in the MRS. (RI/FS Report [EOTI, 2014]; Section 1.5.8)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	 There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible). 	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	 There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

The MRS is located on property owned and managed by the USACE. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	 There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing. 	
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

There are residential, recreational (Pat Mayse WMA and State Park), agricultural, and commercial land uses within two miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score	
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5	
Ecological resources present	There are ecological resources present on the MRS.		
Cultural resources present	There are cultural resources present on the MRS.		
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.		
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0	

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data El	ements		
Munitions Type	Table 1	30	40
Source of Hazard	Table 2	10	40
Accessibility Factor Data Elemen	nts		
Location of Munitions	Table 3	20	
Ease of Access	Table 4	10	30
Status of Property	Table 5	0	
Receptor Factor Data Elements			
Population Density	Table 6	1	
Population Near Hazard	Table 7	5	44
Types of Activities/Structures	Table 8	5	11
Ecological and/or Cultural Resources	Table 9	0	
EHE MODULE TOTAL 81			
EHE Module Total EHE Module Ratir		ating	
92 to 100		Α	
82 to 91	В		
71 to 81	_	С	
60 to 70		D	
48 to 59	E		
38 to 47	F		
less than 38	G		
	Eva	luation Pend	ding
Alternative Module Ratings	No I	_onger Reqւ	ıired
	No Known or Suspected Explosive Hazard		
EHE MODULE RATING C			

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container).	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value		
CWM Hazard Factor Data Elemer	CWM Hazard Factor Data Elements				
CWM Configuration	Table 11	0	0		
Sources of CWM	Table 12		O		
Accessibility Factor Data Elemen	nts				
Location of CWM	Table 13				
Ease of Access	Table 14				
Status of Property	Table 15				
Receptor Factor Data Elements					
Population Density	Table 16				
Population Near Hazard	Table 17				
Types of Activities/Structures	Table 18				
Ecological and/or Cultural Resources	Table 19	-			
СНЕ	MODULE	TOTAL	0		
CHE Module Total	CHE Module Rating		ating		
92 to 100		Α			
82 to 91	В				
71 to 81		С			
60 to 70		D			
48 to 59	E				
38 to 47	F				
less than 38	G				
	Eva	lluation Pen	ding		
Alternative Module Ratings	No Longer Required				
No Known or Suspected Hazard		cted CWM			
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM		

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Groundwater samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl	
	` '		iriniant,	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw	vav Factor		
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.	
Classification	Des	cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos	that contamination in the groundwater is present at, sure.	Н	
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М	
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).			
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.				
Classification	Des	cription	Value	
Identified		dient of the source and the groundwater is a current	Н	
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).		М	
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).		L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Surface water samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ontaminant]	
2 > CHF	L (Low)	[Comparison Value for Conta	minant1	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	•	,	
DIRECTIONS: Circle t		the surface water migratory pathway at the	MRS.	
		cription hat contamination in the surface water is present at,		
Evident	moving toward, or has moved to a point of exposu	re.	Н	
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =			
DIRECTIONS: Circle t	Receptor Fa he value that corresponds most closely to	actor the surface water receptors at the MRS.		
Classification	Desc	ription	Value	
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to surface with move.		М	
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)			
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard		

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

	man endpoints present in the sediment, s				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment Samples were not collected				
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	■ IMaximum Concentration of Co	ontaminant]		
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr	minant1		
2 > CHF	L (Low)		тппапц		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right			
DIRECTIONS: Circle th	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS	S.		
Classification		cription	Value		
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н		
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М		
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).				
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.					
Classification		cription	Value		
Identified	Identified receptors have access to sediment to v	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sediment	nt to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum val		_		
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard			

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)					
	Surface water samples v	vere not collected.				
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl			
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{IO}} \) [Maximum Concentration of Co	· "			
2 > CHF	L (Low)	[Comparison Value for Conta	minantj			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right				
DIRECTIONS: Circle th	Migratory Pathw ne value that corresponds most closely to	vay Factor to the surface water migratory pathway at the	MRS.			
Classification		cription	Value			
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.					
Potential	Contamination in surface water has moved only	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident				
Confined	Information indicates a low potential for contamir to a potential point of exposure (possibly due to t controls).	nant migration from the source via the surface water the presence of geological structures or physical	L			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).				
DIRECTIONS: Circle th	Receptor Former value that corresponds most closely to	actor the surface water receptors at the MRS.				
Classification	Des	cription	Value			
Identified	Identified receptors have access to surface water	r to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface move.		М			
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L			
RECEPTOR FACTOR		DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).				
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard						

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios			
	Sediment samples w	ere not collected.				
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100 100 > CHF > 2	H (High)	CHF = [Maximum Concentration of Co	ontaminant]			
2 > CHF	M (Medium) L (Low)	[Comparison Value for Contain	minant]			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).					
	Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.					
Classification		scription	Value			
Evident		Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.				
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).				
DIRECTIONS: Circle to	Receptor he value that corresponds most closely					
Classification		scription	Value			
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to sedime	ent to which contamination has moved or can move.	М			
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).				
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard				

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC

hazard present in the surface soil, select the box at the bottom of the table.					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio		
	es were collected from the MRS. All analyti ormer Camp Maxey. There is no human he	cal data detected below levels of concern in other an alth or ecological risk associated with MC.	reas of the		
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	- IMaximum Concentration of Co	ntaminantl		
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Co	· · · · · · · · · · · · · · · ·		
2 > CHF	L (Low)	[Comparison Value for Contar	ninantj		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
DIRECTIONS: Circle the	· ·	to the surface soil migratory pathway at the MF	RS. Value		
		escription es that contamination in the surface soil is present at,			
Evident	moving toward, or has moved to a point of exp	Н			
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contan a potential point of exposure (possibly due to to controls).	L			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single hi</u> right (maximum value	ghest value from above in the box to the e = H).			
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.			
Classification		escription	Value		
Identified	Identified receptors have access to surface soi	I to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record <u>the single hi</u> right (maximum value	ghest value from above in the box to the e = H).			
	No K	nown or Suspected Surface Soil MC Hazard			

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				<u> </u>
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)	-1			1	
Surface Water/Human Endpoint (Table 22)	1			1	
Sediment/Human Endpoint (Table 23)		_			
Surface Water/Ecological Endpoint (Table 24)	1	1	-	-	
Sediment/Ecological Endpoint (Table 25)	1		-	-	
Surface Soil (Table 26)	-				

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only) Combination Rating HHH Α HHM В HHL С HMM **HML** D MMM HLL E MML MLL F LLL G **Evaluation Pending** No Longer Required Alternative Module Ratings No Known or Suspected MC Hazard

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS Rating at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		Α	1		
Α	2	В	2	Α	2
В	3	С	3	В	3
С	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation	Pending	Evaluation	Pending	Evaluation Pending	
No Longer	Required	No Longer	Required	No Longer Required	
No Known or Suspected Explosive Hazard No Known or Suspected CWM Hazard No Known or Suspected CWM			pected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING				4	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is

	available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary , briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.								
Com Insta Loca	Munitions Response Site Name: Eastern Range Area C Component: U.S. Army Installation/Property Name: Camp Maxey FUDS Location (City, County, State): Paris, Lamar County, TX Site Name/Project Name (Project No.): Former Camp Maxey (K06TX0305) PRDF/FRMD:								
Poin	Date Information Entered/Updated: <u>December 2013</u> Point of Contact (Name/Phone): <u>Layne Young (410.332.4806)</u> Project Phase (check only one): RI/FS								
	□ PA	□ SI	✓ RI		✓ FS		□ RD		
	□ RA-C	□ RIP	□ RA-O		□ RC		□ LTM		
to be		as created in coordination P will be included in a process all that apply):.						stakeholde	ers. Prior
	☐ Groundwater			□ Sedir	ment (human re	eceptor))		
	☐ Surface soil			☐ Surfa	ice Water (eco	logical r	eceptor)		
	□Sediment (ecologic	cal receptor)		☐ Surfa	ice Water (hum	nan rece	eptor)		
MRS the U This	UXO, DMM, or MC kn MRS includes 563 ac ow band between the	ibe the munitions-relationship in the second by lake or every lake or ev	be present. outhern shore ity and Pat M	When po e of the la layse Lak	ossible, identify ake within the I se. Although no	/ munitic East Ra ot desigr	ons, CWM, an inge Area. It is nated for publ	nd MC by to s located a lic recreation	type: along a ional

use, the area can be accessed by lake or over land. Potential exposure could result from surface related recreational activities, such as hiking or fishing along the lake shore. One MEC item was located on the surface during the RI and MD density was generally low throughout the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for recreational users, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	30

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

UXO has been found in the MRS to include 37 mm projectiles, hand grenades and 2.36-inch rockets. (RI/FS Report [EOTI, 2014]; Section 1.5.6)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Numerous ranges overlap all or portions of the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms confirmed, surface, subsurface, small arms ammunition, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	20

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

UXO were found in the subsurface during a 1998 ordnance survey. (RI/FS Report [EOTI, 2014]; Section 1.5.6)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

The MRS is located on property owned and managed by the USACE. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	 There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses. 	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	
Industrial or warehousing	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing. 	
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

There are residential, recreational (Pat Mayse WMA and State Park), agricultural, and commercial land uses within two miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
Explosive Hazard Factor Data Ele	ements			
Munitions Type	Table 1	30	40	
Source of Hazard	Table 2	10	40	
Accessibility Factor Data Elemen	nts			
Location of Munitions	Table 3	20		
Ease of Access	Table 4	10	30	
Status of Property	Table 5	0		
Receptor Factor Data Elements				
Population Density	Table 6	1		
Population Near Hazard	Table 7	5	440	
Types of Activities/Structures	Table 8	5	110	
Ecological and/or Cultural Resources	Table 9	0		
EHE MODULE TOTAL 81				
EHE Module Total EHE		Module R	ating	
92 to 100		Α		
82 to 91	В			
71 to 81	С			
60 to 70		D		
48 to 59	E			
38 to 47	F			
less than 38	G			
	Evaluation Pending		ding	
Alternative Module Ratings	No Longer Required		uired	
	No Known or Suspected Explosive Hazard			
EHE MODULE RATING C				

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elemer	nts		
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		O
Accessibility Factor Data Elemen	nts		
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19	-	
CHE MODULE TOTAL 0			
CHE Module Total	CHE	Module R	ating
92 to 100		Α	
82 to 91		В	
71 to 81		С	
60 to 70		D	
48 to 59	E		
38 to 47	F		
less than 38	G		
	Eva	lluation Pen	ding
Alternative Module Ratings	No Longer Required		uired
No Known or Suspecte Hazard		cted CWM	
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
	Groundwater samples w	vere not collected.	
CHF Scale	CHF Value	Sum The Ratios	
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl
	` '		iriniant,
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right	
	Migratory Pathw	vav Factor	
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.
Classification	Des	cription	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.		
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.			
Classification	Des	cription	Value
Identified		dient of the source and the groundwater is a current	Н
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).		
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).		L
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).	
	No Kno	wn or Suspected Groundwater MC Hazard	

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios		
Surface water samples were not collected.					
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]		
2 > CHF	L (Low)	[Comparison Value for Conta	minantl		
CONTAMINANT	DIRECTIONS: Record the CHF Value	• •	minantj		
HAZARD FACTOR	(maximum value = H).				
	· ·	the surface water migratory pathway at the			
Classification		ription	Value		
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н		
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contamina a potential point of exposure (possibly due to the controls).	ant migration from the source via the surface water to presence of geological structures or physical	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =				
DIRECTIONS: Circle t	Receptor Face with the value that corresponds most closely to	actor the surface water receptors at the MRS.			
Classification	Desc	ription	Value		
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface move.	water to which contamination has moved or can	М		
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard			

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

with numan enupoints present in the sediment, select the box at the bottom of the table.				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
Sediment Samples were not collected				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant1	
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minantl	
2 > CHF	L (Low)	. ,	iiiiiaiiij	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right		
	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS		
Classification		cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н	
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М	
Confined		nant migration from the source via the sediment to a resence of geological structures or physical controls).	L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).		
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to			
Classification		cription	Value	
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to sedime	nt to which contamination has moved or can move.	М	
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)			
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard		

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
	Surface water samples v	were not collected.	
CHF Scale	CHF Value	Sum the Ratios	
CHF > 100	H (High)	- Maximum Concentration of Co	ontaminantl
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr	
2 > CHF	L (Low)	[Comparison Value for Conta	iminantj
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right	
DIRECTIONS: Circle th	Migratory Pathy ne value that corresponds most closely t	vay Factor o the surface water migratory pathway at the	MRS.
Classification		cription	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.		
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.			
Classification	Des	cription	Value
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.		М
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.		
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).	
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard			

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

with ecological endpoints present in the sediment, select the box at the bottom of the table.					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
Sediment samples were not collected.					
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ntaminantl		
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{indicated}} \sum_{\text{order}} \sum_{o	······································		
2 > CHF	L (Low)	[Comparison Value for Contai	minantj		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
DIRECTIONS: Circle the	Migratory Path he value that corresponds most closely	to the sediment migratory pathway at the MRS	S.		
Classification		scription	Value		
Evident	moving toward, or has moved to a point of expo		Н		
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.				
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).				
DIRECTIONS: Circle the	Receptor he value that corresponds most closely				
Classification	De	scription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	ss to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).			
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard			

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

nazard present in the surface soil, select the box at the bottom of the table.					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio		
No surface soil samples were collected from the MRS. All analytical data detected below levels of concern in other areas of the Former Camp Maxey. There is no human health or ecological risk associated with MC.					
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ntaminant]		
2 > CHF	L (Low)	[Comparison Value for Contar	minant]		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
DIRECTIONS: Circle th	Migratory Path ne value that corresponds most closely	nway Factor to the surface soil migratory pathway at the Mi	RS.		
Classification		scription	Value		
Evident	moving toward, or has moved to a point of expe		Н		
Potential	Contamination in surface soil has moved only s move but is not moving appreciably, or informa or Confined.	М			
Confined	Information indicates a low potential for contam a potential point of exposure (possibly due to the controls).	L			
MIGRATORY PATHWAY FACTOR DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).					
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.			
Classification		scription	Value		
Identified	Identified receptors have access to surface soi	I to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have acce can move.	L			
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the e = H).			
	No K	nown or Suspected Surface Soil MC Hazard			

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				<u> </u>
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)				1	
Surface Water/Human Endpoint (Table 22)			-	1	
Sediment/Human Endpoint (Table 23)			1		
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)	1		-	1	
Surface Soil (Table 26)					

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only)				
Combination	Rating			
ННН	А			
ННМ	В			
HHL	0			
НММ	С			
HML	0			
MMM	D			
HLL	F			
MML	E			
MLL	F			
LLL	G			
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
S	No Known or Suspected MC Hazard			

Table 29MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to

and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		Α	1		
Α	2	В	2	Α	2
В	3	С	3	В	3
С	4	D	4	С	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation	Pending	Evaluation Pending	
No Longer	Required	No Longer	Required	No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Su Haza	-	No Known or Suspected MC Haza	
MRS PRIORITY or ALTERNATIVE MRS RATING			•	4	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is

environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethy found at the MRS, and any potentially exposed human and ecological receptors. If possible, included map of the MRS.	le a ´			
Munitions Response Site Name: Grenade Range Area Component: U.S. Army				
Installation/Property Name: Camp Maxey FUDS				
Location (City, County, State): Paris, Lamar County, TX				
Site Name/Project Name (Project No.): Former Camp Maxey (K06TX0305) PRDF/FRMD:				
Date Information Entered/Updated: December 2013 Point of Contact (Name/Phone): Layne Young (410.332.4806) Project Phase (check only one): RI/FS				
□ PA □ SI ✓ RI ✓ FS □ RD				
□ RA-C □ RIP □ RA-O □ RC □ LTM				
Note: This Draft MRSPP was created in coordination with the U.S. Army Corps of Engineers and additional project stakeholders to being finalized the MRSPP will be included in a public notice and will be available for public review.	s. Prior			
Media Evaluated (check all that apply):.				
☐ Groundwater ☐ Sediment (human receptor)				
✓ Surface soil □ Surface Water (ecological receptor)				
□Sediment (ecological receptor) □ Surface Water (human receptor)				
MRS Summary: MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type this MRS includes 97 acres encompassing three areas identified in historical documents as grenade training areas.	pe:			

This MRS includes 97 acres encompassing three areas identified in historical documents as grenade training areas, located on the south side of the lake west of the Eastern Range Area. The MRS is located on public land that may be accessed for recreational activities associated with Pat Mayse Lake, such as hiking and fishing. The RI results identified 1 surface MEC item and MD which could be an indication of potential MEC in the area. (RI/FS Report [EOTI, 2014]; Table 4-1)

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for recreational users, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	30

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

The MRS was historically used a grenade range. During the RI, one UXO item (a 2.36 inch Rocket) was found on the surface. (RI/FS Report [EOTI, 2014]; Table 3-2)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones.	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	 The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system). 	2
Former small arms range	 The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

Historically this MRS was used as a grenade range area. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	 The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 25).	25

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

During the RI, a 2.36-inch rocket was found on the surface. (RI/FS Report [EOTI, 2014]; Table 3-2)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	 There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5 EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **Status of Property** classification in the space provided.

The MRS is located on property owned and managed by the USACE. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term inhabited structures is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	 There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	4

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The MRS is on property owned by the USACE and open to the public for hunting and other recreational activities. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- 1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
Explosive Hazard Factor Data Ele	ements			
Munitions Type	Table 1	30	40	
Source of Hazard	Table 2	10	40	
Accessibility Factor Data Elemen	nts			
Location of Munitions	Table 3	25		
Ease of Access	Table 4	10	35	
Status of Property	Table 5	0		
Receptor Factor Data Elements				
Population Density	Table 6	1		
Population Near Hazard	Table 7	5	10	
Types of Activities/Structures	Table 8	4		
Ecological and/or Cultural Resources	Table 9	0		
EHE MODULE TOTAL 85				
EHE Module Total EHE Module Rati		ating		
92 to 100		Α		
82 to 91	В			
71 to 81	_	С		
60 to 70		D		
48 to 59		E		
38 to 47	F			
less than 38	G			
	Evaluation Pending		ding	
Alternative Module Ratings	No Longer Required		uired	
	No Known or Suspected Explosive Hazard			
EHE MODULE RATING	_E RATING C			

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
CWM Hazard Factor Data Elemer	nts			
CWM Configuration	Table 11	0	0	
Sources of CWM	Table 12		O	
Accessibility Factor Data Elemen	nts			
Location of CWM	Table 13			
Ease of Access	Table 14			
Status of Property	Table 15			
Receptor Factor Data Elements				
Population Density	Table 16			
Population Near Hazard	Table 17			
Types of Activities/Structures	Table 18			
Ecological and/or Cultural Resources	Table 19	-		
CHE MODULE TOTAL 0				
CHE Module Total	CHE Module Rating		ating	
92 to 100		Α		
82 to 91	В			
71 to 81		С		
60 to 70		D		
48 to 59	E			
38 to 47	F			
less than 38	G			
	Evaluation Pending		ding	
Alternative Module Ratings	No Longer Required		uired	
	No Known or Suspected Hazard		cted CWM	
CHE MODULE RATING	No Known or Suspected CWM Hazard		cted CWM	

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Groundwater samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl	
	` '		iriniant,	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw	vav Factor		
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.	
Classification	Des	cription	Value	
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.			
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).			
DIRECTIONS: Circle th	Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.			
Classification	Des	cription	Value	
Identified		dient of the source and the groundwater is a current	Н	
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).			
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).			
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Surface water samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]	
2 > CHF	L (Low)	[Comparison Value for Conta	minantl	
CONTAMINANT	DIRECTIONS: Record the CHF Value	- '	minantj	
HAZARD FACTOR	(maximum value = H).			
	· ·	the surface water migratory pathway at the		
Classification		ription	Value	
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н	
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =			
DIRECTIONS: Circle t	Receptor Face with the value that corresponds most closely to	actor the surface water receptors at the MRS.		
Classification	Desc	ription	Value	
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to surface move.	water to which contamination has moved or can	М	
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)			
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard		

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

with numan enupoints present in the sediment, select the box at the bottom of the table.				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
Sediment Samples were not collected				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant1	
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minantl	
2 > CHF	L (Low)	. ,	iiiiiaiiij	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right		
	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS		
Classification		cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н	
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М	
Confined		nant migration from the source via the sediment to a resence of geological structures or physical controls).	L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).			
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to			
Classification		cription	Value	
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.		М	
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)			
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard		

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
	Surface water samples	were not collected.	
CHF Scale	CHF Value	Sum the Ratios	
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{index}} \) [Maximum Concentration of	· ·
2 > CHF	L (Low)	[Comparison Value for Conta	iminant]
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right	
		o the surface water migratory pathway at the	
Classification		cription	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.		
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
DIRECTIONS: Circle to	Receptor F he value that corresponds most closely t	actor o the surface water receptors at the MRS.	
Classification	Des	cription	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.		
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.		М
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.		
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).	
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard			

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

. With ec	ological eliupolitis present in the sedim	ent, select the box at the bottom of the table.				
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios			
Sediment samples were not collected.						
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ntaminantl			
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{indicated}} \sum_{\text{order}} \sum_{o	······································			
2 > CHF	L (Low)	[Comparison Value for Contai	minantj			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)					
DIRECTIONS: Circle the	Migratory Path he value that corresponds most closely	to the sediment migratory pathway at the MRS	S.			
Classification		scription	Value			
Evident	moving toward, or has moved to a point of expo		Н			
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	ghest value from above in the box to the = H).				
DIRECTIONS: Circle the	Receptor he value that corresponds most closely					
Classification	De	scription	Value			
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М			
Limited	Little or no potential for receptors to have access can move.	ss to sediment to which contamination has moved or	L			
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).				
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard				

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

	,					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio			
All analytical data detected below levels of concern at this MRS and in other areas of the Former Camp Maxey. There is no human health or ecological risk associated with MC.						
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ntaminant1			
100 > CHF > 2 2 > CHF	M (Medium)	[Comparison Value for Contain	minantl			
	L (Low)	• •	milant			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)					
DIRECTIONS: Circle the	Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.					
		escription es that contamination in the surface soil is present at,	Value			
Evident	moving toward, or has moved to a point of exp	osure.	Н			
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).					
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).					
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.				
Classification	De	scription	Value			
Identified	Identified receptors have access to surface soil	I to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М			
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L			
RECEPTOR FACTOR	DIRECTIONS: Record the single hi right (maximum value	ghest value from above in the box to the e = H).				
	No K	nown or Suspected Surface Soil MC Hazard	✓			

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)				1	
Surface Water/Human Endpoint (Table 22)			-	1	
Sediment/Human Endpoint (Table 23)		-	Į	1	
Surface Water/Ecological Endpoint (Table 24)			1	ı	
Sediment/Ecological Endpoint (Table 25)			1	1	
Surface Soil (Table 26)	-				No Known or Suspected MC Hazard

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for referer	ice only)
Combination	Rating
ННН	Α
ННМ	В
HHL	
НММ	С
HML	
MMM	D
HLL	_
MML	E
MLL	F
LLL	G
	Evaluation Pending
Alternative Module Ratings	No Longer Required
	No Known or Suspected MC Hazard

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS **Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
		Α	1			
Α	2	В	2	Α	2	
В	3	С	3	В	3	
С	4	D	4	С	4	
D	5	E	5	D	5	
E	6	F	6	E	6	
F	7	G	7	F	7	
G	8			G	8	
Evaluation	Pending	Evaluation	Pending	Evaluation Pending		
No Longer	Required	No Longer	Required	No Longer Required		
No Known or Susp Haza		No Known or Su Haza	-	No Known or Suspected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING			,	4		

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is

	available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary , briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.							
Con	Munitions Response Site Name: Cave Training Area Component: U.S. Army Installation/Property Name: Camp Maxey FUDS							
Loc	ation (City, County,	State): Paris, Lamar	County, TX					
Site	Name/Project Name	e (Project No.): Form	er Camp Ma	xey (K06	STX0305) PRDF/F	FRMD:		
Poir	Date Information Entered/Updated: December 2013 Point of Contact (Name/Phone): Layne Young (410.332.4806) Project Phase (check only one): RI/FS							
Ï	□ PA	□ SI	✓ RI		✓ FS	□ RD		
	□ RA-C	□ RIP	□ RA-O		□ RC	□ LTM		
		as created in coordination P will be included in a p				dditional project stakehold w.	lers. Prior	
Med	lia Evaluated (check	all that apply):.						
	☐ Groundwater			☐ Sedii	ment (human receptor	Γ)		
	☐ Surface soil			☐ Surfa	ace Water (ecological	receptor)		
	□Sediment (ecologi	cal receptor)		☐ Surfa	ace Water (human rec	eptor)		
MRS	MRS Summary: MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type:							

This MRS is a 7-acre small area located south of the West Range Area. It is located within a privately owned parcel which was not accessible during the RI. There is little historical information but anecdotal information suggests that the area was used for simulated cave clearing operations. Additional data is needed to characterize the MRS. (RI/FS Report [EOTI, 2014]; Table 4-1)

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for residents, trespassers, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; **Section 5.1.2)**

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	 Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present. 	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

There is little historical information but anecdotal information suggests that the area was used for simulated cave clearing operations using practice munitions and pytotechnics. (RI/FS Report [EOTI, 2014]; Table 4-1)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	 The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal. 	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	 The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system). 	2
Former small arms range	 The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	5

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

There is little historical information but anecdotal information suggests that the area was used for simulated cave clearing operations using practice munitions and pyrotechnics. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with all the locations where munitions are known or suspected to be present at the MRS.

Note: The terms confirmed, surface, subsurface, small arms ammunition, physical evidence, and historical evidence are

defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

There is little historical information but anecdotal information suggests that the area was used for simulated cave clearing operations using practice munitions and pyrotechnics. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5 EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the **Status of Property** classification in the space provided.

The property within the Cave Training Area is privately owned. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term inhabited structures is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses. 	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing. 	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

There are residential, recreational (Pat Mayse WMA and State Park), agricultural, and commercial land uses within two miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value	
Explosive Hazard Factor Data Ele	ements			
Munitions Type	Table 1	10	15	
Source of Hazard	Table 2	5	15	
Accessibility Factor Data Elemen	nts			
Location of Munitions	Table 3	5		
Ease of Access	Table 4	10	20	
Status of Property	Table 5	5		
Receptor Factor Data Elements				
Population Density	Table 6	1		
Population Near Hazard	Table 7	5	44	
Types of Activities/Structures	Table 8	5	11	
Ecological and/or Cultural Resources	Table 9	0		
EHE MODULE TOTAL 4			46	
EHE Module Total	EHE Module Rating		ating	
92 to 100		Α		
82 to 91		В		
71 to 81		С		
60 to 70		D		
48 to 59		E		
38 to 47	F			
less than 38		G		
	Evaluation Pending		ding	
Alternative Module Ratings	No Longer Required		uired	
	No Known or Suspected Explosive Hazard			
EHE MODULE RATING	IG F			

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20
Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elemer	nts		
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		O
Accessibility Factor Data Elemen	nts		
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19		
CHE MODULE TOTAL 0			
CHE Module Total	CHE Module Rating		ating
92 to 100		Α	
82 to 91		В	
71 to 81		С	
60 to 70		D	
48 to 59	E		
38 to 47	F		
less than 38	G		
	Evaluation Pending		ding
Alternative Module Ratings	No Longer Required		
	No Known or Suspected CWM Hazard		
CHE MODULE RATING	No known or Suspected CWM Hazard		ted CWM

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Groundwater samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl	
	` '		iriniant,	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw	vav Factor		
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.	
Classification	Des	cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos	that contamination in the groundwater is present at, sure.	Н	
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М	
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.			
Classification	Des	cription	Value	
Identified		dient of the source and the groundwater is a current	Н	
Potential	There is no threatened water supply well downgr or potentially usable for drinking water, irrigation, aquifer).	adient of the source and the groundwater is currently or agriculture (equivalent to Class I, IIA, or IIB	М	
Limited		well downgradient of the source and the groundwater vater and is of limited beneficial use (equivalent to er exists only).	L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios		
	Surface water samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ontaminant]		
2 > CHF	L (Low)	[Comparison Value for Conta	minant1		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	•	,		
DIRECTIONS: Circle t		the surface water migratory pathway at the	MRS.		
		cription hat contamination in the surface water is present at,			
Evident	moving toward, or has moved to a point of exposu	re.	Н		
Potential	Contamination in surface water has moved only s move but is not moving appreciably, or informatio or Confined.	ightly beyond the source (i.e., tens of feet), could n is not sufficient to make a determination of Evident	М		
Confined	Information indicates a low potential for contamina a potential point of exposure (possibly due to the controls).	ant migration from the source via the surface water to presence of geological structures or physical	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =				
DIRECTIONS: Circle t	Receptor Fa he value that corresponds most closely to	actor the surface water receptors at the MRS.			
Classification	Desc	ription	Value		
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface with move.		М		
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard			

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

	man endpoints present in the sediment, s			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
	Sediment Samples we	ere not collected		
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	■ IMaximum Concentration of Co	ontaminant]	
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr	minant1	
2 > CHF	L (Low)		тппапц	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right		
DIRECTIONS: Circle th	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS	S.	
Classification		cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н	
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М	
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.			
Classification		cription	Value	
Identified	Identified receptors have access to sediment to v	which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to sediment	nt to which contamination has moved or can move.	М	
Limited	Little or no potential for receptors to have access can move.	to sediment to which contamination has moved or	L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum val		_	
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard		

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios		
	Surface water samples were not collected.				
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	- Maximum Concentration of Co	ontaminantl		
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr			
2 > CHF	L (Low)	[Comparison Value for Conta	iminantj		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right			
DIRECTIONS: Circle th	Migratory Pathy ne value that corresponds most closely t	vay Factor o the surface water migratory pathway at the	MRS.		
Classification		cription	Value		
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.		Н		
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		M		
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).				
DIRECTIONS: Circle th	Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.				
Classification	Des	cription	Value		
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.		М		
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.		L		
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).			
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard					

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
Sediment samples were not collected.				
CHF Scale	CHF Value	Sum the Ratios		
CHF > 100 100 > CHF > 2	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
2 > CHF	M (Medium) L (Low)	[Comparison Value for Contain	minant]	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)			
		to the sediment migratory pathway at the MRS		
Classification		scription	Value	
Evident	Analytical data or observable evidence indicate moving toward, or has moved to a point of expo	s that contamination in the sediment is present at, sure.	Н	
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or M Confined.		М	
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single his right (maximum value	thest value from above in the box to the = H).		
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.				
Classification		scription	Value	
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М	
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value	thest value from above in the box to the = H).		
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard		

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

hazard present in the surface soil, select the box at the bottom of the table.						
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio			
No surface soil samples were collected from the Cave Training Area. All analytical data detected below levels of concern in other areas of the Former Camp Maxey. There is no human health or ecological risk associated with MC.						
CHF Scale	CHF Value	CHF Value Sum the Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = [Maximum Concentration of Co	ntaminant]			
2 > CHF	L (Low)	[Comparison Value for Contain	minant1			
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)	ie from above in the box to the right				
	·	to the surface soil migratory pathway at the M				
Classification		scription	Value			
Evident	moving toward, or has moved to a point of expe	es that contamination in the surface soil is present at, osure.	Н			
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contant a potential point of exposure (possibly due to the controls).	L				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the = H).				
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.				
Classification		scription	Value			
Identified	Identified receptors have access to surface soi	to which contamination has moved or can move.	Н			
Potential	Potential for receptors to have access to surface	ce soil to which contamination has moved or can move.	М			
Limited	Little or no potential for receptors to have acce can move.	ss to surface soil to which contamination has moved or	L			
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the = H).				
	No K	nown or Suspected Surface Soil MC Hazard				

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				ļ
				1

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)	-1			1	
Surface Water/Human Endpoint (Table 22)	1			1	
Sediment/Human Endpoint (Table 23)		_			
Surface Water/Ecological Endpoint (Table 24)	1	1	-	-	
Sediment/Ecological Endpoint (Table 25)	1		-	-	
Surface Soil (Table 26)	-				

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only)				
Combination	Rating			
ННН	Α			
ННМ	В			
HHL				
НММ	С			
HML	_			
MMM	D			
HLL				
MML	E			
MLL	F			
LLL	G			
	Evaluation Pending			
Alternative Module Ratings	No Longer Required			
, itemative module realinge	No Known or Suspected MC			

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to

determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS

Rating at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority	
		Α	1			
Α	2	В	2	Α	2	
В	3	С	3	В	3	
С	4	D	4	С	4	
D	5	E	5	D	5	
E	6	F	6	E	6	
F	7	G	7	F	7	
G	8			G	8	
Evaluation	Pending	Evaluation	Pending	Evaluation	n Pending	
No Longer	Required	No Longer	Required	No Longer Required		
No Known or Susp Haza		No Known or Su Haza	-	No Known or Suspected MC Hazard		
MRS PRIORITY or ALTERNATIVE MRS RATING			7	7		

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is

	available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS Summary , briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.								
	nitions Response S nponent: <u>U.S. Army</u>	Site Name: Mine and E	<u>Зооbу Trap A</u>	<u>\rea</u>					
		lame: <u>Camp Maxey FL</u>							
	, ,,	, State): Paris, Lamar							
Site	Name/Project Nam	ne (Project No.): Form	ner Camp Ma	xey (K06	TX0305)	PRDF/F	RMD:		
Poin	nt of Contact (Name		ng (410.332.4	1 806)					
	□ PA	□ SI	✓ RI		√ FS		□ RD		
	☐ RA-C	□ RIP	□ RA-O		□ RC		□ LTM		
to be	Note: This Draft MRSPP was created in coordination with the U.S. Army Corps of Engineers and additional project stakeholders. Prior to being finalized the MRSPP will be included in a public notice and will be available for public review. Media Evaluated (check all that apply):.								
	☐ Groundwater			□ Sedir	ment (human r	eceptor)			
	☐ Surface soil			☐ Surfa	ice Water (eco	logical r	eceptor)		
	□ Sediment (ecological receptor) □ Surface Water (human receptor)								
MRS		cribe the munitions-rela known or suspected to							

This MRS is 35 acres located east of the West Range Area and is on privately owned residential parcels. Historical records indicated that the area was used to train with practice mines. Collection of data during the RI was limited by a lack of access to several private parcels in the area; however during a reconnaissance of the area a property owner provided information and evidence that confirmed mine training in the area. Practice mines used during the time that the Former Camp Maxey was in operation, contained a small "puff charge" that was not intended to cause harm. (RI/FS Report [EOTI, 2014]; Table 4-1)

Description of Pathways for Human and Ecological Receptors:

Potentially complete pathways exist for residents, trespassers, outdoor site workers, and biota for MEC in the surface and subsurface. Incomplete pathways exist for all human and ecological receptors for MC. (RI/FS Report [EOTI, 2014]; Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability.	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	 DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided. During the RI no UXO was found but local residents did provide evidence of practice mines found on the property. (RI/FS Report [EOTI, 2014]; Appendix J)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	 The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones. 	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	6

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

The MRS was historically a mine and booby trap training area. (RI/FS Report [EOTI, 2014]; Appendix J)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	 There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS. 	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	 There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM. 	2
Small arms (regardless of location)	The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	20

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

Evidence from property owners confirms practice land mines were found in the subsurface. (RI/FS Report [EOTI, 2014]; Appendix J)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	 There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS. 	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5 EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	 The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year. 	0
STATUS OF PROPERTY	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

The MRS is located on private property. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	 There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both. 	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with <u>all</u> the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The MRS is located on residential property. (RI/FS Report [EOTI, 2014]; Appendix J)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	3
No ecological or cultural resources present	There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- From Tables 1–9, record the data element scores in the Score boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Ele	ements		
Munitions Type	Table 1	5	11
Source of Hazard	Table 2	6	11
Accessibility Factor Data Elemen	nts		
Location of Munitions	Table 3	20	
Ease of Access	Table 4	10	35
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	1	
Population Near Hazard	Table 7	5	44
Types of Activities/Structures	Table 8	5	11
Ecological and/or Cultural Resources	Table 9	0	
EHE MODULE TOTAL 57			
EHE Module Total	EHE Module Rating		ating
92 to 100		Α	
82 to 91		В	
71 to 81		С	
60 to 70		D	
48 to 59	_	E	
38 to 47		F	
less than 38	G		
	Evaluation Pending		ding
Alternative Module Ratings	No Longer Required		ıired
	No Known or Suspected Explosive Hazard		
EHE MODULE RATING	E		

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elemer	nts		
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		O
Accessibility Factor Data Elemen	nts		
Location of CWM	Table 13		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19	-	
CHE MODULE TOTAL 0			
CHE Module Total	CHE	Module R	ating
92 to 100		Α	
82 to 91		В	
71 to 81		С	
60 to 70		D	
48 to 59		E	
38 to 47		F	
less than 38	G		
	Eva	lluation Pen	ding
Alternative Module Ratings	No Longer Required		uired
	No Known or Suspected CW Hazard		cted CWM
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Groundwater samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2 2 > CHF	M (Medium) L (Low)	[Comparison Value for Conta	minantl	
	` '		iriniant,	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw	vav Factor		
DIRECTIONS: Circle th		o the groundwater migratory pathway at the I	MRS.	
Classification	Des	cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos	that contamination in the groundwater is present at, sure.	Н	
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М	
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely to	actor o the groundwater receptors at the MRS.		
Classification	Des	cription	Value	
Identified		dient of the source and the groundwater is a current	Н	
Potential	There is no threatened water supply well downgr or potentially usable for drinking water, irrigation, aquifer).	adient of the source and the groundwater is currently or agriculture (equivalent to Class I, IIA, or IIB	М	
Limited		well downgradient of the source and the groundwater vater and is of limited beneficial use (equivalent to er exists only).	L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	hest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios		
	Surface water samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]		
2 > CHF	L (Low)	[Comparison Value for Conta	minantl		
CONTAMINANT	DIRECTIONS: Record the CHF Value	• •	minantj		
HAZARD FACTOR	(maximum value = H).				
	· ·	the surface water migratory pathway at the			
Classification		ription	Value		
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н		
Potential	Contamination in surface water has moved only s move but is not moving appreciably, or informatio or Confined.	lightly beyond the source (i.e., tens of feet), could n is not sufficient to make a determination of Evident	M		
Confined	Information indicates a low potential for contamina a potential point of exposure (possibly due to the controls).	ant migration from the source via the surface water to presence of geological structures or physical	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =				
DIRECTIONS: Circle t	Receptor Face that corresponds most closely to	actor the surface water receptors at the MRS.			
Classification	Desc	ription	Value		
Identified	Identified receptors have access to surface water	to which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to surface move.	water to which contamination has moved or can	М		
Limited	Little or no potential for receptors to have access or can move.	to surface water to which contamination has moved	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard			

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with human endpoints present in the sediment, select the box at the bottom of the table.

with numan endpoints present in the sediment, select the box at the bottom of the table.					
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment Samples were not collected				
CHF Scale	CHF Value	Sum The Ratios			
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant1		
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minantl		
2 > CHF	L (Low)	. ,	iiiiiaiiij		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right			
	Migratory Pathw ne value that corresponds most closely to	vay Factor to the sediment migratory pathway at the MRS			
Classification		cription	Value		
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos		Н		
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М		
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor F ne value that corresponds most closely to				
Classification		cription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedime	nt to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)				
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard			

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
Surface water samples were not collected.				
CHF Scale	CHF Value	Sum the Ratios		
CHF > 100	H (High)	— Maximum Concentration of Co	ontaminantl	
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{index}} \) [Maximum Concentration of	· ·	
2 > CHF	L (Low)	[Comparison Value for Conta	iminant]	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right		
		o the surface water migratory pathway at the		
Classification		cription	Value	
Evident	moving toward, or has moved to a point of expo	that contamination in the surface water is present at, sure.	Н	
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contami to a potential point of exposure (possibly due to controls).	nant migration from the source via the surface water the presence of geological structures or physical	L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).		
DIRECTIONS: Circle to	Receptor F he value that corresponds most closely t	actor o the surface water receptors at the MRS.		
Classification	Des	cription	Value	
Identified	Identified receptors have access to surface water	er to which contamination has moved or can move.	Н	
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.		М	
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).		
	No Known or Suspected Surfa	ce Water (Ecological Endpoint) MC Hazard		

HHE Module: Sediment - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard

with ecological endpoints present in the sediment, select the box at the bottom of the table.

. With ec	ological eliupolitis present in the sedim	ent, select the box at the bottom of the table.			
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios		
	Sediment samples were not collected.				
CHF Scale	CHF Value	Sum the Ratios			
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ntaminantl		
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{indicated}} \sum_{\text{order}} \sum_{o	······································		
2 > CHF	L (Low)	[Comparison Value for Contai	minantj		
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)				
DIRECTIONS: Circle the	Migratory Path he value that corresponds most closely	to the sediment migratory pathway at the MRS	S.		
Classification		scription	Value		
Evident	moving toward, or has moved to a point of expo		Н		
Potential	Contamination in sediment has moved only slig but is not moving appreciably, or information is Confined.	htly beyond the source (i.e., tens of feet), could move not sufficient to make a determination of Evident or	М		
Confined		inant migration from the source via the sediment to a presence of geological structures or physical controls).	L		
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	ghest value from above in the box to the = H).			
DIRECTIONS: Circle the	Receptor he value that corresponds most closely				
Classification	De	scription	Value		
Identified	Identified receptors have access to sediment to	which contamination has moved or can move.	Н		
Potential	Potential for receptors to have access to sedim	ent to which contamination has moved or can move.	М		
Limited	Little or no potential for receptors to have access can move.	ss to sediment to which contamination has moved or	L		
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	<u>ahest value</u> from above in the box to the = H).			
	No Known or Suspected	Sediment (Ecological Endpoint) MC Hazard			

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

nazard present in the surface soil, select the box at the bottom of the table.						
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio			
No surface soil samples were collected from the MRS. All analytical data detected below levels of concern in other areas of the Former Camp Maxey. There is no human health or ecological risk associated with MC.						
CHF Scale	CHF Value	Sum the Ratios				
CHF > 100 100 > CHF > 2	H (High) M (Medium) CHF = [Maximum Concentration of Co					
2 > CHF	L (Low) [Comparison Value for Conta					
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)					
Migratory Pathway Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.						
Classification	Description					
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.					
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.					
Confined	Information indicates a low potential for contam a potential point of exposure (possibly due to the controls).	L				
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).					
Receptor Factor DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.						
Classification		scription	Value			
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.		Н			
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.					
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.					
RECEPTOR FACTOR	DIRECTIONS: Record the single his right (maximum value	ghest value from above in the box to the e = H).				
No Known or Suspected Surface Soil MC Hazard						

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				<u> </u>
				<u> </u>

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)				1	
Surface Water/Human Endpoint (Table 22)			-	1	
Sediment/Human Endpoint (Table 23)			1		
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)	1		-	1	
Surface Soil (Table 26)					

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for referen	ice only)
Combination	Rating
ННН	А
ННМ	В
HHL	0
НММ	С
HML	0
MMM	D
HLL	F
MML	E
MLL	F
LLL	G
	Evaluation Pending
Alternative Module Ratings	No Longer Required
S	No Known or Suspected MC Hazard

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS

Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS

Rating at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		Α	1		
Α	2	В	2	Α	2
В	3	С	3	В	3
С	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation	Pending	Evaluation	Pending	Evaluation Pending	
No Longer	Required	No Longer	Required	No Longer Required	
No Known or Susp Haza		No Known or Su Haza	-	No Known or Suspected MC Hazard	
MRS PRIORITY or ALTERNATIVE MRS RATING				3	

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable

	DMM, or environm	MC that are known onent), any other incide the MRS, and any po	r suspected to be pre ental nonmunitions-re	esent, the exposur lated contaminant	mary, briefly describe the re setting (the MRS's ph ts (e.g., benzene, trichlo al receptors. If possible,	ysical roethylene)
	nitions Response Si nponent: <u>U.S. Army</u>	te Name: <u>Bivouac Ar</u>	rea_			
		ıme: <u>Camp Maxey FL</u>				
	, , ,	State): Paris, Lamar				
Site	Name/Project Nam	e (Project No.): Form	<u>ier Camp Maxey (K0</u>	6TX0305) PR	RDF/FRMD:	
Poir		ed/Updated: <u>Decemb</u> /Phone): <u>Layne Your</u> nly one): RI/FS				
	□ PA	□ SI	✓ RI	✓ FS	□RD	
	☐ RA-C	□ RIP	□ RA-O	□ RC	□ LTM	
		as created in coordination P will be included in a p			and additional project stake review.	holders. Prior
Med	lia Evaluated (check	c all that apply):				
	☐ Groundwater		□ Sec	liment (human red	eptor)	
	☐ Surface soil		☐ Sur	face Water (ecolo	gical receptor)	
	☐ Sediment (ecolo	ogical receptor)	□ Sur	face Water (huma	in receptor)	
MRS the This char port	UXO, DMM, or MC ki MRS is approximate racterized or evaluate ions of this area. Add	nown or suspected to ely 1,125 acres that fa ed in the RI/FS. It is an litional data is needed	be present. When p Il outside of the curre n area previously ide to characterize the I	ossible, identify m Int MRS boundary Intified as a Bivoua	llation, the dates of opera nunitions, CWM, and MC didentified in FUDSMIS a fac area. MEC has been I ort [EOTI, 2014]; Table 4	by type: and was not located in
Pote	entially complete path		ional users, outdoor		biota for MEC in the sur	

Section 5.1.2)

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with <u>all</u> the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	 UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). Hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard. 	30
High explosive (used or damaged)	 UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." DMM containing a high-explosive filler that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	25
Pyrotechnic (used or damaged)	 UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: Been damaged by burning or detonation Deteriorated to the point of instability. 	20
High explosive (unused)	 DMM containing a high-explosive filler that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability. 	15
Propellant	 UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: Damaged by burning or detonation Deteriorated to the point of instability. 	15
Bulk secondary high explosives, pyrotechnics, or propellant	 DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard. 	10
Pyrotechnic (not used or damaged)	DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: Have not been damaged by burning or detonation Are not deteriorated to the point of instability.	10
Practice	 UXO that are practice munitions that are not associated with a sensitive fuze. DMM that are practice munitions that are not associated with a sensitive fuze and that have not: Been damaged by burning or detonation Deteriorated to the point of instability. 	5
Riot control	UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	 Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.) 	2
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	30

DIRECTIONS: Document any MRS-specific data used in selecting the *Munitions Type* classifications in the space provided.

Evidence of hand grenades, rifle grenades, 60mm mortar flares, and 2.36–inch rockets have been found at the site. (EE/CA Report [Parsons. 2000]; Section 2.3.5)

Table 2 EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with <u>all</u> the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms former range, practice munitions, small arms range, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones.	10
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	 The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category. 	5
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	 The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.) 	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the **Source of Hazard** classifications in the space provided.

The Bivouac Area was designated as such in the 2000 EE/CA. Former Range was selected because evidence of hand grenades, rifle grenades, 60mm mortar flares, and 2.36–inch rockets have been found at the site. (EE/CA Report [Parsons. 2000]; Section 2.3.5)

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with <u>all</u> the locations where munitions are known or suspected to be present at the MRS.

Note: The terms confirmed, surface, subsurface, small arms ammunition, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	 Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS. 	25
Confirmed subsurface, active	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. 	20
Confirmed subsurface, stable	 Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. 	15
Suspected (physical evidence)	 There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS. 	10
Suspected (historical evidence)	There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	20

DIRECTIONS: Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

A green star rifle grenade was found in the subsurface and reported in the 2000 EE/CA. Additionally, numerous MD has been on the surface and in the subsurface at the Bivouac Area. (EE/CA Report [Parsons. 2000]; Section 2.3.5)

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The

barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds

with the ease of access to the MRS.

Note: The term barrier is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

No barriers currently exist for the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 5EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	 The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day. 	5
Scheduled for transfer from DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

Portions of the property within the Bivouac Area are privately owned. Other portions of the area are owned by the federal government. (RI/FS Report [EOTI, 2014]; Table 4-1)

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the <u>highest</u> population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100-500 persons per square mile	There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	DIRECTIONS: Record the single highest score from above in the box to the right (maximum score = 5).	1

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to U.S. Census data, the population density for Lamar County, TX is 55 persons per square mile. (Lamar County QuickFacts [U.S. Census Bureau]; http://quickfacts.census.gov/qfd/states/48/48277.html)

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of

inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number

of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

There are greater than 26 inhabited structures within 2 miles from the boundary of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the

types of activities that occur and/or structures that are present within two miles of the MRS and circle the

scores that correspond with all the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	 Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering. 	5
Parks and recreational areas	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

There are residential, recreational (Pat Mayse WMA and State Park), agricultural, and commercial land uses within two miles of the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the

types of resources present and circle the score that corresponds with the ecological and/or cultural

resources present on the MRS.

Note: The terms ecological resources and cultural resources are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	There are ecological resources present on the MRS.	3
Cultural resources present	There are cultural resources present on the MRS.	
No ecological or cultural resources present	 There are no ecological resources or cultural resources present on the MRS. 	
ECOLOGICAL AND/OR CULTURAL RESOURCES	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

While several threatened and endangered species are known to inhabit the area in and around Lamar County, there are no known cultural or ecological resources present at the MRS. (RI/FS Report [EOTI, 2014]; Section 2.1.2)

Table 10
Determining the EHE Module Rating

DIRECTIONS:

- 1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
- 2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the EHE Module Total box below.
- 4. Circle the appropriate range for the **EHE Module Total** below.
- 5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value		
Explosive Hazard Factor Data Elements					
Munitions Type	Table 1	30	40		
Source of Hazard	Table 2	10	40		
Accessibility Factor Data Elemen	nts				
Location of Munitions	Table 3	20			
Ease of Access	Table 4	10	35		
Status of Property	Table 5	5			
Receptor Factor Data Elements					
Population Density	Table 6	1			
Population Near Hazard	Table 7	5	44		
Types of Activities/Structures	Table 8	5	11		
Ecological and/or Cultural Resources	Table 9	0			
EHE	MODULE	E TOTAL	86		
EHE Module Total	EHE	Module R	ating		
92 to 100		Α			
82 to 91		В			
71 to 81		С			
60 to 70		D			
48 to 59		E			
38 to 47	F				
less than 38	G				
	Eva	luation Pen	ding		
Alternative Module Ratings	No I	_onger Requ	uired		
	No Known or Suspected Explosive Hazard				
EHE MODULE RATING B					

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with <u>all</u> the CWM configurations known or suspected to be present at the MRS.

Note: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the

Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	 The CWM known or suspected of being present at the MRS are: CWM that are UXO (i.e., CWM/UXO) Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged. 	30
CWM mixed with UXO	The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	 The CWM known or suspected of being present at the MRS are: Nonexplosively configured CWM/DMM either damaged or undamaged Bulk CWM (e.g., ton container). 	15
CAIS K941 and CAIS K942	The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	 Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS. 	0
CWM CONFIGURATION	DIRECTIONS: Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the **CWM Configuration** classifications in the space provided.

There is no historical evidence that CWM was ever used at Camp Maxey. (RI/FS Report [EOTI, 2014]; Section 6.1.3)

Tables 12-19

No known or suspected CWM hazard is expected at this site. Therefore, Tables 12 through 19 have been intentionally omitted according to Active Army Guidance.



Table 20 Determining the CHE Module Rating

DIRECTIONS:

- 1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
- Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
- Add the three Value boxes and record this number in the CHE Module Total box below.
- 4. Circle the appropriate range for the **CHE Module Total** below.
- 5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value		
CWM Hazard Factor Data Elements					
CWM Configuration	Table 11	0	0		
Sources of CWM	Table 12		U		
Accessibility Factor Data Elemen	nts				
Location of CWM	Table 13	-1			
Ease of Access	Table 14				
Status of Property	Table 15	1			
Receptor Factor Data Elements	_				
Population Density	Table 16				
Population Near Hazard	Table 17				
Types of Activities/Structures	Table 18				
Ecological and/or Cultural Resources	Table 19				
CHE	MODULE	TOTAL	0		
CHE Module Total	CHE	Module R	ating		
92 to 100		Α			
82 to 91		В			
71 to 81		С			
60 to 70		D			
48 to 59		E			
38 to 47	F				
less than 38	G				
	Evaluation Pending		ding		
Alternative Module Ratings	No I	_onger Requ	uired		
	No Know	n or Suspec	cted CWM		
CHE MODULE RATING	No Know	n or Suspec Hazard	cted CWM		

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional groundwater contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)		Ratios	
Groundwater samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minant]	
2 > CHF	L (Low)		minantj	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
DIRECTIONS: Circle to	Migratory Pathw he value that corresponds most closely to	r <u>ay Factor</u> o the groundwater migratory pathway at the N	MRS.	
Classification	Des	cription	Value	
Evident		that contamination in the groundwater is present at,	Н	
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		M	
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).			
DIRECTIONS: Circle to	Receptor Face that corresponds most closely to			
Classification	Des	cription	Value	
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).		Н	
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).			
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).			
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value =	nest value from above in the box to the = H).		
	No Kno	wn or Suspected Groundwater MC Hazard		

HHE Module: Surface Water - Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L) Comparison Value (μg/L)		Ratios	
Surface water samples were not collected.				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100 100 > CHF > 2	H (High) M (Medium)	CHF = \(\sum_{\text{imaximum Concentration of Co}} \)	ontaminant]	
2 > CHF	L (Low)	[Comparison Value for Conta	minant]	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	from above in the box to the right		
	Migratory Pathw he value that corresponds most closely to	ay Factor the surface water migratory pathway at the	MRS.	
Classification		ription	Value	
Evident	Analytical data or observable evidence indicates t moving toward, or has moved to a point of exposu	hat contamination in the surface water is present at, ire.	Н	
Potential	Contamination in surface water has moved only s move but is not moving appreciably, or informatio or Confined.	ightly beyond the source (i.e., tens of feet), could n is not sufficient to make a determination of Evident	М	
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single high right (maximum value =			
DIRECTIONS: Circle t	Receptor Fa he value that corresponds most closely to	actor the surface water receptors at the MRS.		
Classification		cription	Value	
Identified	Identified receptors have access to surface water to which contamination has moved or can move.			
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.			
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.			
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum value)			
	No Known or Suspected Su	face Water (Human Endpoint) MC Hazard		

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison** values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios	
Sediment Samples were not collected				
CHF Scale	CHF Value	Sum The Ratios		
CHF > 100	H (High)	— Maximum Concentration of Co	ontominant]	
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Co	Jillailillaillj	
2 > CHF	L (Low)	[Comparison Value for Conta	minant]	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value maximum value = H).	from above in the box to the right		
	Migratory Pathw ne value that corresponds most closely to	ay Factor the sediment migratory pathway at the MRS	S.	
Classification		cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expos	ure.	Н	
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined		ant migration from the source via the sediment to a resence of geological structures or physical controls).	L	
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).			
DIRECTIONS: Circle th	Receptor Fa ne value that corresponds most closely to			
Classification	Des	cription	Value	
Identified	Identified receptors have access to sediment to which contamination has moved or can move.		Н	
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.		М	
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.		L	
RECEPTOR FACTOR	DIRECTIONS: Record the single high the right (maximum val			
	No Known or Suspecte	d Sediment (Human Endpoint) MC Hazard		

HHE Module: Surface Water - Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios	
	Surface water samples v	were not collected.		
CHF Scale	CHF Value	Sum the Ratios		
CHF > 100	H (High)	— [Maximum Concentration of Co	ontaminant]	
100 > CHF > 2	M (Medium)	CHF = [Maximum Concentration of Concentr	·	
2 > CHF	L (Low)	[Comparison Value for Conta	minantj	
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	e from above in the box to the right		
	Migratory Pathy ne value that corresponds most closely t	vay Factor o the surface water migratory pathway at the	MRS.	
Classification		cription	Value	
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expo	that contamination in the surface water is present at, sure.	Н	
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).			
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record the single hig right (maximum value	hest value from above in the box to the = H).		
DIRECTIONS: Circle th	Receptor F ne value that corresponds most closely t	actor o the surface water receptors at the MRS.		
Classification	Des	cription	Value	
Identified	Identified receptors have access to surface water to which contamination has moved or can move.		Н	
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.		М	
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.		L	
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value			
No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard				

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison**

values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional sediment contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Com	parison Value (mg/kg)	Ratios
Sediment samples were not collected.				
CHF Scale	CHF Value		Sum the Ratios	
CHF > 100	H (High)		Maximum Concentration of Co	ntaminant]
100 > CHF > 2	M (Medium)	CHF = \(\sum_{\text{\left}}\)	[Maximum Concentration of Co	
2 > CHF	L (Low)		[Comparison Value for Contar	ninantj
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H).	<u>e</u> from above	in the box to the right	
	Migratory Path he value that corresponds most closely	to the sedime	nt migratory pathway at the MRS	
Classification		scription		Value
Evident	Analytical data or observable evidence indicates moving toward, or has moved to a point of expo		ion in the sediment is present at,	Н
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.			М
Confined	Information indicates a low potential for contampotential point of exposure (possibly due to the			L
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).			
DIRECTIONS: Circle to	Receptor he value that corresponds most closely		nt receptors at the MRS.	
Classification	Des	scription		Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.			Н
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.			М
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.			L
RECEPTOR FACTOR	DIRECTIONS: Record the single hig right (maximum value		om above in the box to the	
	No Known or Suspected	Sediment (Ed	cological Endpoint) MC Hazard	0

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the maximum concentrations of all contaminants in the MRS's surface soil and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface soil contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record the CHF Value. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

	present in the surface soil, select the bi	ox at the bottom of the table.	
Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
		analytical data detected below levels of concern in clealth or ecological risk associated with MC.	other areas of
CHF Scale	CHF Value	Sum the Ratios	
CHF > 100	H (High)	CHF = [Maximum Concentration of Co	ontaminantl
100 > CHF > 2	M (Medium)	[Comparison Value for Conta	minantl
2 > CHF	L (Low)		minantj
CONTAMINANT HAZARD FACTOR	DIRECTIONS: Record the CHF Value (maximum value = H)		
	· ·	to the surface soil migratory pathway at the M	
Classification		scription s that contamination in the surface soil is present at,	Value
Evident	moving toward, or has moved to a point of expo	osure.	Н
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.		М
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).		L
MIGRATORY PATHWAY FACTOR	DIRECTIONS: Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
DIRECTIONS: Circle th	Receptor ne value that corresponds most closely	Factor to the surface soil receptors at the MRS.	
Classification		scription	Value
Identified	Identified receptors have access to surface soil	to which contamination has moved or can move.	Н
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.		М
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.		L
RECEPTOR FACTOR	DIRECTIONS: Record the single high right (maximum value	ghest value from above in the box to the = H).	
	No K	nown or Suspected Surface Soil MC Hazard	

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the media in which these contaminants are present. Then record all contaminants, their maximum concentrations and their comparison values (from Appendix B of the Primer) in the table below. Calculate and record the ratio for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
				1
				-
				+
				+
				1
				+
				+

Determining the HHE Module Rating

DIRECTIONS:

- 1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
- 2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
- 3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)			-	-	
Surface Water/Human Endpoint (Table 22)				1	
Sediment/Human Endpoint (Table 23)				-	
Surface Water/Ecological Endpoint (Table 24)				1	
Sediment/Ecological Endpoint (Table 25)				1	
Surface Soil (Table 26)	-		-		

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING

HHE Ratings (for reference only)

HITE Ratings (for reference only)						
Combination	Rating					
ННН	Α					
ННМ	В					
HHL	-					
НММ	С					
HML	_					
MMM	D					
HLL	E					
MML						
MLL	F					
LLL	G					
	Evaluation Pending					
Alternative Module Ratings	No Longer Required					
	No Known or Suspected MC Hazard					

Table 29 **MRS Priority**

DIRECTIONS: In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical priority for each module. If information to

determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the MRS Priority or Alternative MRS

Rating at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A 1			
Α	2	В	2	Α	2
В	3	С	3	В	3
С	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Susp Haza		No Known or Su Haza	-	No Known or Suspected MC Hazard	
, i	MRS PRIORITY	;	3		