

#### **Munitions Response Site Prioritization Protocol**

Module 3. General Instructions April 2007

### **General Instructions Outline**

- Protocol Structure
- Data Gathering
- Primer Scoring Tables
- Munitions Response Site (MRS) Background Information
- Explosive Hazard Evaluation (EHE) Module and Chemical Warfare Material (CWM) Hazard Evaluation (CHE) Module Scoring and Rating
- Health Hazard Evaluation (HHE) Module Scoring and Rating
- Determining MRS Priority



#### **Protocol Structure**

- The Protocol is composed of three modules that separately evaluate each of the unique hazards associated with UXO, DMM, or MC known or suspected to be present at an MRS
  - Explosive hazards posed by munitions and explosives of concern (MEC) are evaluated using the EHE Module
  - Hazards associated with CWM are evaluated using the CHE Module
  - Health (both acute and chronic) and environmental hazards posed by MC and incidental nonmunitions-related contaminants are evaluated using the HHE Module



#### Protocol Structure (cont)



## **Data Gathering**

- The Protocol was designed to:
  - Maximize use of MRS-specific data
  - Be applied early in the munitions response process
- The MRS Project Team should use the latest and most accurate MRS-specific data available when applying the Protocol
- Data sources may include
  - Preliminary assessments
  - Site inspection reports
  - Environmental baseline studies
  - Records of decision
- Additional data gathering activities may occasionally be required



#### **Primer Scoring Tables**

- The MRS Project Team uses MRS-specific information applicable to the data elements, factors, and modules to complete the Primer Scoring Tables
- The tables allow the MRS Project Team to develop:
  - A SCORE for each data element
  - A VALUE for each factor
  - A RATING for each module
- Completion of all the tables in at least one module results in a relative "PRIORITY" or "ALTERNATIVE MRS RATING" for the MRS under evaluation



#### Primer Scoring Tables (cont)

The Primer scoring tables are found in Appendix A of the Primer





# **MRS Background Information**

- Background information about an MRS is documented in Table A
- Background information includes
  - Identification information (e.g., MRS name, location, etc.)
  - Contact information
  - Brief description of the MRS's conditions
  - A map of the MRS, if available





Map of MRSs

DIRECTIONS: Record availabl FUDS p DMM, c environ found a map of	the background i le from Service ar property information or MC that are known inent), any other at the MRS, and a the MRS.	Tal MRS Backgro information below nd DoD databases ion should be subs own or suspected incidental nonmur iny potentially expo	ble A bund Inf for the M s. If the M stituted. I to be pre nitionsre I osed hum	formation IRS to be evaluat MRS is located or In the MRS Sum isent, the exposu- lated contaminan nan and ecologica	ed. Much of this info a FUDS property, th <b>nary</b> , briefly describe re setting (the MRS's ts (e.g., benzene, tric al receptors. If possit	mation is e suitable the UXO, physical hloroethylene) le, include a		
Munitions Response S	Site Name:							
Component:								
Installation/Property N	ame:							
Location (City, County	/, State):							
Site Name/Project Nar	ne (Project No.):	·						
Date Information Ente Point of Contact (Nam Project Phase (check	red/Updated: e/Phone): only one):							information for the MRS to be evaluated
🗆 PA	🗆 SI	🗆 RI		🗆 FS	🗆 RD			
□ R-C	🗆 RIP	□ R-0		L RC				
Media Evaluated (cheo	ck all that apply)	:				1		
			Sediment (human receptor)				$\rightarrow$	Indicate the media under
			Surface Water (ecological receptor)					evaluation
Sediment (ecolo	ogical receptor)		🗆 Surfa	ace Water (humai	n receptor)			
MRS Summary: MRS Description: Desc the UXO, DMM, or MC I  Description of Pathways  Description of Receptor	cribe the munition known or suspect s for Human and I rs (Human and Ec	isre lated activities ted to be present. Ecological Recept cological):	s that occ When po cors:	urred at the instal ossible, identify m	llation, the dates of o unitions, CWM, and	Deration, and MC by type:		Complete the summary of MRS conditions

## **EHE and CHE Module Scoring**

- Directions to score data element tables in the EHE and CHE Modules are identical
  - EHE Module data elements are found on Tables 1 through 9
  - CHE Module data elements are found on Tables 11 through 19
- Each data element table includes a list of classifications that reflect a range of potential MRS-specific conditions and their corresponding scores
- MRS-specific data are used to score each data element
- The largest single classification score becomes the overall data element score





## EHE and CHE Module Scoring (cont)

Some data elements in the EHE and CHE Modules are scored identically because of similar classifications





# **Determining the EHE and CHE Module Rating**

- Tables 10 and 20 are used to determine the EHE and CHE Module Ratings, respectively
- For both Tables 10 and 20, the data element scores are recorded and summed together to calculate three factor values
- The factor values are summed to determine the EHE and CHE Module Totals
- The EHE and CHE Module Totals each correspond to a letter rating (found on the bottom of Tables 10 and 20) that becomes the Module Rating
- An MRS can also receive one of three alternative module ratings
  - Evaluation Pending
  - No Longer Required
  - No Known or Suspected Hazard
- The EHE and CHE Module Rating will be used to determine the MRS's relative priority or alternative rating based on known or suspected explosive or CWM hazards present



#### **Determining the EHE and CHE Module Rating** (cont)

S	ample Table	Enter the Hazard Factor		
DIRECTIONS	CWM Hazard Factor Data Eleme	ents	Value by summing the data	
	CWM Configuration	Table 11	element scores	
<ol> <li>From Tables 11–19, record the data element scores in the</li> </ol>	Sources of CWM	Table 12		
Score boxes to the right.	Accessibility Factor Data Eleme	ents	Enter the Accessibility	
2. Add the <b>Score</b> boxes for each	Location of CWM	Table 13	Eactor Value by summing	
this number in the <b>Value</b> boxes	Ease of Access	Table 14	the data element scores	
to the right.	Status of Property	Table 15	the data element scores	
3. Add the three <b>Value</b> boxes and record this number in the <b>CHF</b>	Receptor Factor Data Elements			
Module Total box below.	Population Density	Table 16	Enter the Receptor Factor	
4. Circle the appropriate range for	Population Near Hazard	Table 17	Value by summing the data	
the CHE Module Total below.	Types of Activities/Structures	Table 18	element scores	
5. Circle the CHE Module Rating	Ecological and/or Cultural Resources	Table 19		
selected and record this value in the CHE Module Rating box	СНЕ	MODULE TOTAL	Add the three factor values	
found at the bottom of the table.	CHE Module Total	CHE Module Rating		
Note:	92 to 100	А	1	
An alternative module rating may be	82 to 91	В	Select the Module Rating that	
inappropriate. An alternative module	71 to 81	С	corresponds with the Module	
needed to score one or more data	60 to 70	D	Total calculated above	
elements, contamination at an MRS was previously addressed, or there is no	48 to 59	E		
reason to suspect contamination was	38 to 47	F		
	less than 38	G		
		Evaluation Pending		
	Alternative Module Ratings	No Longer Required		
		No Known or Suspected CWM Hazard	Record the Module Rating in	
	CHE MODULE RATING		the Module Pating hov	

# **HHE Module Scoring**

- Similar to the EHE and CHE Modules, the HHE Module has three factors Contaminant Hazard, Migration Pathway, and Receptor that limit the influence of any one factor on the HHE Module Rating
- However, the three factors are used to evaluate four distinct environmental media – groundwater, surface water, sediments, and surface soils
- Each medium has a specific table associated with it
  - The three factors are scored on the same table
  - Human and ecological receptors for surface water and sediments are evaluated on separate tables
- Each HHE Module factor is assigned a value High (H), Medium (M), or Low (L) based on established classifications within the factor



#### HHE Module Scoring (cont)



#### **Determining the HHE Module Rating**

- For each medium evaluated, the three factor values are grouped together to determine a three-letter combination, such that the combination is ranked from highest to lowest (e.g., HHH, HML, LLL)
- Each three-letter combination is assigned one of seven letter ratings (i.e., A – G)
- The HHE Module Rating is the single highest letter rating from across all four media (A is the highest; G is the lowest)
- An MRS can also receive one of three alternative module ratings –
  - Evaluation Pending
  - No Longer Required
  - No Known or Suspected Hazard



#### **Determining the HHE Module Rating** (cont)

	Dete	Tab rmining the H	<b>le 28</b> IHE Module I	Rating		
DIRECTIONS: 1. Record the left Receptor Factor 2. Record the main (three letter of 3. Using the HHI letter in the co	tter values (H, M ctors for the me edia's three lett ombinations are E Ratings prov prresponding Me	A, L) for the <b>Co</b> dia (from Tabl er combinatior arranged fron ided below, de edia Rating bo	ontaminant H es 21–26) in i ns in the <b>Thre</b> n Hs to Ms to termine each ox below.	lazard, Migration Pa the corresponding bo e Letter Combination Ls). media's rating (A–G	athway, and oxes below. on boxes below ) and record the	
Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	ThreeL etter Combination (HsMs L s)	Media Rating (AG)	
Groundwater						
Surface Water/Human Endpoint (Table 22)						t
Sediment/Human Endpoint (Table 23)						$\rightarrow$
Surface Water/Ecological Endpoint (Table 24)						I
Sediment/Ecological Endpoint (Table 25)						
Surface Soil (Table 26)						
DIRECTIONS (cont.	.):		HHE	MODULE RATING		
4. Select the sing	gle highest Med	ia Rating (A	HHE	Ratings (for referen	nce only)	
in the HHE Mo	odule Rating b	DX.	Combination		Rating	
			ННН		A	
Note:			ННМ		В	
An alternative modul	e rating may be r rating is inapp	assigned	HHL		с	
alternative module ra	ating is used wh	en more	HML			
information is needed to score one or more			МММ		D	
addressed or there	media, contamination at an MRS was previously addressed, or there is no reason to suspect			HLL		
contamination was ever present at an MRS.			MML		L	
			MLL		F	
					6	
			Alternative Module Ratings		Evaluation Pending No Longer Required	
					No Known or Suspected MC Hazard	

Record the values for each factor of each medium

- Arrange the factor values for each medium from highest (H) to lowest (L) to determine the three-letter combination
- Use the HHE Rating reference section to determine the appropriate Media Rating
- Record the highest Media Rating from above (A is highest, G is lowest) . This is the HHE Module Rating

# **Determining MRS Priority**

- Table 29 is used to determine the MRS Priority or Alternative MRS Rating, based on the module with the highest potential hazard rating
- MRSs are assigned one of eight numerical priorities (1-8) or to one of the three alternative ratings below –
  - Evaluation Pending
  - No Longer Required
  - No Known or Suspected Hazard
- The three module ratings are independent (i.e., they are not added together)
- At least one module must be completed to assign an MRS a relative priority or alternative rating



# Determining MRS Priority (cont)

Alternative MRS ratings defined –

- Evaluation Pending There are known or suspected hazards but sufficient information is not available to populate the nine data elements of the module
- No Longer Required The MRS no longer requires an assigned priority because –
  - DoD has conducted a response
  - DoD has achieved all DoD objectives set out in the decision document for the MRS
  - No further action, except for long-term management and recurring reviews, is required
- No Known or Suspected Hazard The MRS does not require evaluation under the module



#### Determining MRS Priority (cont)

Select the EHE Priority that corresponds with the EHE Module Rating on Table 10

# 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

Table 29 MRS Priority

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	
g		Δ	1	g		
Δ	2	B 2		Δ 2		
B	3	C C	3	B	3	
С	4	D	4	С	4	
D	5	Е	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	pected Explosive ard	No Known or Suspec	cted CWM Hazard	No Known or Suspected MC Hazard		
Ν			-			

Select the CHE Priority that corresponds with the CHE Module Rating on Table 20

Select the HHE Priority that corresponds with the HHE Module Rating on Table 28

The MRS Priority is the single highest priority of the three modules unless an Alternative MRS Rating is appropriate

# **General Instructions**

**Questions?** 

