

Pt. 179, App. A

32 CFR Ch. I (7–1–14 Edition)

(13) Short-term and long-term ecological effects and environmental impacts in general, including injuries to natural resources.

(b) *Procedures and documentation for sequencing decisions.* (1) Each installation or FUDS is required to develop and maintain a Management Action Plan (MAP) or its equivalent. Sequencing decisions, which will be documented in the MAP at military installations and FUDS, shall be developed with input from appropriate regulators and stakeholders (*e.g.*, community members of an installation's restoration advisory board or technical review committee). If the sequencing of an MRS is changed from the sequencing reflected in the current MAP, information documenting the reasons for the sequencing change will be provided for inclusion in the MAP. Notice of the change in the sequencing shall be provided to those regulators and stakeholders that provided input to the sequencing process.

(2) In addition to the information on prioritization, the Components shall ensure that information provided by regulators and stakeholders that may influence the sequencing of an MRS is included in the Administrative Record and the Information Repository.

(3) Components shall report the results of sequencing to ODUSD(I&E) (or successor organizations). ODUSD(I&E) shall compile the sequencing results reported by each Component and publish the sequencing in the report on environmental restoration activities for that fiscal year. If sequencing decisions result in action at an MRS with a lower MRS priority ahead of an MRS with a higher priority, specific justification shall be provided to the ODUSD(I&E).

**APPENDIX A TO PART 179—TABLES OF
THE MUNITIONS RESPONSE SITE
PRIORITIZATION PROTOCOL**

The tables in this Appendix are solely for use in implementing 32 CFR part 179.

| Table 1 Classifications Within the EHE Module <i>Munitions Type</i> Data Element | | |
|---|---|-------|
| Classification | Description | Score |
| Sensitive | <ul style="list-style-type: none"> All UXO that are considered 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). All 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) | <ul style="list-style-type: none"> All UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." All DMM containing a high-explosive filler that have: <ul style="list-style-type: none"> Been damaged by burning or detonation Deteriorated to the point of instability. | 25 |
| Pyrotechnic (used or damaged) | <ul style="list-style-type: none"> All UXO containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades). All DMM containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades) that have: <ul style="list-style-type: none"> Been damaged by burning or detonation Deteriorated to the point of instability. | 20 |
| High explosive (unused) | <ul style="list-style-type: none"> All DMM containing a high explosive filler that: <ul style="list-style-type: none"> Have not been damaged by burning or detonation Are not deteriorated to the point of instability. | 15 |
| Propellant | <ul style="list-style-type: none"> All UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., rocket motor). All DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., rocket motor) that are: <ul style="list-style-type: none"> Damaged by burning or detonation Deteriorated to the point of instability. | 15 |
| Bulk secondary high explosives, pyrotechnics, or propellant | <ul style="list-style-type: none"> All DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., rocket motor), that are deteriorated. 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 |

| Table 1 Classifications Within the EHE Module <i>Munitions Type</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| Pyrotechnic (not used or damaged) | <ul style="list-style-type: none"> All DMM containing a pyrotechnic fillers (i.e., red phosphorous), other than white phosphorous filler, that: <ul style="list-style-type: none"> Have not been damaged by burning or detonation Are not deteriorated to the point of instability. | 10 |
| Practice | <ul style="list-style-type: none"> All UXO that are practice munitions that are not associated with a sensitive fuze. All DMM that are practice munitions that are not associated with a sensitive fuze and that have not: <ul style="list-style-type: none"> Been damaged by burning or detonation Deteriorated to the point of instability. | 5 |
| Riot control | <ul style="list-style-type: none"> All UXO or DMM containing a riot control agent filler (e.g., tear gas). | 3 |
| Small arms | <ul style="list-style-type: none"> All 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 | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> <i>Former</i> (as in "former military range") means the MRS is a location that was (1) closed by a formal decision made by the Component with administrative control over the location, or (2) put to a use incompatible with the presence of UXO, DMM, or MC. <i>Historical evidence</i> means the investigation: (1) found written documents or records, (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information. <i>Physical evidence</i> means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or munitions debris (e.g., fragments, penetrators, projectiles, shell casings, links, fins); (2) the results of field or laboratory sampling and analysis procedures; or (3) the results of geophysical investigations. <i>Practice munitions</i> means munitions that contain an inert filler (e.g., wax, sand, concrete), a spotting charge (i.e., a small charge of red phosphorus, photoflash powder, or black powder used to indicate the point of impact), and a fuze. The term <i>small arms ammunition</i> means ammunition, without projectiles that contain explosives (other than tracers), that is .50 caliber or smaller, or for shotguns. | | |

| Table 2 Classifications Within the EHE Module <i>Source of Hazard</i> Data Element | | |
|---|--|-------|
| Classification | Description | Score |
| Former range | <ul style="list-style-type: none"> 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, associated buffer and safety zones, firing points, and live-fire maneuver areas. | 10 |
| Former munitions treatment (i.e., OB/OD) unit | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> The MRS is a former military range on which only practice munitions without sensitive fuzes were used. | 6 |
| Former maneuver area | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility. | 4 |
| Former firing points | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |

Notes:

- *Former* (as in “former military range”) means the MRS is a location that was (1) closed by a formal decision made by the Component with administrative control over the location, or (2) put to a use incompatible with the presence of UXO, DMM, or MC.
- *Historical evidence* means the investigation: (1) found written documents or records, (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information.
- *Physical evidence* means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or munitions debris (e.g., fragments, penetrators, projectiles, shell casings, links, fins); (2) the results of field or laboratory sampling and analysis procedures; or (3) the results of geophysical investigations.
- *Practice munitions* means munitions that contain an inert filler (e.g., wax, sand, concrete), a spotting charge (i.e., a small charge of red phosphorus, photoflash powder, or black powder used to indicate the point of impact), and a fuze.
- The term *small arms ammunition* means ammunition, without projectiles that contain explosives (other than tracers), that is .50 caliber or below, or for shotguns.

| Table 3 Classifications Within the EHE Module <i>Information on the Location of Munitions Data</i> Element | | |
|--|--|-------|
| Classification | Description | Score |
| Confirmed surface | <ul style="list-style-type: none"> Physical evidence indicates that there are UXO or DMM on the surface of the MRS. Historical evidence (e.g., a confirmed incident report or accident report) indicates there are UXO or DMM on the surface of the MRS. | 25 |
| Confirmed subsurface, active | <ul style="list-style-type: none"> 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, heat 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, heat 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 | <ul style="list-style-type: none"> 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) | <ul style="list-style-type: none"> 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) | <ul style="list-style-type: none"> There is historical evidence indicating that UXO or DMM may be present at the MRS. | 5 |
| Subsurface, physical constraint | <ul style="list-style-type: none"> 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 |

| Table 3 Classifications Within the EHE Module <i>Information on the Location of Munitions</i> Data Element | | |
|---|---|-------|
| Classification | Description | Score |
| Small arms (regardless of location) | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> <i>Historical evidence</i> means the investigation: (1) found written documents or records, (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information. <i>Physical evidence</i> means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or munitions debris (e.g., fragments, penetrators, projectiles, shell casings, links, fins); (2) the results of field or laboratory sampling and analysis procedures; or (3) the results of geophysical investigations. <i>In the subsurface</i> means the munition (i.e., a DMM or UXO) is (1) entirely beneath the ground surface, or (2) fully submerged in a water body. <i>On the surface</i> means the munition (i.e., a DMM or UXO) is (1) entirely or partially exposed above the ground surface (i.e., above the soil layer), or (2) entirely or partially exposed above the surface of a water body (e.g., as a result of tidal activity). The term <i>small arms ammunition</i> means ammunition, without projectiles that contain explosives (other than tracers), that is .50 caliber or smaller, or for shotguns. | | |

| Table 4 Classifications Within the EHE Module <i>Ease of Access</i> Data Element | | |
|--|---|-------|
| Classification | Description | Score |
| No barrier | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> <i>Barrier</i> means a natural obstacle or obstacles (e.g., difficult terrain, dense vegetation, deep or fast-moving water), a man-made obstacle or obstacles (e.g., fencing), or a combination of natural and man-made obstacles. | | |

| Table 5 Classifications Within the EHE <i>Status of Property</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| Non-DoD control | <ul style="list-style-type: none"> The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by the Department. 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. | 5 |
| Scheduled for transfer from DoD control | <ul style="list-style-type: none"> The MRS is on land or is a water body that is owned, leased, or otherwise possessed by the Department, and the Department 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 rule is applied. | 3 |
| DoD control | <ul style="list-style-type: none"> The MRS is on land or is a water body that is owned, leased, or otherwise possessed by the Department. With respect to property that is leased or otherwise possessed, the Department must control access to the MRS 24 hours per day, every day of the calendar year. | 0 |

| Table 6 Classifications Within the EHE Module <i>Population Density</i> Data Element | | |
|--|---|-------|
| Classification | Definition | Score |
| > 500 persons per square mile | <ul style="list-style-type: none"> There are more than 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data. | 5 |
| 100 to 500 persons per square mile | <ul style="list-style-type: none"> There are 100 to 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data. | 3 |
| < 100 persons per square mile | <ul style="list-style-type: none"> There are fewer than 100 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data. | 1 |
| Notes: <ul style="list-style-type: none"> If an MRS is in more than one county, the Component will use the largest population value among those counties. If the MRS is within or borders a city or town, the population density for that city or town, instead of the county population density, is used. | | |

| Table 7 Classifications Within the EHE Module <i>Population Near Hazard</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| 26 or more structures | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> The term <i>inhabited structures</i> means permanent or temporary structures, other than military munitions-related structures, that are routinely occupied by one or more persons for any portion of a day. | | |

| Table 8 Classifications Within the EHE Module <i>Types of Activities/Structures</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| Residential, educational, commercial, or subsistence | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary. | 1 |
| Notes: <ul style="list-style-type: none"> The term <i>inhabited structures</i> means permanent or temporary structures, other than Department-related structures, that are routinely occupied by one or more persons for any portion of a day. | | |

| Table 9 Classifications Within the EHE Module <i>Ecological and/or Cultural Resources</i> Data Element | | |
|---|---|-------|
| Classification | Description | Score |
| Ecological and cultural resources present | <ul style="list-style-type: none"> There are both ecological and cultural resources present on the MRS. | 5 |
| Ecological resources present | <ul style="list-style-type: none"> There are ecological resources present on the MRS. | 3 |
| Cultural resources present | <ul style="list-style-type: none"> There are cultural resources present on the MRS. | 3 |
| No ecological or cultural resources present | <ul style="list-style-type: none"> There are no ecological resources or cultural resources present on the MRS. | 0 |
| Notes: <ul style="list-style-type: none"> <i>Ecological resources</i> means that (1) a threatened or endangered species (designated under the Endangered Species Act [ESA]) is present on the MRS; or (2) the MRS is designated under the ESA as critical habitat for a threatened or endangered species; or (3) there are identified sensitive ecosystems such as wetlands or breeding grounds present on the MRS. <i>Cultural resources</i> means there are recognized cultural, traditional, spiritual, religious, or historical features (e.g., structures, artifacts, symbolism) on the MRS. Requirements for determining if a particular feature is a cultural resource are found in the <i>National Historic Preservation Act</i>, <i>Native American Graves Protection and Repatriation Act</i>, <i>Archeological Resources Protection Act</i>, <i>Executive Order 13007</i>, and the <i>American Indian Religious Freedom Act</i>. As examples: American Indians or Alaska Natives deem an MRS to be of religious significance; there are areas used by American Indians or Alaska Natives for subsistence activities (e.g., hunting, fishing). | | |

| Table 10 Determining the EHE Rating from the EHE Module Score | |
|--|--|
| Overall EHE Module Score | EHE Rating |
| The MRS has an overall EHE module score from 92 to 100. | EHE Rating A |
| The MRS has an overall EHE module score from 82 to 91. | EHE Rating B |
| The MRS has an overall EHE module score from 71 to 81. | EHE Rating C |
| The MRS has an overall EHE module score from 60 to 70. | EHE Rating D |
| The MRS has an overall EHE module score from 48 to 59. | EHE Rating E |
| The MRS has an overall EHE module score from 38 to 47. | EHE Rating F |
| The MRS has an overall EHE module score less than 38. | EHE Rating G |
| Alternative Module Ratings | Evaluation Pending |
| | No Longer Required |
| | No Known or Suspected Explosive Hazard |

| Table 11 Classifications Within the CHE Module <i>CWM Configuration</i> Data Element | | |
|---|--|-------|
| Classification | Description | Score |
| CWM, explosive configuration, either UXO or damaged DMM | The CWM known or suspected of being present at the MRS is: <ul style="list-style-type: none"> Explosively configured 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 | <ul style="list-style-type: none"> The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged, or nonexplosively configured CWM/DMM, or CWM not configured as a munition, that are commingled with conventional munitions that are UXO. | 25 |
| CWM, explosive configuration that are DMM (undamaged) | <ul style="list-style-type: none"> The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged. | 20 |
| CWM, not explosively configured or CWM, bulk container | The CWM known or suspected of being present at the MRS is: <ul style="list-style-type: none"> Nonexplosively configured CWM/DMM. Bulk CWM/DMM (e.g., ton container). | 15 |
| CAIS K941 and CAIS K942 | <ul style="list-style-type: none"> The CWM/DMM known or suspected of being present at the MRS is CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11. | 12 |
| CAIS (chemical agent identification sets) | <ul style="list-style-type: none"> Only CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS. | 10 |
| Evidence of no CWM | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> The term <i>CWM/UXO</i> means CWM that are UXO. The notation <i>CWM/DMM</i> means CWM that are DMM, to include CAIS K941, toxic gas set M-1; and K942, toxic gas set M-2/E11. The term <i>CAIS/DMM</i> means CAIS, other than CAIS K941 and K942. <i>Historical evidence</i> means the investigation: (1) found written documents or records, (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information. <i>Physical evidence</i> means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or munitions debris (e.g., fragments, penetrators, projectiles, shell casings, links, fins); (2) the results of field or laboratory sampling and analysis procedures; or (3) the results of geophysical investigations. | | |

| Table 12 Classifications Within the CHE Module <i>Sources of CWM</i> Data Element | | |
|---|---|-------|
| Classification | Description | Score |
| Live-fire involving CWM | <ul style="list-style-type: none"> The MRS is a former military range that supported live-fire of explosively configured CWM and the CWM/UXO are known or suspected of being present on the surface or in the subsurface. The MRS is a former military range that supported live-fire with conventional munitions, and CWM/DMM are on the surface or in the subsurface commingled with conventional munitions that are UXO. | 10 |
| Damaged CWM/DMM surface or subsurface | <ul style="list-style-type: none"> There are damaged CWM/DMM on the surface or in the subsurface at the MRS. | 10 |
| Undamaged CWM/DMM surface | <ul style="list-style-type: none"> There are undamaged CWM/DMM on the surface at the MRS. | 10 |
| CAIS/DMM surface | <ul style="list-style-type: none"> There are CAIS/DMM on the surface. | 10 |
| Undamaged CWM/DMM, subsurface | <ul style="list-style-type: none"> There are undamaged CWM/DMM in the subsurface at the MRS. | 5 |
| CAIS/DMM subsurface | <ul style="list-style-type: none"> There are CAIS/DMM in the subsurface at the MRS. | 5 |
| Former CA or CWM Production Facilities | <ul style="list-style-type: none"> The MRS is a facility that formerly engaged in production of CA or CWM, and CWM/DMM is suspected of being present on the surface or in the subsurface. | 3 |
| Former Research, Development, Testing, and Evaluation (RDT&E) facility using CWM | <ul style="list-style-type: none"> The MRS is at a facility that formerly was involved in non-live-fire RDT&E activities (including static testing) involving CWM, and there are CWM/DMM suspected of being present on the surface or in the subsurface. | 3 |
| Former Training Facility using CWM or CAIS | <ul style="list-style-type: none"> The MRS is a location that formerly was involved in training activities involving CWM and/or CAIS (e.g., training in recognition of CWA, decontamination training) and CWM/DMM or CAIS/DMM are suspected of being present on the surface or in the subsurface. | 2 |
| Former Storage or Transfer points of CWM | <ul style="list-style-type: none"> The MRS is a former storage facility or transfer point (e.g., intermodal transfer) for CWM. | 1 |
| Evidence of no CWM | <ul style="list-style-type: none"> 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 |

Notes:

- The term *CWM /UXO* means CWM that are UXO.
- The notation *CWM/DMM* means CWM that are DMM, to include CAIS K941, toxic gas set M-1; and K942, toxic gas set M-2/E11.
- The term *CAIS/DMM* means CAIS, other than CAIS K941 and K942.
- *Historical evidence* means the investigation: (1) found written documents or records, (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information.
- *Physical evidence* means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or munitions debris (e.g., fragments, penetrators, projectiles, shell casings, links, fins); (2) the results of field or laboratory sampling and analysis procedures; or (3) the results of geophysical investigations.
- *In the subsurface* means the CWM (i.e., a DMM or UXO) is (1) entirely beneath the ground surface, or (2) fully submerged in a water body.
- *On the surface* means the CWM (i.e., a DMM or UXO) is (1) entirely or partially exposed above the ground surface (i.e., above the soil layer), or (2) entirely or partially exposed above the surface of a water body (e.g., as a result of tidal activity).

| Table 13 Classifications Within the CHE Module <i>Information on the Location of CWM</i> Data Element | | |
|--|---|-------|
| Classification | Description | Score |
| Confirmed surface | <ul style="list-style-type: none"> Physical evidence indicates that there are CWM on the surface of the MRS. Historical evidence (e.g., a confirmed incident report or accident report) indicates there are CWM on the surface of the MRS. | 25 |
| Confirmed subsurface, active | <ul style="list-style-type: none"> Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM. Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM. | 20 |
| Confirmed subsurface, stable | <ul style="list-style-type: none"> Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed. Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed. | 15 |
| Suspected (physical evidence) | <ul style="list-style-type: none"> There is physical evidence, other than the documented presence of CWM, indicating that CWM may be present at the MRS. | 10 |
| Suspected (historical evidence) | <ul style="list-style-type: none"> There is historical evidence indicating that CWM may be present at the MRS. | 5 |
| Subsurface, physical constraint | <ul style="list-style-type: none"> There is physical or historical evidence indicating that CWM 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 CWM. | 2 |

| Table 13 Classifications Within the CHE Module <i>Information on the Location of CWM</i> Data Element | | |
|---|---|-------|
| Classification | Description | Score |
| Evidence of no CWM | <ul style="list-style-type: none"> Following investigation of the MRS, there is physical evidence that there is no CWM present or there is historical evidence indicating that no CWM are present. | 0 |
| Notes: <ul style="list-style-type: none"> <i>Historical evidence</i> means the investigation: (1) found written documents or records, (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information. <i>Physical evidence</i> means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or munitions debris (e.g., fragments, penetrators, projectiles, shell casings, links, fins); (2) the results of field or laboratory sampling and analysis procedures; or (3) the results of geophysical investigations. <i>In the subsurface</i> means the CWM (i.e., a DMM or UXO) is (1) entirely beneath the ground surface, or (2) fully submerged in a water body. <i>On the surface</i> means the CWM (i.e., a DMM or UXO) is (1) entirely or partially exposed above the ground surface (i.e., above the soil layer), or (2) entirely or partially exposed above the surface of a water body (e.g., as a result of tidal activity). | | |

| Table 14 Classifications Within the CHE Module <i>Ease of Access</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| No barrier | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> <i>Barrier</i> means a natural obstacle or obstacles (e.g., difficult terrain, dense vegetation, deep or fast moving water), a man-made obstacle or obstacles (e.g., fencing), or a combination of natural and man-made obstacles. | | |

| Table 15 Classifications Within the CHE Module <i>Status of Property</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| Non-DoD control | <ul style="list-style-type: none"> The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by the Department. 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. | 5 |
| Scheduled for transfer from DoD control | <ul style="list-style-type: none"> The MRS is on land or is a water body that is owned, leased, or otherwise possessed by the Department, and the Department plans to transfer that land or water body to 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 rule is applied. | 3 |
| DoD control | <ul style="list-style-type: none"> The MRS is on land or is a water body that is owned, leased, or otherwise possessed by the Department. With respect to property that is leased or otherwise possessed, the Department controls access to the property 24 hours per day, every day of the calendar year. | 0 |

| Table 16 Classifications Within the CHE Module <i>Population Density</i> Data Element | | |
|--|---|-------|
| Classification | Definition | Score |
| > 500 persons per square mile | <ul style="list-style-type: none"> There are more than 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data. | 5 |
| 100 to 500 persons per square mile | <ul style="list-style-type: none"> There are 100 to 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data. | 3 |
| < 100 persons per square mile | <ul style="list-style-type: none"> There are fewer than 100 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data. | 1 |
| Notes: <ul style="list-style-type: none"> If an MRS is in more than one county, the Component will use the largest population value among those counties. If the MRS is within or borders a city or town, the population density for that city or town, instead of the county population density, is used. | | |

| Table 17 Classifications Within the CHE Module <i>Population Near Hazard</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| 26 or more structures | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
| Notes: <ul style="list-style-type: none"> The term <i>inhabited structures</i> means permanent or temporary structures, other than military munitions-related structures, that are routinely occupied by one or more persons for any portion of a day. | | |

| Table 18 Classifications Within the CHE Module <i>Types of Activities/Structures</i> Data Element | | |
|--|--|-------|
| Classification | Description | Score |
| Residential, educational, commercial, or subsistence | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary. | 1 |
| Notes: <ul style="list-style-type: none"> The term <i>inhabited structures</i> means permanent or temporary structures, other than Department-related structures, that are routinely occupied by one or more persons for any portion of a day. | | |

| Table 19 Classifications Within the CHE Module <i>Ecological and/or Cultural Resources</i> Data Element | | |
|---|---|-------|
| Classification | Description | Score |
| Ecological and cultural resources present | <ul style="list-style-type: none"> There are both ecological and cultural resources present on the MRS. | 5 |
| Ecological resources present | <ul style="list-style-type: none"> There are ecological resources present on the MRS. | 3 |
| Cultural resources present | <ul style="list-style-type: none"> There are cultural resources present on the MRS. | 3 |
| No ecological or cultural resources present | <ul style="list-style-type: none"> There are no ecological resources or cultural resources present on the MRS. | 0 |
| Notes: <ul style="list-style-type: none"> <i>Ecological resources</i> means that: (1) a threatened or endangered species (designated under the Endangered Species Act [ESA]) is present on the MRS; or (2) the MRS is designated under the ESA as critical habitat for a threatened or endangered species; or (3) there are identified sensitive ecosystems such as wetlands or breeding grounds present on the MRS. <i>Cultural resources</i> means there are recognized cultural, spiritual, traditional, religious, or historical features (e.g., structures, artifacts, symbolism) on the MRS. Requirements for determining if a particular feature is a cultural resource are found in <i>the National Historic Preservation Act, Native American Graves Protection and Repatriation Act, Archeological Resources Protection Act, Executive Order 13007, and the American Indian Religious Freedom Act</i>. As examples: American Indians or Alaska Natives deem an MRS to be of spiritual significance; there are areas that are used by American Indians or Alaska Natives for subsistence activities (e.g., hunting, fishing). | | |

| Table 20 Determining the CHE Rating from the CHE Module Score | |
|--|----------------------------------|
| Overall CHE Module Score | CHE Rating |
| The MRS has an overall CHE module score from 92 to 100. | CHE Rating A |
| The MRS has an overall CHE module score from 82 to 91. | CHE Rating B |
| The MRS has an overall CHE module score from 71 to 81. | CHE Rating C |
| The MRS has an overall CHE module score from 60 to 70. | CHE Rating D |
| The MRS has an overall CHE module score from 48 to 59. | CHE Rating E |
| The MRS has an overall CHE module score from 38 to 47. | CHE Rating F |
| The MRS has an overall CHE module score less than 38. | CHE Rating G |
| Alternative Module Ratings | Evaluation Pending |
| | No Longer Required |
| | No Known or Suspected CWM Hazard |

| Table 21 HHE Factor Levels | | | | | |
|-------------------------------|------------|-----------------|------------|--------------------------|------------|
| Contaminant Hazard Factor | | Receptor Factor | | Migration Pathway Factor | |
| Significant | High (H) | Identified | High (H) | Evident | High (H) |
| Moderate | Middle (M) | Potential | Middle (M) | Potential | Middle (M) |
| Minimal | Low (L) | Limited | Low (L) | Confined | Low (L) |

| Table 22 HHE Three-letter Combination Levels | | | | |
|---|-----------------|-------------------|-----------|----------|
| Contaminant Hazard Factor | Receptor Factor | Migration Pathway | | |
| | | Evident | Potential | Confined |
| Significant | Identified | HHH | HHM | HHL |
| | Potential | HHM | HMM | HML |
| | Limited | HHL | HML | HLL |
| Moderate | Identified | HHM | HMM | HML |
| | Potential | HMM | MMM | MML |
| | Limited | HML | MML | MLL |
| Minimal | Identified | HHL | HML | HLL |
| | Potential | HML | MML | MLL |
| | Limited | HLL | MLL | LLL |

| Table 23 HHE Module Ratings | |
|--------------------------------|---------------------------------|
| Combination | Rating |
| HHH | A |
| HHM | B |
| HHL | C |
| HMM | |
| HML | D |
| MMM | |
| HLL | E |
| MML | |
| MLL | F |
| LLL | G |
| Alternative Module Ratings | Evaluation Pending |
| | No Longer Required |
| | No Known or Suspected MC Hazard |

| Table 24 HHE Module Rating | | | | |
|-------------------------------|-----------------|-------------------|-----------|----------|
| Contaminant Hazard Factor | Receptor Factor | Migration Pathway | | |
| | | Evident | Potential | Confined |
| Significant | Identified | A | B | C |
| | Potential | B | C | D |
| | Limited | C | D | E |
| Moderate | Identified | B | C | D |
| | Potential | C | D | E |
| | Limited | D | E | F |
| Minimal | Identified | C | D | E |
| | Potential | D | E | F |
| | Limited | E | F | G |

| Table 25 MRS Priority Based on Highest Hazard Evaluation Module Rating | | | | | |
|---|----------|----------------------------------|----------|----------------------------------|----------|
| EHE Module Rating | Priority | CHE Module Rating | Priority | HHE Module Rating | Priority |
| | | Hazard Evaluation A (Highest) | 1 | | |
| Hazard Evaluation A (Highest) | 2 | Hazard Evaluation B | 2 | Hazard Evaluation A (Highest) | 2 |
| Hazard Evaluation B | 3 | Hazard Evaluation C | 3 | Hazard Evaluation B | 3 |
| Hazard Evaluation C | 4 | Hazard Evaluation D | 4 | Hazard Evaluation C | 4 |
| Hazard Evaluation D | 5 | Hazard Evaluation E | 5 | Hazard Evaluation D | 5 |
| Hazard Evaluation E | 6 | Hazard Evaluation F | 6 | Hazard Evaluation E | 6 |
| Hazard Evaluation F | 7 | Hazard Evaluation G (Lowest) | 7 | Hazard Evaluation F | 7 |
| Hazard Evaluation G (Lowest) | 8 | | | Hazard Evaluation G (Lowest) Low | 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 | |