

Appendix G - Risk Management Methodology Tables

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New Risk Management Methodology Feedback Form

Formerly Used Defense Site (FUDS) Property/Project Number: Rocket Range North and Burial North (MRS 01)

Property Name: Assateague Island

Project Name: Assateague Island Remedial Investigation through Decision Document

Munitions Response Site Prioritization Protocol (MRSPP) Overall Score: Alternate Rating – No Known or Suspected Hazard

1. List historically known or suspected munitions and specify what evidence of Munitions and explosives of concern (MEC) was found during characterization.

Munitions Response Site (MRS) 01 was formerly an air-to-ground practice rocket, bombing, and strafing range. After use of the range was discontinued, surface debris in the target area was reportedly cleaned up and buried onsite. Known or suspected munitions that were historically used at MRS 01 include practice rockets, practice bombs, and 20-millimeter (mm) Training Practice (TP) projectiles (one TP projectile and one casing). Over ninety-nine percent of the documented munitions debris (MD) was from practice rockets, with less than one percent of the documented MD being associated with inert 20-mm projectiles and practice bombs. All the MD from practice rockets and 20-mm practice projectiles had been fired and practice bombs contained no evidence of spotting charges; and thus, had no explosive content.

Amount of MEC Justification (refer to Matrix 1): During previous investigations and the Remedial Investigation (RI), MD from the following munitions was identified at MRS 01: 2.25-inch (in.) practice rockets, 3.25-in. practice rockets, 3.5-in. practice rockets, 5-in. practice rockets, 3-pound (lb) Mark (Mk) 23 practice bomb, 4.5-lb Mk 43 practice bomb, and 20-mm TP projectiles (one TP projectile and one casing). No evidence of the use of live munitions (i.e., containing explosives) has been found at MRS 01. The 2.25-in. practice rockets, 3.25-in. practice rockets, 3.5-in. practice rockets, 5-in. practice rockets and the 20-mm TP projectile can contain propellant and the 3-lb Mk 23 practice bombs, 4.5-lb Mk 43 practice bombs can contain spotting charges, if they did not function as intended. Over ninety-nine percent of the documented MD was from practice rockets, with less than one percent of the documented MD being associated with inert 20-mm projectiles and practice bombs. All MD identified to date has been fired, expending the potential explosive components and have been determined to be material documented as safe (MDAS). MDAS from a 3-lb Mk 23 and 4.5-lb Mk 43 was observed without spotting charges; however, if a practice bomb contained a spotting charge that did not function as intended, it would be considered MEC. The RI at MRS 01 did not identify evidence of a MEC presence; however, MEC presence is possible based on historical evidence of munitions use.

Sensitivity Justification (refer to Matrix 3): All of the MD found to date are from practice munitions that contain no explosive components. Once fired, the practice rockets, inert 20-mm projectiles, and practice bombs no longer present an explosive hazard as the only explosive component is expended when fired. The 20-mm practice projectile, fired/spent practice bombs and fired practice rockets are not sensitive to detonation. If a practice bomb contained a spotting charge which did not function, the sensitivity of the spotting charge would be considered low.

Severity Justification (refer to Matrix 2): Only MD from the following munitions have been identified at MRS 01: 2.25-in. practice rockets, 3.25-in. practice rockets, 3.5-in. practice rockets, 5-in. practice rockets, 3-lb Mk 23 practice bomb, 4.5-lb Mk 43 practice bomb, and 20-mm projectile (one TP projectile and one casing). Over ninety-nine percent of the MD was from practice rockets with less than one percent from practice bombs and 20-mm practice projectiles. All the practice rockets, inert 20-mm projectiles, and practice bombs had been fired; and thus, had no explosive content. If MD from 20-mm TP projectiles (or casings), practice bombs without spotting charges, and practice rockets were encountered, injury would be Improbable. If a practice bomb with a spotting charge that did not function as intended were encountered injury would be modest. Given the findings to date (practice bombs with no spotting charges) a modest injury would be a rare occurrence: No injury is anticipated.

2. Specify Land Use and Site Receptors. If multiple Land Use/Receptors exist at different areas, these areas may be identified separately.

The current and future land use for the National Seashore/State Park is recreational. Site receptors are site workers and visitors/recreational users.

Access Conditions Justification (refer to Matrix 1): Assateague Island is open to the public year round; therefore, regular access conditions were selected.

Likelihood to Impart Energy Justification (refer to Matrix 3): Based on the current use of MRS 01, which is a National Seashore/Park, the likelihood to impart energy on an item is Modest because it is a National Seashore/Park and is not planned for development.

3. For each area having separate conditions above, indicate the Risk Management Results for the following:

Matrix 1: Seldom

Matrix 2: C

Matrix 3: 3

Matrix 4: ACCEPTABLE.

Risk Determination: ACCEPTABLE.

4. Other Comments (Please identify limitations or suggestions, if any).

None.

5. Compare of use of RAO methodology to MEC Hazard Assessment, if applied.

The MEC Hazard Assessment (HA) has not been applied as no MEC was identified at the MRS.

Matrix 1. Likelihood of Encounter

Likelihood of Encounter, Matrix 1: Amount of MEC vs. Access Conditions		Access Conditions (Frequency of Use) ^(c)			
		Regular (e.g., daily use, open access)	Often (e.g., less regular or periodic use, some access)	Intermittent (e.g., some irregular use, or access limited)	Rare (e.g., very limited use, access prevented)
Amount of MEC (a)(b)	<ul style="list-style-type: none"> • MEC is visible on the surface and detected in the subsurface. 	Frequent	Frequent	Likely	Occasional
	<ul style="list-style-type: none"> • The area is identified as a CMUA where MEC is known or suspected (e.g., MD indicative of MEC is identified) to be present in the surface and subsurface. 	Frequent	Likely	Occasional	Seldom
	<ul style="list-style-type: none"> • MEC presence based on physical evidence (e.g., MD indicative of MEC), although the area is not a CMUA, or • The MEC concentration is below a project-specific threshold to support this selection (e.g., less than 1.0/acre at 95 percent confidence). 	Likely	Occasional	Seldom	Unlikely
	<ul style="list-style-type: none"> • MEC presence is based on isolated historical discoveries (e.g., EOD report) prior to investigation, or • A DERP response action has been conducted to physically remove MEC and known or suspected hazard remains to support this selection, (e.g., surface removal where subsurface was not addressed), or • The MEC concentration is below a project-specific threshold to support this selection (e.g., less than 0.5/acre at 95 percent confidence). 	Occasional	Seldom	Unlikely	Unlikely
	<ul style="list-style-type: none"> • MEC presence is suspected based on historical evidence of munitions use only, or • A DERP response action has been conducted to physically remove surface and subsurface MEC (evidence that some residual hazard remains to support this selection), or • The MEC concentration is below a project-specific threshold to support this selection (e.g., less than 0.25/acre at 95 percent confidence). 	Seldom	Seldom	Unlikely	Unlikely
	<ul style="list-style-type: none"> • Investigation of the MRS did not identify evidence of MEC presence, or • A DERP response action has been conducted that will achieve UU/UE. 	Unlikely	Unlikely	Unlikely	Unlikely
<p>Comments: To date no MEC associated with MRS 01 has been identified at Assateague Island. MD recovered from MRS 01 during the Remedial Investigation and previous investigations has only included MD from 2.25-in. practice rockets, 3.25-in. practice rockets, 3.5-in. practice rockets, 5-in. practice rockets, practice bombs (3-lb Mk 23 practice bomb and 4.5-lb Mk 43 practice bomb), and 20-mm TP projectiles. All the practice rockets and inert 20-mm TP projectiles had been fired. There was no evidence of spotting charges in the practice bombs; therefore, they had no explosive content. The RI at MRS 01 did not identify evidence of a MEC presence; however, MEC presence is possible based on historical evidence of munitions use only. MRS 01 is used daily as it is open to the public for recreational use, but the likelihood of encounter is considered seldom.</p>					

Matrix 1. Likelihood of Encounter

- (a) The “Amount of MEC” selection in Matrix 1 differs from the MEC HA’s input factor for “Amount of MEC,” which is based solely on the MRS “type” historically identified. Instead, the “Amount of MEC” in Matrix 1 is initially dependent on the results of characterization data regarding MEC and MD distribution. The Matrix is then used to assess anticipated or completed results of a remedial action (physical removal of MEC) to a “reduced” amount.
- (b) For example, historical information indicating an area has been extensively developed and used for years with no MEC encounters, and therefore support a lower “Likelihood of Encounter.”
- (c) A site may be accessible but may have a relatively low frequency of use due to difficult terrain, which results in lower possible contact hours or “access” for the MRS. This scale of “access conditions” may include several factors, including number of visitors or receptor hours per year, nearby population, or residential versus industrial use. Each of these factors may have different justifications depending on the facts at the site. The concept of calculation of “receptor hours per year” is provided in the MEC HA document.

NOTES: CMUA = Concentrated Munitions Use Area.
DERP = Defense Environmental Restoration Program.
EOD = Explosive Ordnance Disposal.
HA = Hazard Assessment.
MD = Munitions Debris.
MEC = Munitions and Explosives of Concern.
MRS = Muniton Response Sites.
UU/UE = Unlimited Use Unrestrictive Exposure.

Matrix 2. Severity of Incident

Severity of Explosive Incident, Matrix 2: Severity vs. Likelihood of Encounter		Access Conditions (Frequency of Use) ^(b)				
		Frequent: Regular, or inevitable occurrences	Likely: Several or numerous occurrences	Occasional: Sporadic or intermittent occurrences	Seldom: Infrequent; rare occurrences	Unlikely: Not probable
Severity Associated with Specific Munitions Items ^(a)	Catastrophic/Critical: May result in 1 or more deaths, permanent total or partial disability, or hospitalization	A	A	B	B	D
	Modest: May result in 1 (or more) injury resulting in emergency medical treatment, without hospitalization	B	B	B	<u>C</u>	D
	Minor: May result in 1 or more injuries requiring first aid or medical treatment	B	C	C	C	D
	Improbable: No injury is anticipated	D	D	D	D	D

Comments: At MRS 01, historical documentation and the Remedial Investigation confirmed the presence of munitions debris from the following munitions: 20-mm practice projectiles (one TP projectile and one casing), practice bombs (3 lb Mk 23 and 4.5 lb Mk 43 with no evidence of spotting charges), and practice rockets (2.25-in. Mk 6; 3.25-in. M2, M2A1, M2A2; 3.5-in. and 5-in. Mk 8). All the practice rockets, 20-mm TP projectiles, and practice bombs had been fired; and thus, had no explosive content. If MD from 20-mm TP projectiles (or casings), practice bombs, and practice rockets were encountered, injury would be Improbable: No injury is anticipated. If a practice bomb containing a spotting charge was encountered, injury would be modest resulting in emergency medical treatment. As determined by Matrix 1 Access Conditions were considered Seldom (rare occurrence as no practice bombs with evidence of spotting charges were found).

(a) There is currently no scale for ranking the explosive nature of munitions, and it; therefore, requires coordination with qualified UXO professionals on the project team. Initiatives are underway to evaluate these considerations of scale. There must be a defined munitions item having an explosive nature and a defined exposure scenario. Additionally, the degrees of hazards differentiate between intact UXO and munitions components such as rocket motors, fuzes, discarded military munitions, and explosive soils. Decision logic to support the selection on this scale must be supported by the CSM, and documented in the project reports. Additional research in this subject area in the future may allow for additional refinement within these categories so that site-specific conditions will be the primary factor for project team determination once MEC types onsite have been determined.

(b) Note that with data collected from physical remediation, it is possible to support an unlikely determination for Matrix 1 and Matrix 2.

NOTES: CSM = Conceptual Site Model.
 in. = Inch(es).
 lb = Pound(s).
 MEC = Munitions and Explosives of Concern.
 Mk = Mark.
 mm = Millimeter.
 UXO = Unexploded Ordnance.

"A" indicates conditions most likely to result in determination of an unacceptable risk.
 "D" indicates conditions most likely to result in determination of an acceptable risk.

Matrix 3. Likelihood of Detonation

Likelihood of Detonation, Matrix 3: Munitions Sensitivity vs. Likelihood of Energy to be Imparted		Likelihood to Impart Energy on an Item ^(b)		
		High: (e.g., areas planned for development, or seasonally tilled)	Modest: (e.g., undeveloped, wildlife refuge, parks)	Inconsequential: (e.g., not anticipated, prevented, mitigated)
Sensitivity: ^(a) Susceptibility to Detonation	High: (e.g., classified as sensitive)	1	1	3
	Moderate: (e.g., high explosive or pyrotechnics)	1	2	3
	Low: (e.g., propellant of bulk secondary explosives)	1	3	3
	Not Sensitive	2	3	3

Comments: At MRS 01, historical documentation and the Remedial Investigation confirmed the presence of munitions debris from the following munitions: 20-mm TP projectiles (one TP projectile and one casing), practice bombs (3 lb Mk 23 and the 4.5 lb Mk 43 with no evidence of spotting charges), and practice rockets (2.25-in. Mk 6; 3.25-in. M2, M2A1, M2A2; 3.5-in. and 5-in. Mk 8). All the practice rockets, inert 20-mm projectiles, and practice bombs had been fired; and thus, had no explosive content. The fired/spent 20 mm practice projectile, and fired practice rockets are not sensitive to detonation. A practice bomb with an intact spotting charge would have a low sensitivity to detonation. Based on the current use of MRS 01, which is a National Seashore/Park, the likelihood to impart energy on an item is Modest.

(a) The Sensitivity categories are scaled highest to lowest, similar to the MRSPP Table 1: Munitions Type Data Elements Table. While the scale of sensitivity in Matrix 3 is similar to MRSPP Table 1, the matrix must have the flexibility to consider the inclusion of unlisted or undefined items, such as fuzes having small amounts of primary charge and not attached to a booster charge, which may be less sensitive than fuzes with large amounts of primary charge or any fuze connected to a booster charge. Selections must be supported by identifying the specific munitions on the MRS (listed with correct nomenclature).

(b) The likelihood to impart energy on an item can be high for farmed land that is regularly tilled or areas where development is planned. Moderate areas may include parks or areas where digging is manual or limited. Areas that are inconsequential will include areas where digging is not anticipated, or otherwise mitigated to prevent imparting energy on an item. The project team will consider land use, specifically types and amount of energy imparted at the site that will result in an interaction with a munitions item. The project team will document the justification for selection on the scale.

NOTES: in. = Inch(es).
 lb = Pound(s).
 Mk = Mark.
 mm = Millimeter.
 MRS = Munition Response Site.
 MRSPP = Military Munitions Response Site Prioritization Protocol.

Matrix 4. Acceptable and Unacceptable Site Conditions

Acceptable and Unacceptable Site Conditions		Result from Matrix 2			
		A	B	C	D
Result from Matrix 3	1	Unacceptable	Unacceptable	Unacceptable	Acceptable
	2	Unacceptable	Unacceptable	Acceptable	Acceptable
	3	Unacceptable	Acceptable	Acceptable	Acceptable
<p>Comments: Based on the results from Matrix 2 (C) and the results from Matrix 3 (3) current conditions at MRS 01 are acceptable.</p> <p>NOTES: MRS = Munition Response Site.</p> <p>Multiple conditions may exist within an MRS such that unique baseline risks can be established for the multiple explosive hazards that are present within the same property. Acceptable conditions indicate input factors are collectively determined to support a negligible risk.</p>					

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New Risk Management Methodology Feedback Form

Formerly Used Defense Site (FUDS) Property/Project Number: Rocket Range South and Burials (MRS 03)

Property Name: Assateague Island

Project Name: Assateague Island Remedial Investigation through Decision Document

Munitions Response Site Prioritization Protocol (MRSP) Overall Score: Alternate Rating – No Known or Suspected Hazard

1. List historically known or suspected munitions and specify what evidence of Munitions and explosives of concern (MEC) was found during characterization.

Munitions Response Site (MRS) 03 was reportedly a former air-to-ground practice rocket, bombing, and strafing range. After use of the range was discontinued, surface debris in the target area was reportedly cleaned up and buried onsite. Known or suspected munitions that were historically used at MRS 03 include practice rockets.

Amount of MEC Justification (refer to Matrix 1): During previous investigations and the remedial investigation (RI) two pieces of munitions debris (MD) from 5-inch (in.) practice rockets were identified at MRS 03. None of the MD found were MEC. Once fired, the practice rockets no longer present an explosive hazard as the only explosive component (propellant) is expended when fired. The RI at MRS 03 did not identify evidence of a MEC presence.

Sensitivity Justification (refer to Matrix 3): The two pieces of MD found to date are from practice rockets in MRS 03 that contained no explosive components. Once fired, the practice rockets no longer present an explosive hazard as the only explosive component (propellant) is expended when fired. Fired practice rockets are not Sensitive (i.e., susceptible to detonation).

Severity Justification (refer to Matrix 2): Only two pieces of MD from 5-in. practice rockets have been identified at MRS 03. The practice rockets appeared to have been fired and thus had no explosive content. Injury would be considered Improbable: No injury is anticipated.

2. Specify Land Use and Site Receptors. If multiple Land Use/Receptors exist as different areas, these areas may be identified separately.

The current and future land use for the National Seashore/State Park is recreational. Site receptors are site workers and visitors/recreational users.

Access Conditions Justification (refer to Matrix 1): Assateague Island is open to the public all year round; therefore, regular access conditions were selected. However, MRS 03 is used minimally because it is remotely located.

Likelihood to Impart Energy Justification (refer to Matrix 3): Based on the current use of MRS 03, which is a National Seashore/Park, the likelihood to impart energy on an item is Modest because it is a National Seashore/Park and is not planned for development.

3. For each area having separate conditions above, indicate the Risk Management Results for the following:

Matrix 1: Unlikely

Matrix 2: D

Matrix 3: 3

Matrix 4: ACCEPTABLE.

Risk Determination: ACCEPTABLE.

4. Other Comments (Please identify limitations or suggestions, if any):

None.

5. Compare of use of RAO methodology to MEC Hazard Assessment, if applied.

The MEC Hazard Assessment (HA) has not been applied as no MEC was identified at the MRS.

Matrix 1. Likelihood of Encounter

Likelihood of Encounter, Matrix 1: Amount of MEC vs. Access Conditions		Access Conditions (Frequency of Use) ^(c)			
		Regular (e.g., daily use, open access)	Often (e.g., less regular or periodic use, some access)	Intermittent (e.g., some irregular use, or access limited)	Rare (e.g., very limited use, access prevented)
Amount of MEC (a)(b)	<ul style="list-style-type: none"> • MEC is visible on the surface and detected in the subsurface. 	Frequent	Frequent	Likely	Occasional
	<ul style="list-style-type: none"> • The area is identified as a CMUA where MEC is known or suspected (e.g., MD indicative of MEC is identified) to be present in the surface and subsurface. 	Frequent	Likely	Occasional	Seldom
	<ul style="list-style-type: none"> • MEC presence based on physical evidence (e.g., MD indicative of MEC), although the area is not a CMUA, or • The MEC concentration is below a project-specific threshold to support this selection (e.g., less than 1.0/acre at 95 percent confidence). 	Likely	Occasional	Seldom	Unlikely
	<ul style="list-style-type: none"> • MEC presence is based on isolated historical discoveries (e.g., EOD report) prior to investigation, or • A DERP response action has been conducted to physically remove MEC and known or suspected hazard remains to support this selection, (e.g., surface removal where subsurface was not addressed), or • The MEC concentration is below a project-specific threshold to support this selection (e.g., less than 0.5/acre at 95 percent confidence). 	Occasional	Seldom	Unlikely	Unlikely
	<ul style="list-style-type: none"> • MEC presence is suspected based on historical evidence of munitions use only, or • A DERP response action has been conducted to physically remove surface and subsurface MEC (evidence that some residual hazard remains to support this selection), or • The MEC concentration is below a project-specific threshold to support this selection (e.g., less than 0.25/acre at 95 percent confidence). 	Seldom	Seldom	Unlikely	Unlikely
	<ul style="list-style-type: none"> • Investigation of the MRS did not identify evidence of MEC presence, or • A DERP response action has been conducted that will achieve UU/UE. 	Unlikely	Unlikely	Unlikely	Unlikely
<p>Comments: During the Remedial Investigation no MEC or MD was identified at MRS 03. Historically, two pieces of MD were identified from 5-inch practice rockets. The RI at MRS 03 did not identify evidence of a MEC presence. The results of the RI suggest the MRS may not have been used as a practice range. MRS 03 is used minimally because it is remote; however, it is open to the public for recreational use.</p>					

Matrix 1. Likelihood of Encounter

- (a) The “Amount of MEC” selection in Matrix 1 differs from the MEC HA’s input factor for “Amount of MEC,” which is based solely on the MRS “type” historically identified. Instead, the “Amount of MEC” in Matrix 1 is initially dependent on the results of characterization data regarding MEC and MD distribution. The Matrix is then used to assess anticipated or completed results of a remedial action (physical removal of MEC) to a “reduced” amount.
- (b) For example, historical information indicating an area has been extensively developed and used for years with no MEC encounters, and therefore support a lower “Likelihood of Encounter.”
- (c) A site may be accessible but may have relatively low frequency of use due to difficult terrain, which results in lower possible contact hours or “access” for the MRS. This scale of “access conditions” may include several factors, including number of visitors or receptor hours per year, nearby population, or residential versus industrial use. Each of these factors may have different justifications depending on the facts at the site. The concept of calculation of “receptor hours per year” is provided in the MEC HA document.

NOTES: CMUA = Concentrated Munitions Use Area.
DERP = Defense Environmental Restoration Program.
EOD = Explosive Ordnance Disposal.
HA = Hazard Assessment.
MD = Munitions Debris.
MEC = Munitions and Explosives of Concern.
MRS = Muniton Response Sites.
UU/UE = Unlimited Use Unrestrictive Exposure.

Matrix 2. Severity of Incident

Severity of Explosive Incident, Matrix 2: Severity vs. Likelihood of Encounter		Access Conditions (Frequency of Use) ^(b)				
		Frequent: Regular, or inevitable occurrences	Likely: Several or numerous occurrences	Occasional: Sporadic or intermittent occurrences	Seldom: Infrequent; rare occurrences	Unlikely: Not probable
Severity Associated with Specific Munitions Items ^(a)	Catastrophic/Critical: May result in 1 or more deaths, permanent total or partial disability, or hospitalization	A	A	B	B	D
	Modest: May result in 1 (or more) injury resulting in emergency medical treatment, without hospitalization	B	B	B	C	D
	Minor: May result in 1 or more injuries requiring first aid or medical treatment	B	C	C	C	D
	Improbable: No injury is anticipated	D	D	D	D	D
<p>Comments: At MRS 03, historical documentation indicated that two pieces of munitions debris from 5-in. Mk 8 practice rockets were reportedly present. The practice rockets (having been fired) were spent and contained no explosives. No MEC or MD was encountered during the RI and all anomalies identified through digital geophysical mapping were investigated. If debris from 5-in. practice rockets were encountered, injury would be Improbable: No injury is anticipated. As determined by Matrix 1 Access Conditions were Unlikely.</p> <p>(a) There is currently no scale for ranking the explosive nature of munitions, and it therefore requires coordination with qualified UXO professionals on the project team. Initiatives are underway to evaluate these considerations of scale. There must be a defined munitions item having an explosive nature and a defined exposure scenario. Additionally, the degrees of hazards differentiate between intact UXO and munitions components such as rocket motors, fuzes, discarded military munitions, and explosive soils. Decision logic to support the selection on this scale must be supported by the CSM and documented in the project reports. Additional research in this subject area in the future may allow for additional refinement within these categories so that site-specific conditions will be the primary factor for project team determination once MEC types onsite have been determined.</p> <p>(b) Note that with data collected from physical remediation, it is possible to support an unlikely determination for Matrix 1 and Matrix 2.</p> <p>NOTES: CSM = Conceptual Site Model. in. = Inch(es). MEC = Munitions and Explosives of Concern. Mk = Mark. UXO = Unexploded Ordnance.</p> <p>"A" indicates conditions most likely to result in determination of an unacceptable risk. "D" indicates conditions most likely to result in determination of an acceptable risk.</p>						

Matrix 3. Likelihood of Detonation

Likelihood of Detonation, Matrix 3: Munitions Sensitivity vs. Likelihood of Energy to be Imparted		Likelihood to Impart Energy on an Item ^(b)		
		High: (e.g., areas planned for development, or seasonally tilled)	Modest: (e.g., undeveloped, wildlife refuge, parks)	Inconsequential: (e.g., not anticipated, prevented, mitigated)
Sensitivity: ^(a) Susceptibility to Detonation	High: (e.g., classified as sensitive)	1	1	3
	Moderate: (e.g., high explosive or pyrotechnics)	1	2	3
	Low: (e.g., propellant of bulk secondary explosives)	1	3	3
	Not Sensitive	2	3	3
<p>Comments: At MRS 03, historical documentation indicated that two pieces of munitions debris from 5-in. Mk 8 practice rockets were reportedly present. The practice rockets (having been fired) were spent and contained no explosives. No MEC or MD was encountered during the RI. A fired 5-in. practice rocket is not sensitive (susceptible to detonation). Based on the current use of MRS 03, which is a National Seashore/Park, the likelihood to impart energy on an item is Modest. Although it should be noted that the MRS is in located on a remote portion of the island and is not frequently accessed by visitors.</p> <p>(a) The Sensitivity categories are scaled highest to lowest, similar to the MRSPP Table 1: Munitions Type Data Elements Table. While the scale of sensitivity in Matrix 3 is similar to MRSPP Table 1, the matrix must have the flexibility to consider the inclusion of unlisted or undefined items, such as fuzes having small amounts of primary charge and not attached to a booster charge, which may be less sensitive than fuzes with large amounts of primary charge or any fuze connected to a booster charge. Selections must be supported by identifying the specific munitions on the MRS (listed with correct nomenclature).</p> <p>(b) The likelihood to impart energy on an item can be high for farmed land that is regularly tilled, or areas where development is planned. Moderate areas may include parks or areas where digging is manual or limited. Areas that are inconsequential will include areas where digging is not anticipated, or otherwise mitigated to prevent imparting energy on an item. The project team will consider land use, specifically types and amount of energy imparted at the site that will result in an interaction with a munitions item. The project team will document the justification for selection on the scale.</p> <p>NOTES: in. = Inch(es). Mk = Mark. MRS = Munition Response Site. MRSP = Military Munitions Response Site Prioritization Protocol.</p>				

Matrix 4. Acceptable and Unacceptable Site Conditions

Acceptable and Unacceptable Site Conditions		Result from Matrix 2			
		A	B	C	D
Result from Matrix 3	1	Unacceptable	Unacceptable	Unacceptable	Acceptable
	2	Unacceptable	Unacceptable	Acceptable	Acceptable
	3	Unacceptable	Acceptable	Acceptable	Acceptable
<p>Comments: Based on the results from Matrix 2 (D) and the results from Matrix 3 (3) current conditions at MRS 03 are acceptable.</p> <p>NOTES: MRS = Munition Response Site.</p> <p>Multiple conditions may exist within an MRS, such that unique baseline risks can be established for the multiple explosive hazards that are present within the same property. Acceptable conditions indicate input factors are collectively determined to support a negligible risk.</p>					

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