| MEC HA Hazard Level Determination - Ricochet Area MRS, Safety Buffer Zone/Ricochet Area | | | |
|---|---|---|---|
| **Site ID:** | **State Game Lands 211** | | |
| **Date:** | **4/15/2011** | | |
| | | **Hazard Level Category** | **Score** |
| a. Current Use Activities | | **3** | **705** |
| c. Response Alternative 1: Current Conditions | | **3** | **705** |
| d. Response Alternative 2: | | | |
| e. Response Alternative 3: | | | |
| f. Response Alternative 4: | | | |

| Characteristics of the MRS | |
|---|---|
| Is critical infrastructure located within the MRS or within the ESQD arc? | No |
| Are cultural resources located within the MRS or within the ESQD arc? | Yes |
| Are significant ecological resources located within the MRS or within the ESQD arc? | Yes |

## Scoring Summary

| Site ID: | Ricochet Area MRS | St | a. Scoring Summary for Current Use Activities | |
|---|---|---|---|---|
| Date: | 4/15/2011 | | Response Action Cleanup: | No Response Action |
| **Input Factor** | | | **Input Factor Category** | **Score** |
| I. Energetic Material Type | | | High Explosive and Low Explosive Filler in Fragmenting Rounds | 100 |
| II. Location of Additional Human Receptor | | | Inside the MRS or inside the ESQD arc | 30 |
| III. Site Accessibility | | | Moderate Accessibility | 55 |
| IV. Potential Contact Hours | | | 100,000 to 999,999 receptor hrs/yr | 70 |
| V. Amount of MEC | | | Safety Buffer Areas | 30 |
| VI. Minimum MEC Depth Relative to Maximum Intrusive Depth | | | Baseline Condition: MEC located surface and subsurface. After Cleanup: Intrusive depth overlaps with subsurface MEC. | 240 |
| VII. Migration Potential | | | Possible | 30 |
| VIII. MEC Classification | | | UXO | 110 |
| IX. MEC Size | | | Small | 40 |
| | | | **Total Score** | **705** |
| | | | **Hazard Level Category** | **3** |

| Site ID: | Ricochet Area MRS | St | c. Scoring Summary for Response Alternative 1: Current Conditions | |
|---|---|---|---|---|
| Date: | 4/15/2011 | | Response Action Cleanup: | No MEC cleanup |
| **Input Factor** | | | **Input Factor Category** | **Score** |
| I. Energetic Material Type | | | High Explosive and Low Explosive Filler in Fragmenting Rounds | 100 |
| II. Location of Additional Human Receptors | | | Inside the MRS or inside the ESQD arc | 30 |
| III. Site Accessibility | | | Moderate Accessibility | 55 |
| IV. Potential Contact Hours | | | 100,000 to 999,999 receptor hrs/yr | 70 |
| V. Amount of MEC | | | Safety Buffer Areas | 30 |
| VI. Minimum MEC Depth Relative to Maximum Intrusive Depth | | | Baseline Condition: MEC located surface and subsurface. After Cleanup: Intrusive depth overlaps with subsurface MEC. | 240 |
| VII. Migration Potential | | | Possible | 30 |
| VIII. MEC Classification | | | UXO | 110 |
| IX. MEC Size | | | Small | 40 |
| | | | **Total Score** | **705** |
| | | | **Hazard Level Category** | **3** |

## MEC HA Summary Information

| | | Comments |
|---|---|---|
| Site ID: | Ricochet Area MRS<br>State Game Lands 211 | |
| Date: | 4/15/2011 | |

Please identify the single specific area to be assessed in this hazard assessment. From this point forward, all references to "site" or "MRS" refer to the specific area that you have defined.

***A. Enter a unique identifier for the site:***

Ricochet Area MRS

Provide a list of information sources used for this hazard assessment. As you are completing the worksheets, use the "Select Ref(s)" buttons at the ends of each subsection to select the applicable information sources from the list below.

| Ref. No. | Title (include version, publication date) |
|---|---|
| 1 | Inventory, Final, 2003 |
| 2 | Historical Records Review, Final, 2007 |
| 3 | Site Inspection, Final, 2008 |
| 4 | Community Relations Plan, Final, 2010 |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |

***B. Briefly describe the site:***

1. Area (include units): 3,262 acres
2. Past munitions-related use:

Safety Buffer Areas

3. Current land-use activities (list all that occur):

Recreational- State Game Lands 211

4. Are changes to the future land-use planned? No
5. What is the basis for the site boundaries?

The 0.5 anomalies per acre contour line, taken from the Category 1-3 anomaly density calculations, were used as the boundary between Ricochet Area MRS and Sharp Mountain MRS. The boundary is interpolated between the large contiguous area to the west and the smaller dispersed areas to the east. The area also includes the former Cold Spring firing point.

6. How certain are the site boundaries?

Confident in boundaries

Reference(s) for Part B:

Select Ref(s)

***C. Historical Clearances***

1. Have there been any historical clearances at the site? No, none
2. If a clearance occurred:
   a. What year was the clearance performed?
   b. Provide a description of the clearance activity (e.g., extent, depth, amount of munitions-related items removed, types and sizes of removed items, and whether metal detectors were used):

Reference(s) for Part C:

Select Ref(s)

***D. Attach maps of the site below (select 'Insert/Picture' on the menu bar.)***

Site ID: **Ricochet Area MRS** **State Game Lands 211**
Date: **4/15/2011**

## Cased Munitions Information

| Item No. | Munition Type (e.g., mortar, projectile, etc.) | Munition Size | Munition Size Units | Mark/ Model | Energetic Material Type | Is Munition Fuzed? | Fuzing Type | Fuze Condition | Minimum Depth for Munition (ft) | Location of Munitions | Comments (include rationale for munitions that are "subsurface only") |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Artillery | 155 | mm | 1 | High Explosive | No | UNK | UNK | 0 | Surface and Subsurface | Found on Surface |
| 2 | Artillery | 75 | mm | | High Explosive | Yes | Impact | Armed | 0 | Surface and Subsurface | Total 2 found on the surface |
| 3 | Artillery | 75 | mm | | High Explosive | UNK | UNK | UNK | 0 | Surface and Subsurface | Total 5 found 0-0.25 ft bgs |
| 4 | Artillery | 75 | mm | | High Explosive | Yes | Impact | Armed | 0.25 | Subsurface Only | 75mm APHE |
| 5 | Artillery | | | MK-2A4 | Propellant | UNK | UNK | UNK | 1 | Subsurface Only | DMM found at a depth of 1 ft (4 items). MK2A4 Primer filled with black powder. |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |

Reference(s) for table above:

Select Ref(s)

## Bulk Explosive Information

| Item No. | Explosive Type | Comments |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

Reference(s) for table above:

Select Ref(s)

Site ID: **Ricochet Area MRS** **State Game Lands 211**
Date: **4/15/2011**

## Activities Currently Occurring at the Site

| Activity No. | Activity | Number of people per year who participate in the activity | Number of hours per year a single person spends on the activity | Potential Contact Time (receptor hours/year) | Maximum intrusive depth (ft) | Comments |
|---|---|---|---|---|---|---|
| 1 | Recreation (hunting, hiking, fishing) | 5,000 | 150 | **750,000** | 1 | High use recreational months (April-December) area at 16 hours/month x 9 months = 144 hours Low use recreational months ( January - March) are 4 hours/month x 3 months = 12 hours Grand Total = 156 hours rounded to 150 hours |
| 2 | PGC Maintenance (trail, food plots) | 6 | 312 | **1,872** | 3 | SGL 211 staff is 6 people at 6hrs/week x 52 weeks = 312 hrs/individual |
| 3 | Timbering operations | 4 | 720 | **2,880** | 2 | See notes |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |

Total Potential Contact Time (receptor hrs/yr): **754,752**

Maximum intrusive depth at site (ft): **3**

Reference(s) for table above:

Select Ref(s)

Site ID: **Ricochet Area MRS** **State Game Lands 211**
Date: **4/15/2011**

## Planned Remedial or Removal Actions

| Response Action No. | Response Action Description | Expected Resulting Minimum MEC Depth (ft) | Expected Resulting Site Accessibility | Will land use activities change if this response action is implemented? | What is the expected scope of cleanup? | Comments |
|---|---|---|---|---|---|---|
| 1 | Current Conditions | 0 | Moderate Accessibility | No | No MEC cleanup | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |

**According to the 'Summary Info' worksheet, no future land uses are planned. For those alternatives where you answered 'No' in Column E, the land use activities will be assessed against current land uses.**

Reference(s) for table above:

Select Ref(s)

Site ID: **Ricochet Area MRS** **State Game Lands 211**
Date: **4/15/2011**

***This worksheet needs to be completed for each remedial/removal action alternative listed in the 'Remedial-Removal Action' worksheet that will cause a change in land use.***

## Land Use Activities Planned After Response Alternative #1: Current Conditions

| Activity No. | Activity | Number of people per year who participate in the activity | Number of hours a single person spends on the activity | Potential Contact Time (receptor hours/year) | Maximum intrusive depth (ft) | Comments |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |

Total Potential Contact Time (receptor hrs/yr):
Maximum intrusive depth at site (ft):

Reference(s) for table above:

Select Ref(s)

Site ID: **Ricochet Area MRS**
**State Game Lands 211**
Date: **4/15/2011**

## Energetic Material Type Input Factor Categories

The following table is used to determine scores associated with the energetic materials. Materials are listed in order from most hazardous to least hazardous.

| | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|
| High Explosive and Low Explosive Filler in Fragmenting Rounds | 100 | 100 | 100 |
| White Phosphorus | 70 | 70 | 70 |
| Pyrotechnic | 60 | 60 | 60 |
| Propellant | 50 | 50 | 50 |
| Spotting Charge | 40 | 40 | 40 |
| Incendiary | 30 | 30 | 30 |

**The most hazardous type of energetic material listed in the 'Munitions, Bulk Explosive Info' Worksheet falls under the category 'High Explosive and Low Explosive Filler in Fragmenting Rounds'.**

***Score***

Baseline Conditions: **100**
Surface Cleanup: **100**
Subsurface Cleanup: **100**

## Location of Additional Human Receptors Input Factor Categories

1. What is the Explosive Safety Quantity Distance (ESQD) from the Explosive Siting Plan or the Explosive Safety Submission for the MRS? 234 feet

2. Are there currently any features or facilities where people may congregate within the MRS, or within the ESQD arc? Yes

3. Please describe the facility or feature.

Nature classes, studies, hikers, hunters, etc can congregate within the MRS and on trails.

MEC Item(s) used to calculate the ESQD for current use activities

**105 MM HEAT**

Select MEC(s)

The following table is used to determine scores associated with the location of additional human receptors (current use activities):

| | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|
| Inside the MRS or inside the ESQD arc | 30 | 30 | 30 |
| Outside of the ESQD arc | 0 | 0 | 0 |

**4. Current use activities are 'Inside the MRS or inside the ESQD arc', based on Question 2.'**

***Score***

Baseline Conditions: **30**
Surface Cleanup: **30**
Subsurface Cleanup: **30**

5. Are there future plans to locate or construct features or facilities where people may congregate within the MRS, or within the ESQD arc?

6. Please describe the facility or feature.

MEC Item(s) used to calculate the ESQD for future use activities

Select MEC(s)

The following table is used to determine scores associated with the location of additional human receptors (future use activities):

| | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|
| Inside the MRS or inside the ESQD arc | 30 | 30 | 30 |
| Outside of the ESQD arc | 0 | 0 | 0 |

**7. Please answer Question 5 above to determine the scores.**

***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

## Site Accessibility Input Factor Categories

The following table is used to determine scores associated with site accessibility:

| | Description | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|---|
| Full Accessibility | No barriers to entry, including signage but no fencing | 80 | 80 | 80 |
| Moderate Accessibility | Some barriers to entry, such as barbed wire fencing or rough terrain | 55 | 55 | 55 |
| Limited Accessibility | Significant barriers to entry, such as unguarded chain link fence or requirements for special transportation to reach the site | 15 | 15 | 15 |
| Very Limited Accessibility | A site with guarded chain link fence or terrain that requires special equipment and skills (e.g., rock climbing) to access | 5 | 5 | 5 |

***Current Use Activities*** ***Score***

Select the category that best describes the site accessibility under the current use scenario:

Moderate Accessibility

Baseline Conditions: **55**
Surface Cleanup: **55**
Subsurface Cleanup: **55**

***Future Use Activities***

Select the category that best describes the site accessibility under the future use scenario:

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

Reference(s) for above information:

Select Ref(s)

***Response Alternative No. 1: Current Conditions***

**Based on the 'Planned Remedial or Removal Actions' Worksheet, this alternative will lead to 'Moderate Accessibility'.**
Baseline Conditions: **55**
Surface Cleanup: **55**
Subsurface Cleanup: **55**

***Response Alternative No. 2:***

**Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 3:***

**Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 4:***

**Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 5:***

**Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 6:***

**Please enter site accessibility information in the 'Planned Remedial or Removal Actions' Worksheet to continue.**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

## Potential Contact Hours Input Factor Categories

The following table is used to determine scores associated with the total potential contact time:

| | Description | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|---|
| Many Hours | ≥1,000,000 receptor-hrs/yr | 120 | 90 | 30 |
| Some Hours | 100,000 to 999,999 receptor hrs/yr | 70 | 50 | 20 |
| Few Hours | 10,000 to 99,999 receptor-hrs/yr | 40 | 20 | 10 |
| Very Few Hours | <10,000 receptor-hrs/yr | 15 | 10 | 5 |

***Current Use Activities***:

Input factors are only determined for baseline conditions for current use activities. Based on the 'Current and Future Activities' Worksheet, the Total Potential Contact Time is: **754,752** hrs/yr
Based on the table above, this corresponds to a input factor score for baseline conditions of: **70** Score

***Future Use Activities***:

Input factors are only determined for baseline conditions for future use activities. Based on the 'Current and Future Activities' Worksheet, the Total Potential Contact Time is: **#NAME?** hrs/yr
Based on the table above, this corresponds to a input factor score of: **#NAME?** Score

***Response Alternative No. 1: Current Conditions***

**Based on the 'Planned Remedial or Removal Actions' Worksheet, land use activities will not change if this alternative is implemented.**
**Total Potential Contact Time, based on the contact time listed for current use activities (see 'Current and Future Activities' Worksheet)** **754,752**
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions: **70**
Surface Cleanup: **50**
Subsurface Cleanup: **20**

***Response Alternative No. 2:***

**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Total Potential Contact Time**
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 3:***

**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Total Potential Contact Time**
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 4:***

**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Total Potential Contact Time**
Based on the table above, this corresponds to input factor scores of: ***Score***
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 5:***

**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Total Potential Contact Time**
Based on the table above, this corresponds to input factor scores of: **Score**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 6:***

**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Total Potential Contact Time**
Based on the table above, this corresponds to input factor scores of: **Score**
Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

## Amount of MEC Input Factor Categories

The following table is used to determine scores associated with the Amount of MEC:

| | Description | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|---|
| Target Area | Areas at which munitions fire was directed | 180 | 120 | 30 |
| OB/OD Area | Sites where munitions were disposed of by open burn or open detonation methods. This category refers to the core activity area of an OB/OD area. See the "Safety Buffer Areas" category for safety fans and kick-outs. | 180 | 110 | 30 |
| Function Test Range | Areas where the serviceability of stored munitions or weapons systems are tested. Testing may include components, partial functioning or complete functioning of stockpile or developmental items. | 165 | 90 | 25 |
| Burial Pit | The location of a burial of large quantities of MEC items. | 140 | 140 | 10 |
| Maneuver Areas | Areas used for conducting military exercises in a simulated conflict area or war zone | 115 | 15 | 5 |
| Firing Points | The location from which a projectile, grenade, ground signal, rocket, guided missile, or other device is to be ignited, propelled, or released. | 75 | 10 | 5 |
| Safety Buffer Areas | Areas outside of target areas, test ranges, or OB/OD areas that were designed to act as a safety zone to contain munitions that do not hit targets or to contain kick-outs from OB/OD areas. | 30 | 10 | 5 |
| Storage | Any facility used for the storage of military munitions, such as earth-covered magazines, above-ground magazines, and open-air storage areas. | 25 | 10 | 5 |
| Explosive-Related Industrial Facility | Former munitions manufacturing or demilitarization sites and TNT production plants | 20 | 10 | 5 |

| Select the category that best describes the ***most hazardous*** amount of MEC: | ***Score*** |
|---|---|
| Safety Buffer Areas | |
| Baseline Conditions: | **30** |
| Surface Cleanup: | **10** |
| Subsurface Cleanup: | **5** |

## Minimum MEC Depth Relative to the Maximum Intrusive Depth Input Factor Categories

***Current Use Activities***

The shallowest minimum MEC depth, based on the 'Cased Munitions Information' Worksheet: **0** ft
The deepest intrusive depth: **3** ft
The table below is used to determine scores associated with the minimum MEC depth relative to the maximum intrusive depth:

| | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|
| Baseline Condition: MEC located surface and subsurface. After Cleanup: Intrusive depth overlaps with subsurface MEC. | 240 | 150 | 95 |
| Baseline Condition: MEC located surface and subsurface, After Cleanup: Intrusive depth does not overlap with subsurface MEC. | 240 | 50 | 25 |
| Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth overlaps with minimum MEC depth. | 150 | N/A | 95 |
| Baseline Condition: MEC located only subsurface. Baseline Condition or After Cleanup: Intrusive depth does not overlap with minimum MEC depth. | 50 | N/A | 25 |

**Because the shallowest minimum MEC depth is less than or equal to the deepest intrusive depth, the intrusive depth will overlap after cleanup. MECs are located at both the surface and subsurface, based on the 'Munitions, Bulk Explosive Info' Worksheet. Therefore, the category for this input factor is 'Baseline Condition: MEC located surface and subsurface. After Cleanup: Intrusive depth overlaps with subsurface MEC.' For 'Current Use Activities', only Baseline Conditions are considered.** **240** ***Score***

***Future Use Activities***

Deepest intrusive depth: ft

**Not enough information has been entered to determine the input factor category.** ***Score***

***Response Alternative No. 1: Current Conditions***

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **0** ft
**Based on the 'Planned Remedial or Removal Actions' Worksheet, land use activities will not change if this alternative is implemented.**
**Maximum Intrusive Depth, based on the maximum intrusive depth listed for current use activities (see 'Current and Future Activities' Worksheet)** **3** ft

**Because the shallowest minimum MEC depth is less than or equal to the deepest intrusive depth, the intrusive depth overlaps. MECs are located at both the surface and subsurface, based on the 'Munitions, Bulk Explosive Info' Worksheet. Therefore, the category for this input factor is 'Baseline Condition: MEC located surface and subsurface. After Cleanup: Intrusive depth overlaps with subsurface MEC.'**

***Score***

Baseline Conditions: **240**
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 2:***

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **0** ft
**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Maximum Intrusive Depth** ft

**Not enough information has been entered to calculate this input factor.**

***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 3:***

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **0** ft
**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Maximum Intrusive Depth** ft

**Not enough information has been entered to calculate this input factor.**

***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 4:***

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **0** ft
**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Maximum Intrusive Depth** ft

**Not enough information has been entered to calculate this input factor.**

***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 5:***

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **#NAME?** ft
**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Maximum Intrusive Depth** ft

**#NAME?**

***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

***Response Alternative No. 6:***

Expected minimum MEC depth (from the 'Planned Remedial or Removal Actions' Worksheet): **#NAME?** ft
**Not enough information has been entered in the 'Planned Remedial or Removal Actions' Worksheet. Please complete the table before returning to this section.**

**Maximum Intrusive Depth** ft

**#NAME?**

***Score***

Baseline Conditions:
Surface Cleanup:
Subsurface Cleanup:

## Migration Potential Input Factor Categories

Is there any physical or historical evidence that indicates it is possible for natural physical forces in the area (e.g., frost heave, erosion) to expose subsurface MEC items, or move surface or subsurface MEC items? Yes

If "yes", describe the nature of natural forces. Indicate key areas of potential migration (e.g., overland water flow) on a map as appropriate (attach a map to the bottom of this sheet, or as a separate worksheet).

frost heave or movement from original placement from human processes (e.g., construction)

The following table is used to determine scores associated with the migration potential:

| | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|
| Possible | 30 | 30 | 10 |
| Unlikely | 10 | 10 | 10 |

**Based on the question above, migration potential is 'Possible.'**

| | *Score* |
|---|---|
| Baseline Conditions: | **30** |
| Surface Cleanup: | **30** |
| Subsurface Cleanup: | **10** |

Reference(s) for above information:

Select Ref(s)

## MEC Classification Input Factor Categories

**Cased munitions information has been inputed into the 'Munitions, Bulk Explosive Info' Worksheet; therefore, bulk explosives do not comprise all MECs for this MRS.**

**The 'Amount of MEC' category is 'Safety Buffer Areas'. It cannot be automatically assumed that the MEC items from this category are DMM. Therefore, the conservative assumption is that the MEC items in this MRS are UXO.**

Has a technical assessment shown that MEC in the OB/OD Area is DMM?

Are any of the munitions listed in the 'Munitions, Bulk Explosive Info' Worksheet: No

- Submunitions
- Rifle-propelled 40mm projectiles (often called 40mm grenades)
- Munitions with white phosphorus filler
- High explosive anti-tank (HEAT) rounds
- Hand grenades
- Fuzes
- Mortars

**At least one item listed in the 'Munitions, Bulk Explosive Info' Worksheet was identified as 'fuzed'.**

The following table is used to determine scores associated with MEC classification categories:

| UXO | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|
| UXO Special Case | 180 | 180 | 180 |
| UXO | 110 | 110 | 110 |
| Fuzed DMM Special Case | 105 | 105 | 105 |
| Fuzed DMM | 55 | 55 | 55 |
| Unfuzed DMM | 45 | 45 | 45 |
| Bulk Explosives | 45 | 45 | 45 |

**Based on your answers above, the MEC classification is 'UXO'.**

| | *Score* |
|---|---|
| Baseline Conditions: | **110** |
| Surface Cleanup: | **110** |
| Subsurface Cleanup: | **110** |

## MEC Size Input Factor Categories

The following table is used to determine scores associated with MEC Size:

| | Description | Baseline Conditions | Surface Cleanup | Subsurface Cleanup |
|---|---|---|---|---|
| Small | Any munitions (from the 'Munitions, Bulk Explosive Info' Worksheet) weigh less than 90 lbs; small enough for a receptor to be able to move and initiate a detonation | 40 | 40 | 40 |
| Large | All munitions weigh more than 90 lbs; too large to move without equipment | 0 | 0 | 0 |

Based on the definitions above and the types of munitions at the site (see 'Munitions, Bulk Explosive Info' Worksheet), the MEC Size Input Factor is: Small

| | *Score* |
|---|---|
| Baseline Conditions: | **40** |
| Surface Cleanup: | **40** |
| Subsurface Cleanup: | **40** |