C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table A
MRS Background Information

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

Munitions Response Site Name: Southern Proving Ground No Action

Component: USACE FUDS/USACE FUDS/NAD/New England District (NAE)

Installation/Property Name: NJ29799F692400 Fort Hancock

Location (City, County, State): HIGHLANDS, MONMOUTH, NJ

Site Name/Project Name (Project No.): Southern Proving Ground No Action (11)

Date Information Entered/Updated: 3/22/2024

Point of Contact (Name/Phone): Public Affairs, 978-318-8238

Project Phase (check only one):

☐ PA	☐ SI	☐ RI	☐ RI/FS	☐ RD
☐ RA-C	☐ RIP	☐ RA-O	☑ RC	☐ LTM

Media Evaluated (check all that apply):

☑ Groundwater	☐ Sediment (human receptor)
☐ Surface soil	☐ Surface Water (ecological receptor)
☐ Sediment (ecological receptor)	☐ Surface Water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present.When possible, identify munitions, CWM, and MC by type:	The Fort Hancock Southern Portion Proving Ground was used by the U.S. Army from 1874 to 1918 for testing weapons and ordnance. Fort Hancock housed the Army's first official proving ground. This entire Southern Proving Ground consists of seven, noncontiguous portions of the down-range impact areas, south of the two firing batteries included in MRS 03. The seven portions were identified in the 2014 Remedial Investigation as MEC/MD Hazard Areas 1B, 2A, 3A, 3B, 4A, 5A, and 5B (Figs A-5-6, A-5-7, A-5-8, and A-5-9, RI Report). The Remedial Investigation Addendum #1, dated September 2016, realigned the MRS configurations. MRS 5 was identified as the Southern Proving Ground and included original areas 1B, 2A, 3A, 3B, R1 5A and 5B. The total acreage of the MRS 5 was identified as 51 acres and subareas 5A through F were identified and evaluated (Executive Summary). The ROD identified 7.3 acres of the Southern Proving Ground (sub areas 5A, C, D and F) where no MEC or evidence of MEC was identified. The ROD concluded no further action for these acres and they were broken out into a separate MRS/Project - #11. A 2023 INPR authorized the creation of project 11, delineated out of project 05. The EHE score is No Known or Suspected Hazard. (Secs 5.1.2-5.1.5, RI Report and Executive Summary ROD). No MC is known or suspected in the MRS. Per the approved RI work plan, no soil samples were collected during the RI, as no breached munitions items or high concentrations of munitions debris were found. Also per the approved work plan, no surface water or sediment samples were collected in the MRS during the RI (Secs 6.1.1 and 6.1.3, RI Report). Five groundwater samples were collected during the RI to represent conditions across all MRSs. No explosives were detected and all metals reflected background conditions (Secs 4.2.3 and 5.3.3, RI Report). Based on the baseline risk assessment conducted during the RI, no unacceptable risk was found; the HHE module has been assigned an alternate rating of No Known or Suspected MC Hazard (Table 8-3, RI Report). ROD concluded no further action at this MRS. Both physical and historical evidence indicates that CWM was not present at this MRS (Secs 1.2.1 and 1.4.2, RI Report). Therefore, the CHE module has been assigned the alternative rating of No Known or Suspected CWM Hazard. Stakeholder coordination of the MRSPP evaluation occurred through the technical project planning process for the SI and RI. Documentation of stakeholder coordination can be found in FUDSDocs at C02NJ000403_01.22_0500. The MRSPP scores were also provided in the RI Report and Addendums, which the stakeholders reviewed. Documentation of stakeholder coordination of the RI and Addendum can be found in FUDSDocs at C02NJ000403_03.01_0640_a. and C02NJ000403_03.01_0531_a. Public involvement on the input was offered during the SI (public notice at C02NJ000403_01.09_1004_a) and RI (public notice at C02NJ000403_08/01_1050a). Throughout the MRSPP, the reference to the "RI Report" refers to the "Final MMRP Remedial Investigation Report, Remedial Investigation/Feasibility Study, Fort Hancock Formerly Used Defense Site, Monmouth County, New Jersey," dated January 2014, found on FUDsDocs under document sequence no. C02NJ000405_03.10_0500. The "RI Report Addendum 1" dated September 2016, can be found on FUDSDocs under document sequence no. C02NJ000405_03.10_0502 The September 2023 Record of Decision can be found on FUDSDocs under document sequence no. C02NJ000411_05.09_0001 The September 2023 Amended INPR can be found on FUDSDocs under document sequence no. C02NJ000411_01.08_0001
Description of Pathways for Human and Ecological Receptors:	The potential exposure media and associated exposure pathways for human receptors are: Groundwater: direct contact (ingestion, dermal contact). There are no potential exposure pathways for ecological receptor. (Sections 6.2.1 and 6.3.1, RI Report).
Description of Receptors (Human and Ecological):	Based on the current land use, the following human receptors were identified: (1) Outdoor maintenance worker (represents a National Park Service [NPS] ranger who spends the majority of his/her time patrolling the area on foot); (2) Adult and child recreational user (represent members of the public who partake in recreational activities at Fort Hancock); and (3) NPS Archaeologist. Ecological receptors include three potentially-affected terrestrial avian communities (granivores, insectivores, and carnivores) are represented by the mourning dove (granivore), American woodcock (insectivore), red-tailed hawk (carnivore) and the

	great blue heron (piscivore). For terrestrial mammals, the representative species will be the meadow vole (herbivore), short-tailed shrew (insectivore), and red fox (carnivore)(see Sections 6.2.1.2 and 6.3.1 RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action Table 1
EHE Module: Munitions Type Data Element Table

Directions: Below are 11 classifications of munitions and their descriptions. Check the scores that correspond with all the munitions types known or suspected to be present at the MRS.
Notes: The terms practice munitions, small arms ammunition, physical evidence, and historical evidence are defined in Appendix C of the Primer.

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

DIRECTIONS: Document any MRS - specific data used in selecting the Munitions Type classifications in the space provided.) No MEC was found during the RI in this MRS. The Final ROD concluded No Further Action at this MRS. RI Addendum 3, Appendix F. 2023 ROD Executive Summary. Tables 2 to 9 intentionally omitted per Army Guidance

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground
No Action
Table 10
EHE

Directions: 1. From Tables 1-9, record the data element scores in the Score boxes to the right. 2. Add the Score boxes for each of the three factors and record this number in the Value boxes to the right. 3. Add the three Value boxes and record this number in the EHE Module Total below. 4. Check the appropriate range for the EHE Module Total below. 5. Circle the EHE Module Rating that corresponds to the range selected and record this value in the EHE Module Rating box found at the bottom of the table.

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

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	0	0
Source of Hazard	Table 2		
Accessibility Factor Data Elements			
Location of Munitions	Table 3		0
Ease of Access	Table 4		
Status of Property	Table 5		
Receptor Factor Data Elements			
Population Density	Table 6		0
Population Near Hazard	Table 7		
Types of Activities/Structures	Table 8		
Ecological and/or Cultural Resources	Table 9		
		EHE Module Total	0

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
0 to 37	G
Alternative Module Ratings	☐ Evaulation Pending
	☐ No Longer Required
	☑ No Known or Suspected Explosive Hazard
EHE Module Rating	No Known or Suspected Explosive Hazard

EHE Module Description (4000 characters max):
No MEC was found in MRS (areas 5A, 5C, 5D, 5F in RI). The risk matrices demonstrate that MRS 11 currently has an acceptable risk from MEC hazards on the MRS due to the absence of MEC and the resulting combination of severity of incident and likelihood of detonation factors. Therefore, the baseline site condition for MRS is assessed to be Acceptable. RI Addendum #3 Appendix F. The 2023 ROD contained a remedy of no further action for this MRS.

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action Table 11
CHE Module: CWM Configuration Data Element Table

Directions: Below are seven classification of CWM configuration and their descriptions. Check the scores that correspond with all the CWM configurations known or suspected to be present at the MRS.
Notes: The terms CWM/UXO, CWM/DMM, physical evidence, and historical evidence are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: *CWM that are UXO (i.e., CWM/UXO) *Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	☐ 30
CWM mixed with UXO	*The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	☐ 25
CWM, explosive configuration that are undamaged DMM	*The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	☐ 20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: *Nonexplosively configured CWM/DMM either damaged or undamabed *Bulk CWM (e.g., ton container).	☐ 15
CAIS K941 and CAIS K942	*The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M2/E11.	☐ 12
CAIS (chemical agent identification sets)	*CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	☐ 10
Evidence of no CWM	*Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	☑ 0
CWM Configuration	**DIRECTIONS: Record the single highest score from above in the box to the right(maximum score = 30).**	0

DIRECTIONS: Document any MRS - specific data used in selecting the CWM Configuration classifications in the space provided.) Both physical and historical evidence indicates that CWM was not present at this MRS (see Sections 1.2.1 and 1.4.2 of the RI Report). Therefore, Tables 12 through 19 are intentionally omitted according to Army Guidance

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground
No Action
Table 20
CHE

Directions: 1. From Tables 11-19, record the data element scores in the Score boxes to the right. 2. Add the Score boxes for each of the three factors and record this number in the Value boxes to the right. 3. Add the three Value boxes and record this number in the CHE Module Total box below. 4. Check the appropriate range for the CHE Module Total below. 5. Check the CHE Module Rating that corresponds to the range selected and record this value in the CHE Module Rating box found at the bottom of the table.

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

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12		
Accessibility Factor Data Elements			
Location of CWM	Table 13		0
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		0
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and/or Cultural Resources	Table 19		
		CHE Module Total	

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
0 to 37	G
Alternative Module Ratings	☐ Evaulation Pending
	☐ No Longer Required
	☑ No Known or Suspected CWM Hazard
CHE Module Rating	No Known or Suspected CWM Hazard

CHE Module Description (4000 characters max):
Both physical and historical evidence indicates that CWM was not present at this MRS (Secs 1.2.1 and 1.4.2, RI Report). Therefore, the CHE module has been assigned the alternative rating of No Known or Suspected CWM Hazard.

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 21
Groundwater

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	H (High)	**CHF =** $\sum$ [Maximum Concentration of Contaminant] / [Comparison Value for Contaminant]	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).**		

Migratory Pathway Factor

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure	☐ H
Potential	Contamination in the groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	☐ M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possible due to the presence of geological structures or physical controls).	☐ L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).**	

Receptor Factor

Classification	Description	Value
Identified	Identified receptors have access to groundwater to which contamination has moved or can move.	☐ H
Potential	Potential for receptors have access to groundwater to which contamination has moved or can move.	☐ M
Limited	Little or no potential for receptors to have access to groundwater to which contamination has moved or can move.	☐ L
RECEPTOR FACTOR	**Check the value that corresponds most closely to the groundwater receptors at the MRS.**	
	No Known or Suspected Groundwater MC Hazard	☑

DIRECTIONS: Document any MRS - specific data used in selecting the ground water contaminants in the space provided.

Detections are not indicative of munitions activities and would not impact the MRS Score. No MC were detected above background (Secs 4.2.3 and 5.3.3, RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 22
Surface Water - Human Endpoint

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	H (High)	**CHF =** $\sum$ [Maximum Concentration of Contaminant] / [Comparison Value for Contaminant]	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).**		

Migratory Pathway Factor

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure	☐ H
Potential	Contamination in the surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	☐ M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possible due to the presence of geological structures or physical controls).	☐ L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).**	

Receptor Factor

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	☐ H
Potential	Potential for receptors have access to surface water to which contamination has moved or can move.	☐ M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	☐ L
RECEPTOR FACTOR	**Check the value that corresponds most closely to the surface water receptors at the MRS.**	

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ☐

DIRECTIONS: Document any MRS - specific data used in selecting the surface water contaminants in the space provided.

Media not evaluated. Per the Final RI Work Plan, no surface water samples were collected in this MRS (see Section 4.2.2 of the RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 23
Sediment - Human Endpoint

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	H (High)	**CHF =** $\sum$ [Maximum Concentration of Contaminant] / [Comparison Value for Contaminant]	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).**		

Migratory Pathway Factor

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure	☐ H
Potential	Contamination in the sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	☐ M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possible due to the presence of geological structures or physical controls).	☐ L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).**	

Receptor Factor

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	☐ H
Potential	Potential for receptors have access to sediment to which contamination has moved or can move.	☐ M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	☐ L
RECEPTOR FACTOR	**Check the value that corresponds most closely to the sediment receptors at the MRS.**	
No Known or Suspected Sediment (Human Endpoint) MC Hazard		☐

DIRECTIONS: Document any MRS - specific data used in selecting the sediment contaminants in the space provided.

Media not evaluated. Per the Final RI Work Plan, no sediment samples were collected in this MRS (see Section 4.2.2 of the RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 24
Surface Water - Ecological Endpoint

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	H (High)	**CHF =** $\sum$ [Maximum Concentration of Contaminant] / [Comparison Value for Contaminant]	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).**		

Migratory Pathway Factor

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure	☐ H
Potential	Contamination in the surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	☐ M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possible due to the presence of geological structures or physical controls).	☐ L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).**	

Receptor Factor

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	☐ H
Potential	Potential for receptors have access to surface water to which contamination has moved or can move.	☐ M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	☐ L
RECEPTOR FACTOR	**Check the value that corresponds most closely to the surface water receptors at the MRS.**	

No Known or Suspected Surface Water (Ecological Endpoing) MC Hazard ☐

DIRECTIONS: Document any MRS - specific data used in selecting the surface water contaminants in the space provided.

Media not evaluated. Per the Final RI Work Plan, no surface water samples were collected in this MRS (section 4.2.2, RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 25
Sediment - Ecological Endpoint

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	H (High)	**CHF =** $\sum$ [Maximum Concentration of Contaminant] / [Comparison Value for Contaminant]	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).**		

Migratory Pathway Factor

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure	☐ H
Potential	Contamination in the sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	☐ M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possible due to the presence of geological structures or physical controls).	☐ L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).**	

Receptor Factor

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	☐ H
Potential	Potential for receptors have access to sediment to which contamination has moved or can move.	☐ M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	☐ L
RECEPTOR FACTOR	**Check the value that corresponds most closely to the sediment receptors at the MRS.**	

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ☐

DIRECTIONS: Document any MRS - specific data used in selecting the sediment contaminants in the space provided.

Media not evaluated. Per the Final RI Work Plan, no sediment samples were collected in this MRS.(section 4.2.2, RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 26
Surface Soil

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	H (High)	**CHF =** $\sum$ [Maximum Concentration of Contaminant] / [Comparison Value for Contaminant]	
100 > CHF > 2	M (Medium)		
2 > CHF	L (Low)		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS: Record the CHF Value from above in the box to the right (maximum value = H).**		

Migratory Pathway Factor

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure	☐ H
Potential	Contamination in the surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	☐ M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possible due to the presence of geological structures or physical controls).	☐ L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).**	

Receptor Factor

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	☐ H
Potential	Potential for receptors have access to surface soil to which contamination has moved or can move.	☐ M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	☐ L
RECEPTOR FACTOR	**Check the value that corresponds most closely to the surface soil receptors at the MRS.**	
	No Known or Suspected Surface Soil MC Hazard	☐

DIRECTIONS: Document any MRS - specific data used in selecting the soil contaminants in the space provided.

Media not evaluated. Per the Final RI Work Plan, no soil samples were collected during the RI, as no breached MEC items or concentrated MD were found (Section 6.1.1, RI Report).

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 28
Determining the HHE Module Rating

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

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

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

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

HHE MODULE RATING	N
HHE Ratings (for reference only)	
Combination	**Rating**
HHH	A
HHM,HMH,MHH	B
HHL,HLH,LHH,HMM,MHM,MMH	C
HML,HLM,MHL,MLH,LHM,LMH,MMM	D
HLL,LHL,LLH,MML,MLM,LMM	E
MLL,LML,LLM	F
LLL	G
Alternative Module Ratings	☐ Evaluation Pending
	☐ No Longer Required
	☑ No Known or Suspected MC Hazard

HHE Module Description (4000 characters max):
Detections are not indicative of munitions activities and would not impact the MRS Score. No MC were detected above background (Secs 4.2.3 and 5.3.3, RI Report). No Known or Suspected Hazard Selected.

C02NJ0004 Fort Hancock - 11 - MMRP - Southern Proving Ground No Action
Table 29
MRS Priority

In the chart below, circle the letter rating for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Check the corresponding numerical priority for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority, record this relative priority in the MRS Priority or Alternative MRS Rating at the bottom of the table.
An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS Priority or Alternative MRS Rating				No Known or Suspected Hazard	