DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
635 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2824

23 May 2014

REPLY TO ATTENTION OF:

Washington Department of Ecology

Mr. Ronnie Johnson
Munitions Cleanup
Toxics Cleanup Program
PO Box 47600
Olympia, WA 98504-7600

Dear Mr. Johnson:

This letter is in regards to the Formerly Used Defense Site (FUDS) known as Fort Flagler Military Reservation. The property is located at the northern end of Marrowstone Island about 2 ½ miles southeast of Port Townsend in Jefferson County, Washington. The majority of the property is currently owned by the state of Washington and operated as Fort Flagler State Park.

In 2007, a Military Munitions Response Program (MMRP) Site Inspection (SI) was completed at Fort Flagler. The MMRP SI reviewed the property for munitions and explosives of concern (MEC) and munitions constituents (MC). The SI created the Rifle Range as a munitions response site (MRS) that had previously not been identified.

The FUDS program has created Project 05 at the Fort Flagler Military Reservation to address the Rifle Range MRS. Enclosure 1 is the Draft MRSPP worksheets that were prepared for the Rifle Range MRS after the final SI was issued with a MC concern, but not a MEC concern.

Following the review by your organization, the Draft MRSPP shall be forwarded to the Department of Defense's Environmental and Munitions Center of Expertise (EMCX) to be review and finalized. If there is any substantial change to the MRSPP by the EMCX, then your organization shall be given the opportunity to review and comment again.

USACE requests comment in regards to the Project 05 Draft MRSPP worksheets that are in regards to the Rifle Range MRS. Comments, or a statement of no comments, may be provided via email or letter. A response from your organization regarding the Project 05 Draft MRSPP worksheets is requested by 20 June 2014.

If there are any questions or concerns you may reach me at (816) 389-3922 or by e-mail at Kurt.H.Baer@usace.army.mil.

Sincerely,

BAER.KURT.HENDERSON.1231195226

Digitally signed by BAER.KURT.HENDERSON.1231195226
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=BAER.KURT.HENDERSON.1231195226
Date: 2014.05.23 09:52:31 -05'00'

Kurt Baer
Project Manager

Enclosure

Table A
MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from DoD databases, such as RMIS. 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 non-munitions related contaminants found at the MRS (e.g., benzene, trichloroethylene), and any potentially exposed human and ecological receptors. Include a map of the MRS, if one is available.

Munitions Response Site Name: **Rifle Range**
Component: **US Army Corps of Engineers, Formerly Used Defense Site (FUDS) Program**
Installation/Property Name: **(WA09799F328900) Fort Flagler Mil Res**
Location (City, County, State): **Port Townsend, Jefferson, WA**
Site Name (RMIS ID)/Project Name (Project No.): **F10WA031602R01 Rifle Range (05)**

Date Information Entered/Updated: **4/30/2014**
Point of Contact (Name/Phone): **PUBLIC AFFAIRS - 816-389-3486**
Project Phase (check only one):

☐ PA	☒ SI	☐ 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 (by type of munition, if known) or munitions constituents (by type, if known) known or suspected to be present):
The Rifle Range MRS is 16 acres in size and is located near the lighthouse at Marrowstone Point on the northeast tip of the FUDS Property. The range was used to train troops in the use of small arms. According to the ASR, the Rifle Range was used between 1942 and 1954 for small arms use. The configuration of this range is firing from south to north. The butt to this range was torn down in 1932 to salvage lead and copper from the expended bullets. A new range was reportedly built on the same location during World War II. The berm in front of the targets is clearly visible.

Currently, the Rifle Range MRS is part of the Ft. Flagler State Park, which offers camping, boating, fishing, shoreline use, hiking, and historical interpretive information. Hiking trails traverse the Rifle Range MRS, and an interpretive trail occupies the rifle range location. For the foreseeable future, it is likely that the Range Complex AOC will continue to be part of the Ft. Flagler State Park. (2007 SI Report, Sections 12.1).

The EHE Module was assigned the alternative rating of No Known or Suspected Explosive Hazards. Only small arms ammunition was used at the MRS. No MEC or MD was identified during the SI visual reconnaissance. (2007 SI Report, sections 12.3 and 12.3.1) MEC exposure pathway is considered incomplete (2007 SI Report, Appendix J, CSM, page 25). USACE Policy is expended small arms ammunition does not pose an explosive hazard.

The CHE Module was assigned the alternative rating of No Known or Suspected CWM Hazard. The 2007 SI Report makes no mention of chemical warfare material at Fort Flagler Military Reservation. The ASR states that based on historical records, the result of the site survey, and interviews, there is no evidence of CWM being stored or used at the property (ASR, Project Fact Sheet, paragraph 8.a).

The MRSPP Score was not coordinated with the Stakeholders during the SI. Documentation of stakeholder coordination subsequent to the SI may be found in the Project file on FRMD under Document Category 01.22.

Throughout the MRSPP, the following references are used:
a. Reference to the "ASR" refers to the "Final Archives Search Report for the Fort Flagler State Park," dated April 2005, located on FRMD at F10WA031602_01.02_0002_p.
b. Reference to the 2007 SI Report refers to the "Final Site Inspection Report" Fort Flagler Military Reservation, Jefferson County, WA, FUDS Property No. F10WA0316" dated September 2007, located on FRMD at F10WA031602_01.09_0001_a.

Description of Pathways for Human and Ecological Receptors: **MEC surface and subsurface exposure pathways are incomplete. Groundwater and surface water exposure pathways for MC are incomplete. Soil is the primary medium of concern because of possible MC in the soil from training activities. The soil also serves as a secondary source of potential air, sediment, surface water, or groundwater contamination. Sediments may accumulate in the area through ponding of precipitation. The sediment also serves as a secondary source for surface water and groundwater contamination. There are one or more ponds in the area between the firing points and targets. These are not considered to be a pathway because of their location well in front of the targets and it is understood that these may have been constructed after the use of the range ended in 1954. The potential routes of human exposure to contaminated soils include incidental ingestion of and dermal contact with contaminated media, as well as inhalation of soil particulates during intrusive work. The potential routes for wildlife exposure to contaminated soils include ingestion of and direct contact with contaminated media. Plants may uptake MC and then subsequently be eaten by wildlife. Burrowing animals may ingest MC-contaminated soil and subsequently be eaten by predators. The potential routes of human exposure to contaminated sediment include incidental ingestion and dermal contact with sediments. The potential routes of wildlife (including aquatic organisms)**

exposure to contaminated sediment include ingestion of and direct contact with sediment (2007 SI Report, Appendix J, CSM, pages 25-27).

Description of Receptors (Human and Ecological): **State Park workers and visitors and wildlife (2007 SI Report, Appendix J, CSM, pages 26-27).**

Table 1

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the score(s) that correspond with **all** munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

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

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided. **The Rifle Range MRS was a rifle range used to train troops in the use of small arms. Only small arms were used at the MRS. (2007 SI Report, Sections 12.1 and 12.3).**

Table 2

EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the score(s) that correspond with **all** sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms *former range, practice munitions, small arms, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	♦ The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include: impact or target areas, associated buffer and safety zones, firing points, and live-fire maneuver areas.	10
Former munitions treatment (i.e., OB/OD) unit	♦ The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	♦ The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	♦ The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5
Former burial pit or other disposal area	♦ The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	♦ The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	♦ The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	♦ The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	♦ The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	♦ The MRS is a former military range where only small arms ammunition was used [There must be evidence that no other types of munitions (e.g., grenades) were used or are present to place an MRS into this category.].	1
Evidence of no munitions	♦ Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	**1**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Source of Hazard*** classifications in the space provided. **The Rifle Range MRS was a rifle range used to train troops in the use of small arms. Only small arms were used at the MRS. (2007 SI Report, Sections 12.1 and 12.3).**

Table 3

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the score(s) that correspond with **all** locations where munitions are located or suspected of being found at the MRS.

Note: The terms *surface, subsurface, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	♦ Physical evidence indicates that there are UXO or DMM on the surface of the MRS ☐ ♦ Historical evidence (e.g., a confirmed incident report or accident report) indicates there are UXO or DMM on the surface of the MRS.	25
Confirmed subsurface, active	♦ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ♦ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20
Confirmed subsurface, stable	♦ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ♦ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	15
Suspected (physical evidence)	♦ There is physical evidence (e.g., munitions debris, such fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	♦ There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	♦ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	♦ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability [There must be evidence that no other types of munitions (e.g., grenades) were used or are present at the MRS to place an MRS into this category.].	1
Evidence of no munitions	♦ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	**1**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of Munitions*** classifications in the space provided. **The Rifle Range MRS was a rifle range used to train troops in the use of small arms. Only small arms were used at the MRS. (2007 SI Report, Sections 12.1 and 12.3).**

Table 4

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to any explosive materiel. Circle the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	♦ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	♦ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	♦ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	♦ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	**10**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided. **The MRS is and for the foreseeable future is likely to continue to be part of the Fort Flagler State Park, which offers camping, boating, fishing, shoreline use, hiking, and historical interpretive information. There was no mention of restrictions on public access to the MRS. (2007 SI Report, Sections 2.4.2 and 12.1).**

Table 5

EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	♦ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies.	5
Scheduled for transfer from DoD control	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the rule is applied.	3
DoD control	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided. **The U.S. Government acquired land for Ft. Flagler in 1866. In 1953, Ft. Flagler was closed and in 1954 the property was transferred to the State of Washington for use as a state park. (2007 SI Report, Section 2.1)**

Table 6

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications of population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Select the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the highest population density within a two –mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	♦ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100–500 persons per square mile	♦ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	♦ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**1**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided. **Jefferson County has a 2000 estimated population of 28,666 or approximately 15.4 people per square mile. The area immediately south of the FUDS Property has a density of 83.2 per square mile. (2007 SI Report, Section 2.4.3 and Figure 2-4).**

Table 7

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the population near the hazard. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the associated population near the known or suspected hazard.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	♦ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	♦ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	♦ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	♦ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	♦ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	♦ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided. **There are 212 household and 280 housing units within a 2-mile radius of the site (2007 SI Report, Section 2.4.3 and Figure 2-4). Reference FUDSMIS GIS: http://maps.crrel.usace.army.mil:7778/apex/fuds.fudscm2.map?map=&p_MapExt=-122.733623,48.081428,-122.686673,48.104102&p_layers=fudspoly&p_basemap=GES**

Table 8

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures near the hazard and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the score(s) that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5
Parks and recreational areas	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	♦ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	♦ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided. **Fort Flagler is a state park and has permanent residents (park employees) and offers camping facilities to recreational users. The area immediately south of Fort Flagler is populated with private residences. (2007 SI Report, Section 2.3 and Figures 2-4 and 2-7).**

Table 9

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resource classifications at the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	♦ There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	♦ There are ecological resources present on the MRS.	3
Cultural resources present	♦ There are cultural resources present on the MRS.	3
No ecological or cultural resources present	♦ There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	**5**

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided. **There is one known archaeological site located within at Ft. Flagler. Ft. Flagler is listed on both the National Register of Historic Places and on the Washington Heritage Register (2007 SI Report, Appendix B, Final TPP Memo, page 18).**

The ranges and other areas do qualify as Important Ecological Places or Sensitive Environments as defined by USACE or EPA (2007 SI Report, Section 2.4.8, Table 2-2 and Figure 2-7). Table 2-2 has ecological places checkmarked that are included in Figure 7.14, List of Ecological Resources, in the MRSPP Primer.

Table 10
Determining the EHE Module Rating

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** box below.
4. Circle 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.

Note:
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	2	3
Source of Hazard	Table 2	1	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	1	16
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	1	16
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	
Ecological and /or Cultural Resources	Table 9	5	
EHE MODULE TOTAL			35

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
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE MODULE RATING	**No Known or Suspected Explosive Hazard**

Table 11
CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the score(s) that correspond to **all** CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, explosive configuration either UXO or damaged DMM	The CWM known or suspected of being present at the MRS is: ♦ Explosively configured CWM that are UXO (i.e., CWM/UXO). ♦ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	♦ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged, or nonexplosively configured CWM/DMM, or CWM not configured as a munition, that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are 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, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS is: ♦ Nonexplosively configured CWM/DMM. ♦ Bulk CWM/DMM (e.g., ton container).	15
CAIS K941 and CAIS K942	♦ The CWM/DMM known or suspected of being present at the MRS is CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	♦ Only 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. **The CHE Module was assigned the alternative rating of No Known or Suspected CWM Hazard. The 2007 SI Report makes no mention of chemical warfare material at Fort Flagler Military Reservation. The ASR states that based on historical records, the result of the site survey, and interviews, there is no evidence of CWM being stored or used at the property (ASR, Project Fact Sheet, paragraph 8.a). Evidence of no CWM was selected for Table 11. Tables 12 through 19 were intentionally omitted according to Army guidance.**

Tables 12-19 are intentionally omitted per Army Guidance.

Table 20

Determining the CHE Module Rating

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. Circle the appropriate range for the **CHE Module Total** below.

5. Circle 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.

Note:
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		
Ease of Access	Table 14		
Status of Property	Table 15		
Receptor Factor Data Elements			
Population Density	Table 16		
Population Near Hazard	Table 17		
Types of Activities/Structures	Table 18		
Ecological and /or Cultural Resources	Table 19		
CHE MODULE TOTAL			**0**

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
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	**No Known or Suspected CWM Hazard**

Table 21
HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum 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 **maximum 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 **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**	
CHF > 100	**H (High)**	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
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

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

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 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 (possibly 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

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the ground water is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☐

Table 21 Comment: Groundwater was not sampled (2007 SI Report, Section 12.4.3)

Table 22
HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum 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 **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**	
CHF > 100	**H (High)**	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
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

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

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 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 (possibly 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

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to 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	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

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

Table 22 Comment: Surface water was not sampled (2007 SI Report, Section 12.4.2).

Table 23
HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum 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 **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
Lead (7439-92-1)	219	400	0.5475
CHF Scale	**CHF Value**	**Sum the Ratios**	0.5475
CHF > 100	**H (High)**	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
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).		L

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

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 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 (possibly 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).	M

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to 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	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	M

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

Table 23 Comment: Reference 2007 SI Report, Section 12.4.2.2 and Table 12-2.

Table 24
HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum 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 **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
CHF > 100	H (High)	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$
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

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

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 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 (possibly 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

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to 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	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

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

Table 24 Comment: Surface water was not sampled (2007 SI Report, Section 12.4.2).

Table 25
HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum 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 **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
Lead (7439-92-1)	219	35.8	6.1173

CHF Scale	CHF Value	Sum the Ratios	6.1173
CHF > 100	H (High)	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
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).	M

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

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 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 (possibly 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).	M

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to 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	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	M

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

Table 25 Comment: Reference 2007 SI Report, Section 12.4.2.3 and Table 12-2.

Table 26
HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum 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 **CHF Value**. If there is no known or suspected MC hazard with present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
Lead (7439-92-1)	**587**	**400**	**1.4675**

CHF Scale	CHF Value		
CHF > 100	**H (High)**	**Sum the Ratios**	1.4675
100 > CHF > 2	**M (Medium)**	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
2 > CHF	**L (Low)**		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	**L**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

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 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 (possibly 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).	**M**

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to 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	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**M**

No Known or Suspected Surface Soil MC Hazard ☐

Table 26 Comment: Reference 2007 SI Report, Section 12.4.1.1 and Table 12-1.

Table 27
HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B of the Primer) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio

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)	Contaminant Hazard 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)	L	M	M	MML	E
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)	M	M	M	MMM	D
Surface Soil (Table 26)	L	M	M	MML	E

DIRECTIONS (cont.):

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

Note:
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 media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	**D**

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	C
HML	D
MMM	D
HLL	E
MML	E
MLL	F
LLL	G

Alternative Module Ratings	
	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard

Table 29

MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the **MRS or Alternative Priority** box at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative 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 or ALTERNATIVE PRIORITY				**5**	