

DATA ITEM DESCRIPTION

Title: Interim Holding Facility (IHF) Siting Plan for Recovered Chemical Warfare Materiel (RCWM) Projects

Number: MR-005-16

Approval Date: 20031201

AMSC Number:

Limitation:

DTIC Applicable: No

GIDEP Applicable: No

Office of Primary Responsibility: CEHNC-OE-CX

Applicable Forms:

Use/Relationship: The Interim Holding Facility (IHF) Siting Plan will be used to provide siting criteria for IHFs for Recovered Chemical Warfare Material (RCWM) Projects. This Data Item Description contains instructions for preparing a work plan chapter to address siting and security measures for the IHF for RCWM projects and incorporates guidance from AR 385-61, DA PAM 385-61, AR and DA Pam 385-64, EP 75-1-3, and DOD 6055.9.

Requirements:

1. The Contractor shall submit an IHF Siting Plan that describes the safety and security criteria to be employed during RCWM operations.
2. The following chemical operations shall be described in the plan and sited on the Quantity-Distance (Q-D) map:
 - 2.1 Static storage of RCWM in the IHF.
 - 2.2 Assessment of RCWM.
3. Provide the Maximum Credible Event (MCE) for the operations at the IHF.
 - 3.1 The Government will provide the D2PC calculations for the MCE. For siting purposes, always use the following parameters:
 - a. Wind speed of 1 meter per second
 - b. Stability factor of "D".
 - 3.2 Provide details for explosively configured RCWM.
 - 3.3 Provide details for non-explosively configured RCWM.
 - 3.4 The Government will provide the primary fragmentation characteristics for the explosively configured RCWM.
 - 3.5 The Government will provide the calculations for engineering controls necessary to prevent primary fragments from propagating the explosives wave between Multiple Round Containers (MRC), limiting the MCE to no more than one explosively configured RCWM item in the IHF (see Table 1 below).
 - 3.6 For explosively configured RCWM, an instantaneous release of all agent within the item will be assumed if the MCE occurs.
 - 3.7 For non-explosively configured RCWM, the release of a percentage of the agent will be assumed and will be determined dependent upon specific item being identified and will be provided to the Contractor by the Government.
4. Site Map. The site map should be scaled at 1-inch equals 400 feet. A larger scale may be used if available and the map can be logistically included in the work plan. A smaller scale is acceptable if distances can be accurately shown. If an unscaled map is used, the map must have labeled distances. Ensure the following items are identified on the map:

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4.1 Q-D arc for the 1% Lethality Distance, as calculated by D2PC.

4.2 Q-D arc for the Net Explosive Weight (NEW) for the IHF (usually will be the NEW of the MCE, if explosively configured).

4.3 Public Withdrawal Distance (PWD). This distance is usually the No Significant Effects (NOSE) Distance, calculated by the D2PC.

4.4 Secondary fragment distance from Table C9.T6, DOD 6055.9, usually the distance specified for <31 pounds NEW.

5. Describe any additional engineering controls that may be necessary to ensure the public is protected in the event the necessary Q-D cannot be achieved.

5.1 Use of a primary fragmentation capturing device to eliminate primary fragments from penetrating another MRC should an MCE occur within the IHF (see the Table below). The Government will provide this design, should it be needed.

Table 1
Penetration of Fragments from Explosively Configured Agent-Filled Munitions

Chemical Round	Thickness of Mild Steel Required to Prevent Perforation (in)	Thickness of Mild Steel Required to Prevent Perforation After Perforation of MRC (in)
4 lb Incendiary AN-M50X-A1	0.10	0.00
VB Rifle Grenade Mark I	0.21	0.08
M15 WP Grenade	0.09	0.00
115mm M55 Rocket (Chemical)	0.22	0.09
6 lb Incendiary Bomb	0.35	0.22
75mm MkII	0.31	0.18
75 mm M1/M8 (Chemical)	0.11	0.00
4 in Stokes (Chemical)	0.11	0.00
105mm M60	0.25	0.12
105 mm M360	0.46	0.33
4.2" M2/M2A1 (Chemical)	0.10	0.00
4.7 in. (chemical)	0.21	0.08
155 mm Mk 2	0.59	0.46
155 mm M122 (Chemical)	0.66	0.53
8 in M426 (Chemical)	0.85	0.72
8 in Livens (Chemical)	0.11	0.00

NOTE: Penetration is based upon design fragment weight and velocity calculated in accordance with HNC-ED-CS-S-98-1 and penetration of mild steel using the THOR equations.

5.2 Use of a Vapor Containment Structure (VCS) designed to mitigate the blast overpressure should the explosively-configured MCE occur within the IHF. The VCS used by the USACE has been approved for use for explosive bursters up to 0.750 pounds without modification.

5.3 Use of an Engineering Control Structure (ECS) for a non-explosively configured MCE will be required during assessment activities outside of the IHF, if the Q-D for the PWD cannot be achieved, or absolute exclusion cannot be maintained.

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5.4 Use of a chemical agent filtering system, in conjunction with the VCS, to capture the agent release should the MCE occur within the IHF.

6.0 The contractor shall prepare a Physical Security Plan using DID MR-005-17. Not all paragraphs may be applicable to all projects.

7.0. End of DID MR-005-16.