APPENDIX C

Chemical Safety Submission Outline

C-1. General Guidelines.

a. It is intended for this document to be a "stand-alone" document from the Work Plan and other supplemental plans for the project.

b. This plan is built on the Work Plan and supplemental plans, so those plans must be complete before the CSS can be completed.

c. The overall length of the plan should not exceed 50 single-sided pages.

d. It is intended to provide those reviewing and approving agencies the necessary technical information, as required in the DA Interim Guidance of 1997. This outline has been agreed to by USAESCH and USATCES. No substantive changes will be made without the approval of the MM CX.

e. Document control is positively essential during the drafting, editing, and publishing of this CSS. Each page must have a footer that identifies the document, either original date or date of the latest change. Additionally, a sheet shall be inserted into the front of the document that specifies the latest dates and changes. All changes to the original document will leave the bars in the outside margins to identify change locations throughout the document.

f. It is intended for this document to include the necessary information required for an ESS as well, should it be necessary for the conduct of site operations for the RCWM activities.

C-2. Outline.

EXECUTIVE SUMMARY

ES1.0 Project Overview. Brief overview of the project, project objective, site history and background, expected RCWM/OE. (1 to 2 paragraphs maximum)

ES2.0 Synopsis of Site Operations.

ES2.1 Intrusive operations (brief paragraph on the activity covering; reacquisition of anomalies, use of UXO personnel, use of engineering controls or evacuation, use of fragmentation distances, use of 1 Percent Lethality distances, and anticipated date of startup of operations, include projected date of Pre-Operational Survey).

ES2.2 Brief description of the MGFD - list the MGFD and reference the appropriate section of the body of the CSS.

ES2.3 Brief description of the MCE - list the MCE and reference the appropriate section of the body of the CSS.

ES2.4 Brief description of discovery actions for: conventional ordnance items, suspect ordnance items, is EOD required, if suspect RCWM TEU does assessment, if preliminary assessment is RCWM then packaging by TEU, transportation to IHF by TEU, subsequent assessment by TEU.

ES3.0 Brief description of air monitoring for RCWM agents; using MINICAMS, for agents (name them), DAAMS, OP-FTIR, sentence on appropriate personal protective equipment dependent upon air monitoring results.

ES3.1 Brief description of actions to be taken in the event of a MINICAMS ring-off or discovery of RCWM.

ES4.0 Environmental Sampling.

ES4.1 Brief paragraph on the types of samples that will be taken on site; surficial sampling, subsurface soil, pit characterization, soil disposal, aqueous investigative waste, decontamination water, Investigation Derived Waste (IDW).

ES4.2 Brief paragraph on what CWA is expected and the applicable ABPs, and how and who will be doing the analysis.

ES5.0 Monitoring and Disposal. Briefly describe who will monitor for what and with what equipment.

ES6.0 Site Usage after cleanup, brief statement as to projected site usage after cleanup.

TABLE OF CONTENTS.

1.2.4 Activity Hazard Analysis for RCWM and Explosives-related tasks (all others will be located within the SSHP).

1.3 Organizational Responsibilities.

1.3.1 UXO Contractor.

1.3.2 HTW Contractor.

1.3.3 ECBC (or equivalent organization).

1.3.4 TEU.

1.3.5 Industrial Air monitoring (for the chemicals CG, AC, CK, PS, etc.)

1.3.6 USAESCH (include Chemical Event Reporting and Safety Oversight of Site Operations).

1.3.7 Corps District.

1.4 Exclusion Zones (MGFD and MCE).

1.4.1 Fragmentation Distance of MGFD.

1.4.2 Public Access Exclusion Distance (PAED)

1.4.3 1 Percent Lethality Distance for MCE.

1.4.4 Interim Holding Facility.

1.5 Maps and Drawings (use 1 inch = 400 feet, or when smaller scales are used, ensure all distances to objects within the map are clearly marked as to what the items are and the distances to those items (DOD 6055.9).

1.5.1 Fragmentation Zones (QD Arcs) (if applicable).

1.5.2 1 Percent Lethality Distance.

1.5.3 Public Access Exclusion Distance (PAED).

1.5.4 Installation Boundaries.

1.5.5 Explosive Storage Locations.

1.5.6 IHF Location.

1.5.7 Overall Site Map.

1.5.8 Predetermined UXO Disposal Locations for Safe-To-Move UXO.

2.0 Sampling Plan Summary.

2.1 Introduction.

2.2 Soil Sampling.

2.2.1 Pit Characterization Sampling.

2.2.2 Soil Disposal Sampling.

2.3 Aqueous Sampling.

2.4 Scrap and Non-RCWM Intact Container Sampling.

3.0 Air Monitoring Plan Summary.

3.1 Introduction.

3.2 HTW (for those chemicals that are agent-related only).

3.3 Chemical Warfare Agents.

3.4 Environmental/Industrial (for the chemicals CG, AC, CK, PS, etc.)

4.0 PPE and Decontamination Summary.

4.1 PPE Summary.

4.1.1 General Requirements.

4.1.2 Task-specific Levels of PPE.

4.2 Personal Decontamination Procedures.

4.2.1 General Decontamination Procedures.

4.2.2 Specific Decontamination Procedures.

4.3 Equipment Decontamination Procedures.

4.3.1 General Decontamination Procedures.

4.3.2 Specific Decontamination Procedures.

5.0 Medical Support Summary.

5.1 Project Resources.

5.2 Health Care Facilities - where to take casualties (chemical and non-chemical).

5.3 MedEvac Procedures.

5.4 Emergency Contact Information (for health care facilities).

5.5 Directions to health care facilities.

6.0 Public Protection Plan Summary.

6.1 Introduction.

6.2 Public Notifications.

6.3 Emergency Operations.

6.4 Downwind Hazard Modeling (D2PC) Calculations.

7.0 Interim Holding Facility Siting Plan Summary.

7.1 Introduction.

7.2 IHF Container Description.

7.2.1 Location and Layout (Include a map, or refer to existing maps that clearly show the layout and distances identified in 7.3).

7.3 IHF Siting Requirements.

7.3.1 Public Access Exclusion Distance and 1 Percent Lethality Distance.

7.3.2 Inhabited Building Distance (IBD).

7.3.3 Net Explosive Weight (NEW).

7.3.4 Evacuation/Protective Distance.

7.3.5 Intra-line Distance.

7.3.6 Public Traffic Route (PTR) Distance.

7.3.7 Public Notification.

7.3.8 IHF Access Controls.

7.3.9 Multiple IHF Siting.

7.4 IHF Use and Occupancy.

7.5 Security.

7.6 Evacuation.

7.6.1 Notification for IHF Entry.

7.6.2 Notification Procedures.

8.0 MEC Transportation Plan Summary.

8.1 Procedures.

8.1.1 Discovery and Transport to Storage Area.

8.1.2 Packaging.

8.1.3 Manifesting/Placards.

8.1.4 Off-site Selection.

8.1.5 On-site Disposal Facility.

8.2 Emergency Response.

8.2.1 Incident Containment and Controlling of Hazardous Waste.

8.2.2 Military EOD Participation.

9.0 RCWM Transportation Plan Summary

9.1 Discovery and Transport to IHF.

9.2 Off-site Transport (This is a placeholder for PMNS in the event that RCWM is discovered).

9.3 On-site Destruction

10.0 Engineering Controls Summary.

10.1 Introduction.

10.2 Brief description of what types will be used at the project: VCS, ECS, Filters, Blast mitigating devices and their effects on the safety distances for the MGFD and the NOSE distance. Full technical details will be available on-site, or upon request, or included for "first-used" technology.

10.3 Evacuation/Shelter-in-Place.

11.0 Post-Recovery Assessment Activities Summary.

11.1 Brief description of what assessment activities will be used at the project, what types of engineering controls will be used to mitigate release of RCWM vapors into the atmosphere during post-recovery assessment activities, brief discussion on what technologies

will be used during the assessment process. Identify 1 Percent Lethality Distance and NOSE distance for this operation and any necessary Q-D Arcs for explosively configured items.

LIST OF FIGURES.

a. In Section 1:

(1) Explosives Siting Distances, Storage Site (Q-D Arcs)(if applicable).

(2) Fragmentation Zones (Q-D Arcs)(if applicable).

(3) Installation/Site Boundaries.

(4) 1 Percent Lethality Distance/IBD/PAED.

(5) Areas Designated for Disposal of "safe-to-move" conventional UXO.

b. In Section 6: Wind Rose Data for Site.

c. In Section 7: IHF Layout with all applicable distances and Q-D arcs identified.

d. In Section 11: Layout of area where Assessment activities takes place.

LIST OF TABLES.

a. In Section 1:

(a) 1 Percent Lethality Distances for MCE(s).

(b) Activity Hazard Analysis Tables for all RCWM and Explosives-related tasks.

b. In Section 2: Analytical Methods for RCWM

c. In Section 3: Air Monitoring Matrix

d. In Section 4:

(1) PPE Requirements by Task.

(2) PPE Upgrade Criteria.

(3) Decontamination Applications.

(4) Personnel Decontamination Procedures.

C-3. Chemical Safety Submission Information Sheet (CSSIS).

The following items are keyed to the subparagraphs of DOD 6055.9-STD, Revision 3, Chapter 5, Paragraph 5.4.4. This sheet shall be used to identify where the following areas of interest may be found within the CSS. This CSSIS will be the first page in the CSS.

DOD 6055.9 Paragraph	**Topic**	**Location found in the CSS**
5.4.4.3.2	Drawings of Site Maps (typically 1 in equals not more than 400 feet)	
5.4.4.3.2	Fragmentation range (MSDs and Overpressure)	
5.4.4.3.2	Downwind Hazard distances (1 Percent Lethality, PAED)	
5.4.4.3.3	Distances to installation/site boundaries	
5.4.4.3.3	Public Railways/Highways	
5.4.4.3.3	Power Transmission and utility lines	
5.4.4.3.4	Other inhabited facilities within the IBD	
5.4.4.3.5	Description of Hazardous materials or items	
5.4.4.3.5	Quantities, hazard class and division of material/items (IHF only)	
5.4.4.3.6	Personnel limits for each operation (IHF)	
5.4.4.3.1	General details (Project Background)	
5.4.4.3.8	Brief summary of design considerations to reduce Q-D (Engineering Controls)	
5.4.4.3.9	Type and arrangement of Operations	
5.4.4.3.10	Topographic map (usually not needed unless using topography to reduce or mitigate blast, downwind hazard areas)	
5.4.4.3.11.1	Personal protective clothing and equipment	
5.4.4.3.11.2	Treatment of effluent and waste	
5.4.4.3.11.3	Adequacy of medical support	

DOD 6055.9 Paragraph	Topic	Location found in the CSS
5.4.4.3.11.4	Average Wind Speed and Direction (Wind Rose data)	
5.4.4.3.11.5	Other support facilities pertinent to chemical safety	
5.4.4.3.11.6	Shelter-in-place	
5.4.4.3.11.5	Available resources (Project structure – organizations)	
5.4.4.3.11.6	Evacuation	
5.4.4.3.11.6	Disaster control plan (Public Protection Plan/PAP)	
5.4.4.3.8	Emergency destruction of (specify item) (only if EDS is programmed)	
5.4.4.3.9	Intentional detonation of munitions	
5.4.4.3.11.6	Warning and detection systems	
5.4.4.3.11.7	Hazard Analysis (Risk Assessment)	
5.4.4.3.12	Deviations from Safety Standards	