

Framework Option Paper #5: The Role of the MEC HA in the Decision-Making Process

1 INTRODUCTION

1.1 Purpose

The discussion and flowchart that follow are designed to explain how the proposed MEC HA process could integrate with the site investigation and decision-making process. The nature and specifics of this integration serve as an important context for the development of the MEC HA framework.

1.2 Background

One of the early concerns in the development of the MEC HA related to how the MEC HA process would be integrated into the CERCLA process. The National Contingency Plan (NCP), which is the implementation framework for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), requires that a site-specific risk assessment be conducted when making decisions at a site. The NCP provides few details as to how this risk assessment is to be carried out; however, it suggests that the assessment should be appropriate to the requirements of the project. The MEC HA should fulfill that requirement while appropriately reflecting the differences between a chemical risk assessment and a hazard assessment for MEC.

1.2.1 MEC HA Integration with CERCLA Process

The site-specific decision process referred to in the discussion above is assumed to be the CERCLA process, which pertains to either remedial or removal decisions. The process reflects the preference of DoD and EPA for a process consistent with CERCLA, as presented in the *Interim Final Management Principles for Implementing Response Actions at Closed, Transferred, and Transferring Ranges* (March 7, 2000). In some cases where the State has the lead in overseeing a cleanup, the cleanup may be preferentially conducted under State Resource Conservation and Recovery Act (RCRA) requirements, other federally delegated authorities, or other State authorities. Because the RCRA corrective action program is conducted in a manner parallel to the CERCLA program, the integration of a hazard assessment under that process will be similar to integration under CERCLA.

As shown in Figure 1, the MEC HA may add value at different decision points in the CERCLA process. The central question of an MEC HA is whether or not the land in question is reasonably safe for its intended use. The response can be “yes,” “no,” or “not certain.” If the response is not certain, then additional investigation will be required until the question can be answered with a yes or no, and until there is sufficient understanding of the “no” (it is not safe) answer to take appropriate action. Figure 1 presents five points at which an assessment of hazard informs decisions (this does not indicate that a separate MEC HA would be performed at each point):

1. Hazard information is first considered during a preliminary screening that may take place during the Preliminary Assessment/Site Investigation (PA/SI) stage under CERCLA. If sufficient information is available at this point to support a no-action decision, no further investigation may be required. (A no-action decision at this stage will require substantial weight of evidence.) If sufficient information is available to determine that a hazard from MEC exists, and to determine the action required, it may be appropriate to move directly to a removal action.

2. The first phase of a formal MEC HA hazard assessment may be performed prior to the remedial investigation (RI) and will involve the assessment of historical data, archival research material, and sampling that may have taken place during the PA/SI. At this point in the process, the initial Conceptual Site Model (CSM) will be used to guide the hazard assessment, the identification of uncertainty, and data gaps that should be filled during the RI. The hazard assessment could also be used to identify site-specific priorities where there are multiple response sites that may require actions.
3. The second phase of the MEC HA is at the conclusion of the RI. The MEC HA could be performed at any time there is sufficient information to answer the yes or no decision and to understand what actions, if any, are appropriate. At this point the MEC HA can be used to understand the hazards at the munitions response sites in the absence of action and to identify the issues that should be addressed in a focused feasibility study. Depending on the complexity of the cleanup alternatives, a site with a “no” answer could move directly into a removal action or into a focused feasibility study.
4. The third phase of the MEC HA occurs during the feasibility study. During this phase, the effect of alternatives on the level of hazard is analyzed to inform the hazard management decision process.
5. Finally, the MEC HA can be used to assess the results of interim removal actions against final remediation goals.

Focused Feasibility Study

The term *focused feasibility study* is used here because munitions response sites often have a limited number of possible alternative actions, such as the depth of removal. The term is used to emphasize that the level of analysis of alternatives should reflect the true alternatives available at the site.

Please refer to Figure 1 for additional details.

2. CONCLUSION

There are two technical issues to be explored further in the development of the framework. These include:

- What input factors are appropriate for each phase of hazard assessment ? (e.g. It is likely that some information will not be available on each proposed input factor at the early stages of response actions)
- How do the differences in the input factors for different stages affect the structure of the framework?

In addition, a central policy issue to explore is how prescriptive will the MEC-HA guidance be in specifying its use at different phases of the hazard assessment process.

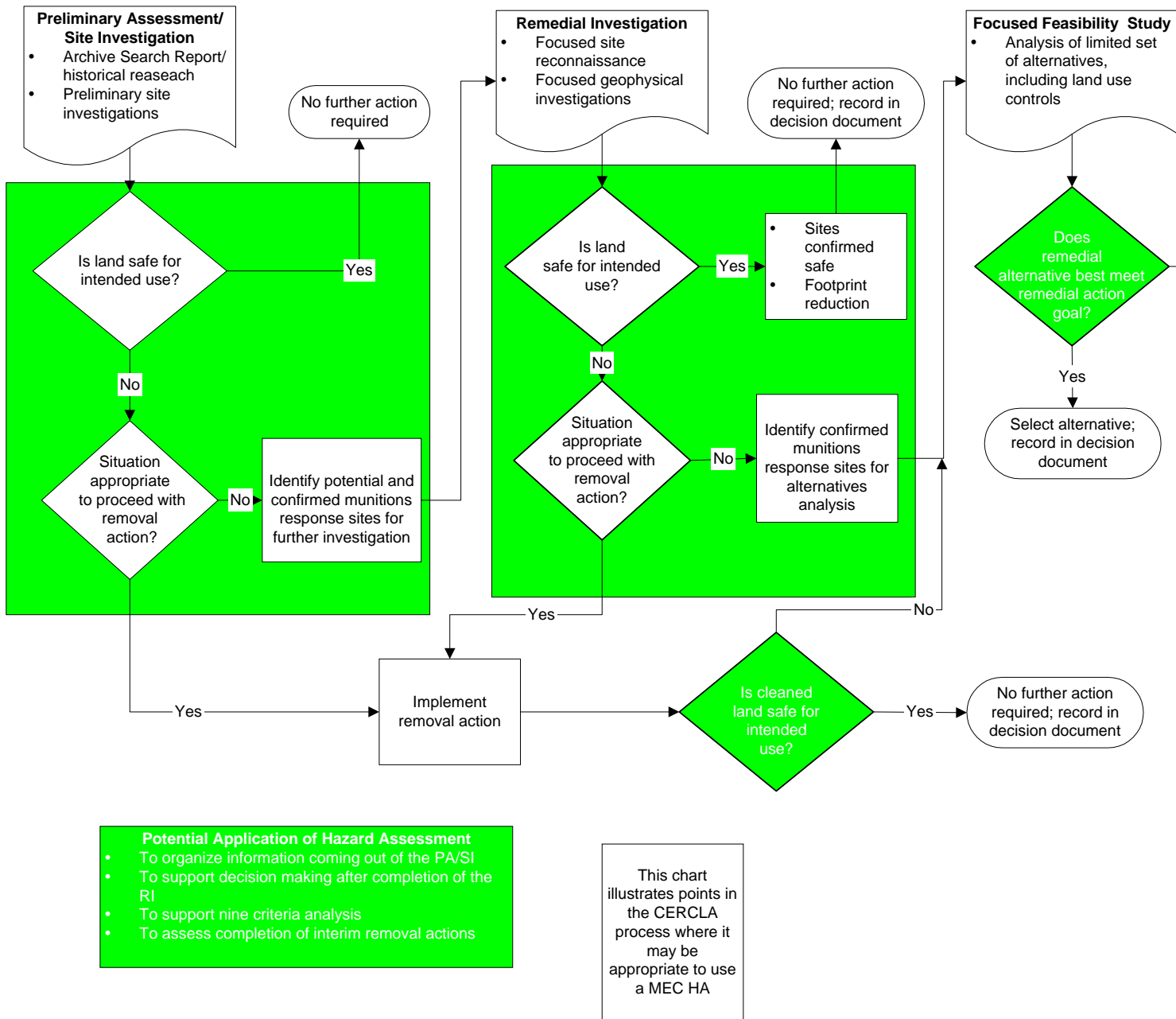


Figure 1: Integration of MEC HA in the CERCLA Process