EP 200-1-18
30 September 2011

US Army Corps
of Engineers®

ENVIRONMENTAL QUALITY

FIVE-YEAR REVIEWS OF MILITARY MUNITIONS RESPONSE PROJECTS

ENGINEER PAMPHLET

AVAILABILITY

Electronic copies of this and other U.S. Army Corps of Engineers publications are available on the Internet at http://140.194.76.129/publications/. This site is the only repository for all official USACE engineer regulations, circulars, manuals, and other documents originating from HQUSACE. Publications are provided in portable document format (PDF).

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314-1000

EP 200-1-18

CEMP-RA

Pamphlet
No. 200-1-18

30 September 2011

Environmental Quality
FIVE-YEAR REVIEWS OF MILITARY
MUNITIONS RESPONSE PROJECTS

1. Purpose. This engineer pamphlet (EP) provides U.S. Army Corps of Engineers (USACE) personnel with procedural guidance for performing Five-Year Reviews for projects under the Military Munitions Response Program (MMRP).

2. Applicability. This pamphlet applies to all Headquarters, U.S. Army Corps of Engineers (HQUSACE) elements and all USACE commands having responsibility for performing military munitions response activities.

3. Distribution Statement. Approved for public release; distribution is unlimited.

4. References. References are provided in Appendix A.

5. Explanation of Abbreviations and Terms. Acronyms and special terms used in this pamphlet are explained in the glossary.

FOR THE COMMANDER:

2 Appendices
(See Table of Contents)

DIONYSIOS ANNINOS
Colonel, Corps of Engineers
Chief of Staff

This pamphlet supersedes EP 75-1-4, dated 31 October 2003.

THIS PAGE INTENTIONALLY LEFT BLANK

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314-1000

EP 200-1-18

CEMP-RA

Pamphlet
No. 200-1-18

30 September 2011

Environmental Quality
FIVE-YEAR REVIEWS OF MILITARY MUNITIONS RESPONSE PROJECTS

TABLE OF CONTENTS

Page

TABLES

FIGURES

APPENDICES

CHAPTER 1

Overview of Five-Year Reviews

1-1. Introduction. This EP presents procedures for developing and implementing Five-Year Review requirements for military munitions response projects. The purpose of Five-Year Reviews is to determine if a response action continues to minimize explosive safety hazards and continues to be protective of human health, safety, and the environment. Five-Year Reviews are typically conducted under the Long Term Management phase once a project achieves Response Complete or Remedy In Place. In situations where the Remedial Action-Construction or Remedial Action-Operation phases are expected to exceed five years, the review may be required during those phases. Five-Year Reviews are a requirement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

a. Responsibility for executing Five-Year Reviews for a military munitions response action depends on whether the site is a Formerly Used Defense Site (FUDS) or an active or transferring installation.

(1) FUDS. For FUDS, as defined in ER 200-3-1, Five-Year Reviews are conducted under the Defense Environmental Restoration Program (DERP). Authority for executing military munitions response actions at FUDS has been delegated to the United States Army Corps of Engineers (USACE) by DoD through Headquarters, Department of the Army (HQDA). It is the responsibility of the USACE district, which serves as the Project Manager (PM), to execute Five-Year Reviews for military munitions response actions at FUDS.

(2) Active or Transferring Installations. Military munitions response actions at active installations are conducted under the Military Munitions Response Program (MMRP). Military munitions response actions at transferring installations are conducted under the Base Realignment and Closure (BRAC) program. Five-year reviews will be conducted in accordance with customer requirements; however, the procedures described in this pamphlet may be helpful for conducting Five-Year Reviews at active or transferring installations.

b. Military munitions response actions are planned, managed, and executed using the CERCLA remedial process. Further information on this topic is provided in EP 200-1-19, Military Munitions Response Process. For FUDS, Engineer Regulation (ER) 200-3-1, Formerly Used Defense Sites Program Guidance, provides additional guidance. If further assistance is needed with regards to this issue, contact the Environmental and Munitions Center of Expertise (EM CX).

1-2. Regulatory Authorities. For FUDS, the determination of the governing statutes and regulations for any specific military munitions project will be made by the District Office of Counsel in consultation with counsel supporting the EM CX. For work performed by USACE under a different program or authority (e.g., BRAC, active installation, or other clients), the appropriate legal representative of the sponsoring agency will be lead counsel and will determine the governing statutes and regulations for the specific project. Statutes and regulations applicable to military munitions response actions are provided in Appendix

A. When conducting site visits for purposes of Five-Year Reviews, all USACE elements will comply with DoD, Department of the Army (DA) and USACE safety and health regulations and procedures.

1-3. Purpose of the Five-Year Review. The purpose of Five-Year Reviews for military munitions response actions is to determine if a response action continues to minimize explosive safety hazards and be protective of human health, safety, and the environment. Five-Year Reviews also provide an opportunity to assess the applicability of new technology for addressing previous technical impracticability determinations.

a. The scope of the review will be site-specific and will depend upon the response objectives and the specific responses implemented. The review will evaluate appropriate site-specific factors that may impact the continued effectiveness of the response. These factors may include changes in physical conditions at the site, changes in public accessibility and land use, and the applicability of new technology for addressing a previous technical impracticability determination. The review will also evaluate the maintenance and enforcement of Land Use Controls (LUCs). Further detail regarding the scope of the review is provided in Chapters 2 and 3 of this EP.

b. The Five-Year Review will answer three general questions:

(1) Is the remedy functioning as intended by the Decision Documents?

(2) Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives used at the time of the remedy selection still valid?

(3) Has any other information come to light that could call into question the protectiveness of the remedy?

c. As described in Engineer Manual (EM) 200-1-2, the Technical Project Planning (TPP) Process may be used to assess Five-Year Review Objectives.

1-4. Sites Requiring a Five-Year Review.

a. The Decision Document for a military munitions response action conducted under the remedial process will identify if a Five-Year Review is required for a site.

b. Sites where the Decision Document identifies a determination of No DoD Action Indicated (NDAI) because there is no evidence of military munitions do not require Five-Year Reviews, unless a risk is identified at a later date. If a risk is identified at a later date, USACE will address the risk in accordance with EP 200-1-19.

c. Sites that require a Five-Year Review for a military munitions response action may also require a five-year review for Hazardous, Toxic, and Radioactive Waste (HTRW) hazards. The military munitions and HTRW reviews should be coordinated, and where practical reported in one document.

d. Statutory Review. CERCLA requires statutory five-year reviews if both of the following conditions are true:

(1) Upon Completion of the remedial action, hazardous substances, pollutants, or contaminants will remain on site at levels that would not allow unlimited use and unrestricted exposure; and

(2) The Decision Document for the site was signed on or after October 17, 1986 [the effective date of the Superfund Amendments and Reauthorization Act of 1986 (SARA)] and the remedial action was selected under CERCLA §121.

e. Policy Review. Five-Year Reviews generally should be conducted as a matter of policy for the following types of actions:

(1) A pre- or post-SARA remedial action that, upon completion, will not leave hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure, but requires five years or more to complete; or

(2) A pre-SARA remedial action that leaves hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure.

1-5. Frequency of Five-Year Reviews. If a Five-Year Review is required at a site, it will be conducted at least every five years from the trigger date discussed below in subparagraphs a. and b. Subsequent reviews will be conducted every five years or sooner, if specified, from the date on the previous Five-Year Review Report.

a. FUDS. By policy, the trigger date is initiation of the on-site fieldwork phase to implement the selected response action. The time frame for Five-Year Review efforts will be tracked in the Formerly Used Defense Sites Management Information System (FUDSMIS) by the district PM.

b. Active or Transferring Installations. By policy, for active Army installations, the trigger date is the signature date of the Decision Document.

c. Five-Year Reviews may be necessary indefinitely depending on site conditions and ability to meet unlimited use/unrestricted exposure conditions. Thirty years is a suggested duration of Five-Year Reviews used for government planning purposes. Factors to consider in assessing termination of Five-Year Reviews are discussed in Section 4-3.

d. Should a problem with an implemented military munitions response be identified or an incident occur between scheduled Five-Year Reviews, a request for a Five-Year Review to be completed ahead of schedule may be submitted to the district PM. For example, soil erosion, wave processes, or other factors may create environmental conditions which alter the potential for exposure (e.g., exposing previously buried items or increasing the accessibility to a property containing military munitions) that may suggest that it is necessary to conduct a Five-Year Review more frequently than every five years. Depending on the nature of the issue, the USACE district office may generate a Five-Year Review Report or use a less formal documentation method.

1-6. Funding.

a. FUDS

(1) The Defense Environmental Restoration Account (DERA) will fund Five-Year Review activities for FUDS projects. Funding for Five-Year Reviews is subject to approval of the district's annual Work Plan. For cost estimating and environmental liability purposes, Five-Year Reviews will be costed through a 30-year time frame.

(2) It is the responsibility of the USACE district, which serves as the PM, to program funding requirements for Five-Year Reviews, input and track milestones in the FUDSMIS, input information to the Corps of Engineers Financial Management System (CEFMS), and develop and implement the Five-Year Review for military munitions response activities. Funding requirements should include adequate funding for all offices associated with the Five-Year Review as well as adequate funding for personnel from other USACE offices to participate in the Five-Year Review, as necessary. Effective Five-Year Review efforts require the commitment of Federal, state, local, and individual resources. Additional detail regarding developing programming cost estimates can be found in EM 1110-1-4009, Engineering and Design: Military Munitions Response Actions.

b. Active or Transferring Installations. DERP will fund Five-Year reviews on active installations. BRAC installation reviews will be funded out of the BRAC account.

1-7. Notification. The PM District will notify stakeholders and regulators at the time the Five-Year Review is being initiated in order to seek their involvement. Another broad notification will also be made when a Five-Year Review is completed. Chapter 3 and EP 200-1-19, Public Participation During Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Actions provide further information regarding stakeholder and regulator involvement in the Five-Year Review process and details on notification requirements and procedures.

CHAPTER 2

Planning the Five-Year Review

2-1. Introduction. Planning for a Five-Year Review will be conducted prior to initiating Five-Year Reviews on a site. This chapter discusses when planning should be initiated, who is responsible for planning the Five-Year Review, and the components of the planning process.

2-2. Timing for Preparation of the Five-Year Review. Planning should begin at least twelve months prior to the Five-Year Review due date, which is defined in Section 1-5.

2-3. Parties Responsible for Preparation of the Five-Year Review.

a. Five-Year Reviews will be developed with the full involvement of the Project Delivery Team (PDT). ER 1110-1-8153, Military Munitions Support Services, provides further details regarding organizational responsibilities throughout the military munitions response action process.

b. PM District. The PM District is responsible for Five-Year Review planning. The PM District leads the PDT and is responsible for overall coordination of PDT members.

c. PDT. The PDT, under the direction of the PM District, will be involved in the planning of the Five-Year Review. The PDT members include the District PM; other representatives from the district (i.e., the District Real Estate Division, Public Affairs Office, District Office of Counsel, etc.), as required; the MM Design Center or MM Remedial Action District; an Ordnance and Explosives (OE) Safety Specialist; the EM CX, as required; and the contractor lead, if a contractor is utilized. The PDT may also be drawn from stakeholders or other state and federal agencies, as appropriate. Team members shall be chosen for their skills and abilities to successfully execute a quality project. Ideally, team members should not have been directly involved with the initial investigation/design/remediation, allowing an independent assessment.

2-4. Five-Year Review Planning Components.

a. Review of Existing Documentation. Identify existing documentation that will be reviewed during the Five-Year Review. This will include all final reports and decision documents. The location of the reports, preferably electronic copies posted to the Internet [e.g., the Project Information Retrieval System (PIRS)], must be identified. Table 2.1 provides examples of the types of documents that normally will be reviewed.

b. Stakeholder Notification. Identify key stakeholders, provide their contact information, and provide suggested avenues for notification based on what was successful in the Environmental Engineering/Cost Analysis (EE/CA) or Remedial Investigation/Feasibility Study (RI/FS) process.

Table 2.1
Examples of Existing Documentation to be Reviewed
in Preparation for the Five-Year Review

Document Examples
___ Statement of Work
___ Work Plans
___ Inventory Project Report
___ Archives Search Reports
___ EE/CA or RI/FS Report
___ Institutional Analysis
___ Decision Document
___ Institutional Control Plan
___ Explosives Safety Submissions
___ Site-Specific Response Report
___ Responsiveness Summaries
___ HTRW documents, if applicable
___ Real estate records
___ Newspaper records
___ Accident reports
___ Incident reports
___ Operation and Maintenance records
___ Previously conducted Five-Year Review Report at the site, if applicable
___ Current DoD Risk Prioritization Results

c. Identification/Review of New Information and Current Site Conditions. The PDT will identify readily available information regarding the site that has become available since implementation of the response action or since the last Five-Year Review and will identify the current site conditions.

d. Preliminary Site Analysis and Site Visit. The PDT will conduct a preliminary site analysis based upon the review of existing and new information. This analysis will identify any additional information that is required in order to prepare the final site analysis. The PDT will also plan the scope of the site visit, investigative or community relations activities that will be undertaken during the visit, and any methodologies to be utilized in connection with the visit.

CHAPTER 3

Executing the Five-Year Review

3-1. Introduction.

a. This chapter discusses the execution requirements for the PDT involved in Five-Year Reviews, including: establishing a PDT; reviewing existing documentation; notifying stakeholders; identifying and reviewing new information and current site conditions; preparing a preliminary site analysis and work plan; conducting a site visit; and preparing the Five-Year Review Report. Figure 3-1 illustrates the Five-Year Review process.

b. Project Management for Five-Year Reviews will be implemented in accordance with ER 5-1-11, U.S. Army Corps of Engineers Business Process.

3-2. Establish PDT to Conduct the Five-Year Review. Successful performance of a Five-Year Review requires establishment of an interdisciplinary PDT. Members of the PDT are listed in Section 2-3 of this EP.

3-3. Community Involvement.

a. The PM District will review the Community Relations Plan and update the plan as appropriate, determine stakeholder information requirements, and ensure appropriate involvement of the various stakeholder groups.

b. The PDT should schedule an open meeting in the local community for initial coordination with stakeholders, including regulators and any local community leaders, to discuss activities being planned for the Five-Year Review and to obtain their input. In any case, the method of notification will depend on the characteristics of the site and the local community, but may include notices in local newspapers, press releases and/or direct mailings. Notifications will include the following: a brief site history; notice that a Five-Year Review will be conducted; how the community can contribute; how the community will be notified that the review is completed; and how the Five-Year Review Report will be made available when completed.

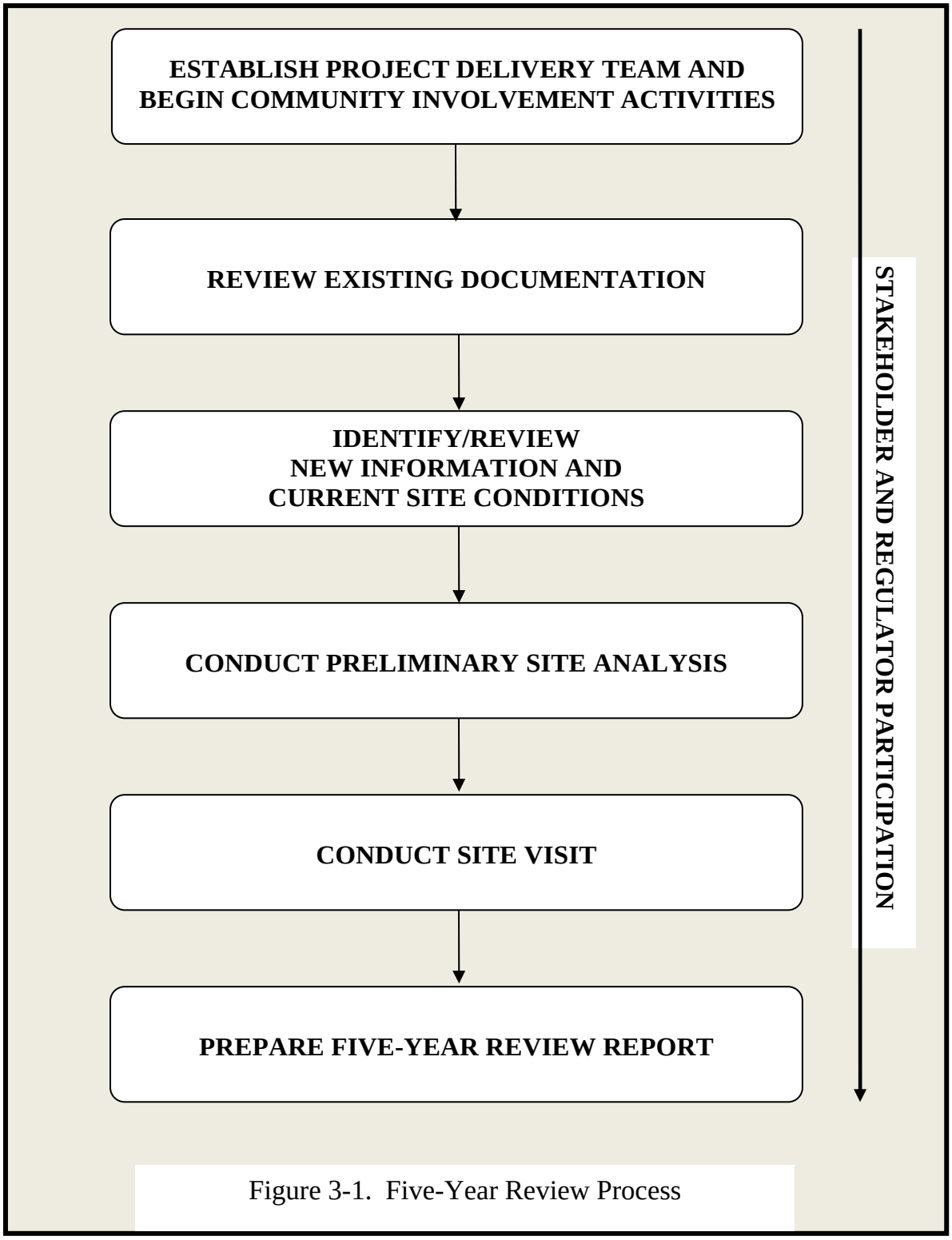

Figure 3-1. Five-Year Review Process

3-4. Review of Existing Documentation.

a. The PDT will review existing documentation for the site. At a minimum, the team will review the documents listed in Table 2.1 and the Five-Year Review Report from the previous review, if applicable. The PDT must review the Decision Document, and all planned activities should be in accordance with the Decision Document.

b. Through this review, the PDT will become familiar with the site history and the implemented response action. The review will accomplish the following objectives:

(1) Determine what actions were completed at the site.

(2) Determine where unexploded ordnance (UXO) or discarded military munitions (DMM) are suspected or were located, if applicable, and document the basis for this determination.

(3) Identify and review the basis for the selection of the response action (e.g., land use, property ownership, site accessibility).

(4) If a determination of technical impracticability was made for the site, determine whether new technology is now available that could address the remaining explosives safety hazard at the site.

3-5. Identify/Review New Information and Current Site Conditions.

a. The PDT will identify readily available site information that has become available since implementation of the response action, decision document, or since the last Five-Year Review. New information will also be gathered through interviews with persons knowledgeable about the site including stakeholders such as property owners, local agencies, local community members, and regulators.

b. Information may be gathered telephonically, through news articles or releases, public records, local authorities, stakeholder input, etc. PDT members will document all efforts to identify new information including a description of all sources that were searched, contact information for all people or agencies contacted, and a summary of all telephone conversations/interviews.

c. The PDT will gather information pertaining to the following areas:

(1) Development at the site or in the vicinity of the site;

(2) Erosion;

(3) Recreational or other activities at the site or in the vicinity of the site;

(4) Coastal processes (e.g., wave action);

(5) Fire;

(6) Frost heave;

(7) Storm damage (e.g., uprooted trees);

(8) Changes in land use at the site and in the vicinity of the site, both actual and potential;

(9) Changes in accessibility to the site;

(10) Military munitions incidents;

(11) Status of Land Use Controls;

(12) Changes in stakeholder interest or concerns;

(13) New technology or techniques that have become available, are economical, and may be applicable to the site;

(14) Changes in surface water; and

(15) Volcano and/or Earth quake.

d. For sites where land use controls were implemented, the PDT will review all aspects described in project documents (i.e., the decision document, remedial/removal design documents, Land Use Control Plan/Institutional Control Plan, etc.) and contact all agencies responsible for implementing, maintaining and/or enforcing the land use controls. Land use controls may include legal, physical, or educational mechanisms that limit the access or use of a property, or warn of the hazard in order to protect property users and the public. The PDT will make an evaluation as to whether the implemented land use controls are operating as intended.

e. For active installations, the PDT will also review the installation's master plan and related documents to ensure any land use controls required in the military munitions response action have been incorporated into those documents.

3-6. Preliminary Site Analysis. The PDT will conduct a preliminary site analysis based upon a review of existing and new information. This preliminary site analysis will include a preliminary evaluation of the continued protectiveness of the response action. The worksheet provided as Table 3.1 will be used to facilitate the preliminary site analysis and will be included as an appendix to the report.

Table 3.1
Preliminary Site Analysis Worksheet

PRELIMINARY SITE ANALYSIS WORKSHEET	
Review the Decision Document. **Does the Decision Document outline specific Five-Year Review Requirements?**	
What changes have occurred that may affect prior decisions concerning the site?	Physical Changes: General Site Conditions: Accessibility to Public: Land Use (on and off site): Technology Changes: Other:
How do these changes affect previous decisions for this site?	
What is the status of any Land Use Controls implemented at the site?	Fencing, signs, and other security measures: Indications of implementation/enforcement: Type of monitoring (self-reporting, drive by, etc.): Frequency of monitoring: Responsible party/agency and contact: Reporting up to date and verified by lead agency: Specific requirements of decision document met:
What additional information is needed to develop a conclusion regarding the continued protectiveness of the response?	

PRELIMINARY SITE ANALYSIS WORKSHEET (Continued)	
Recommendations for follow-up action.	
List documents/site records/resources used, summarize interviews.	
Re-read the Decision Document to verify consistency with what is planned for that the Preliminary Site Analysis.	

3-7. Conduct Site Visit. The PDT will conduct a site visit in order to visually confirm and document the current physical condition of the site and surrounding area and the current condition or status of any land use controls implemented as part of the military munitions response action. To facilitate the site visit, the PDT will develop a site-specific checklist of required tasks based on Table 3.1 and the content requirements of the Five-Year Review Report which is outlined in Appendix B.

a. Site Evaluation.

(1) The site evaluation will include visual evaluation of the items listed in Section 3-5c. Site evaluations shall include photo or video documentation of current site conditions.

(2) Sites that are no longer owned or controlled by DOD require a right of entry prior to conducting a site visit. The District Real Estate Division will obtain rights of entry. The PM District should contact the District Real Estate Division early in the review process due to the time required to obtain the necessary rights of entry. Additional information on acquisition of rights of entry is discussed in EP 200-1-19.

(3) The site visit will be conducted in accordance with all explosive safety requirements as outlined in Army and USACE 385 series documents and in accordance with all applicable occupational safety requirements.

b. Stakeholder Outreach. The PDT may schedule public information forums, media days, or other outreach initiatives to solicit further input regarding the site.

c. Interviews. The PDT may conduct interviews with stakeholders and regulators (face-to-face discussions with property owners, local authorities, other stakeholders, etc.) to supplement the interviews conducted over the telephone. Actions should be coordinated with the District Public Affairs Officer (PAO).

3-8. Prepare Five-Year Review Report.

a. General. The PDT will prepare a Five-Year Review Report to document the information collected and evaluated, and present the findings of the evaluation of the continued protectiveness of the military munitions response action. The report will document whether the response action is still protective of human health, safety, and the environment and/or recommend follow-up actions that may be warranted.

b. Contents of the Report.

(1) The Five-Year Review Report is a flexible document tailored to the scope of the Five-Year Review for the site. The report will be written with the assumption that the reader is not familiar with the site. Historical site information (e.g., site history, site description, response action descriptions, etc.) can be taken directly from existing site documents. The report will include a description of the Five-Year Review process and the evaluation considerations used to assess the protectiveness of the response. The report will be brief, with supporting information provided as appendices.

(2) Appendix B provides a summary of the contents for a Five-Year Review Report.

(3) The report checklist and report template included in Appendix B provide further details regarding the contents of each section of the Five-Year Review Report. At a minimum, the report will include the information described in Appendix B.

3-9. Environmental Records Management.

a. Project records resulting from the Five-Year Review process will be retained in accordance with Army Regulation (AR) 25-400-2, Army Records Information Management System (ARIMS) as permanent records. The PM District should also refer to EP 200-1-19 to determine the appropriate documents for inclusion in the Administrative Record.

b. For FUDS, Five-Year Review reports and other supporting documentation is to be uploaded by the PM to the FUDS Record Management Database. All others will be managed according to customer requirements.

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 4

Approving and Terminating the Five-Year Review

4-1. Introduction. This chapter discusses the process for review and approval of the draft and final Five-Year Review Report, as well as termination of Five-Year Reviews at a site.

4-2. Review and Approval of the Five-Year Review Report. The district will prepare a draft and final Five-Year Review Report as described in the following sections.

a. Draft Five-Year Review Report.

(1) The PDT will prepare a draft Five-Year Review Report. The district will provide a copy to the EM CX for review. The Office of Counsel for the District conducting the Five-Year Review will review and provide comments on the draft Five-Year Review Report generated by the PDT before it is released outside of the USACE. Following the approval of the District Office of Counsel, the district will provide a copy to stakeholders and regulators for review and comment.

(2) The district may hold a public meeting or availability session during the public comment period.

(3) The district will publish a notice in a major local newspaper of general circulation including the following information:

(a) Notification that the draft report has been completed and placed in the information repository;

(b) Location of the information repository for public review;

(c) Summary of the findings and conclusions of the Five-Year Review;

(d) An announcement of a formal 30-day (minimum) public comment period for submission of written comments; and

(e) Location and time for a public meeting, if applicable.

(4) Upon completion of the public comment period, a responsiveness summary is prepared that discusses any significant public comments received on the report and the actions taken to address those comments. The responsiveness summary becomes part of the project files.

b. Final Five-Year Review Report.

(1) The final report for FUDS five-year review must contain a signed determination by the District Commander stating that the response continues to minimize the explosives safety hazard and is protective of human health, safety, and the environment. If the response does not continue

to minimize the explosives safety hazard and is not protective of human health, safety, and the environment, the report should make a recommendation whether reopening the remedy is required.

(2) The district will provide copies of the final report to appropriate stakeholders, regulators, and the EM CX. The final Five-Year Review Report, along with the responsiveness summary, will be included in the project files for the site, including the information repository. For FUDS, Five-Year Review reports and other supporting documentation is to be uploaded by the PM to the FUDS Record Management Database.

(3) The final report will be coordinated with the appropriate regulator(s) by the PM district.

c. Figure 4-1 illustrates the military munitions review and approval process. Table 4.1 may be used by the PM District to track and document reporting activities for the Five-Year Review.

4-3. Termination of Five-Year Reviews.

a. Further Five-Year Reviews may be terminated at a site when the PM, with the advice of the PDT, stakeholders, and regulators, determines that the site meets unlimited use/unrestricted exposure requirements and the site is stable. A site may be considered stable if the following criteria have been met over the previous five years:

(1) there are no issues at the site that result in a change in the effectiveness of the response actions, which remain protective of human health and the environment;

(2) there has been no erosion at the site that significantly impacts the response action;

(3) there have been no military munitions incidents at the site; and

(4) there have been no significant changes in land use for the site, etc.

b. The final Five-Year Review Report generated for the last Five-Year Review at a site will state that no further Five-Year Reviews will be conducted at the site. The report will also provide a discussion regarding the justification for termination of the Five-Year Reviews.

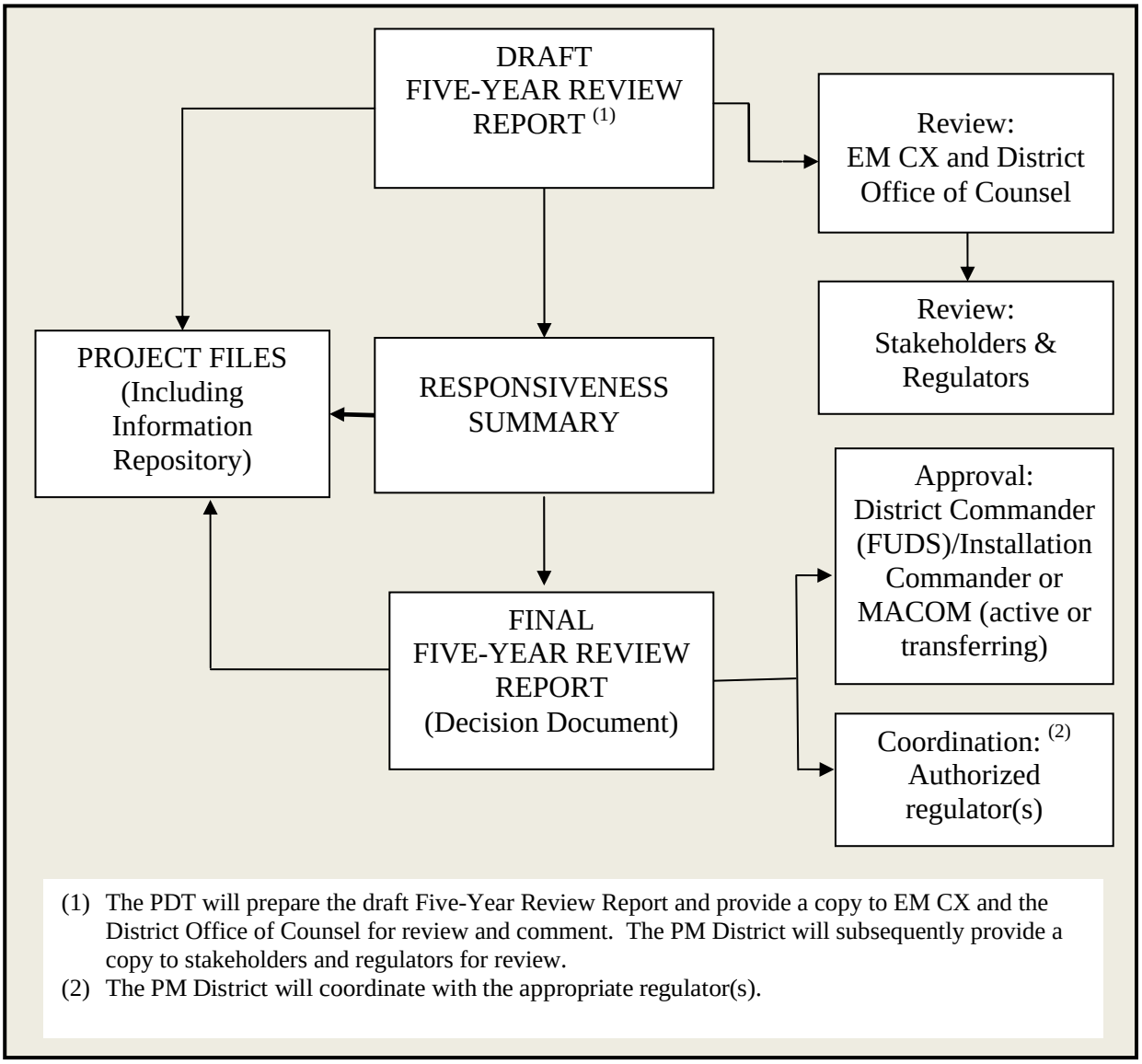

Figure 4-1. Review and Approval Process for the Five-Year Review Report

Table 4.1
Sample Format to Track Five-Year Review Reporting

Draft Five-Year Review Report	Federal_____ Date Sent: _____ Comments: _____ State _____Date Sent: _____ Comments: _____ Tribal _____ Date Sent: _____ Comments: _____ Information Repository _____ Date Sent: _____ Comments: _____ Other _____ Date Sent: _____ Comments: _____ Other _____ Date Sent: _____ Comments: _____
Public Notice of Five-Year Review Report and Findings	Name of Newspaper(s): Publication Date(s): _____ _____ _____ _____ _____ _____
Public Meeting	Yes _____ No_____ Date held: _____ Location _____
Final Five-Year Review Report	Date Signed: _____ Federal_____ Date Sent: _____ Comments: _____ State _____Date Sent: _____ Comments: _____ Tribal _____ Date Sent: _____ Comments: _____ Information Repository _____ Date Sent: _____ Comments: _____ Other _____ Date Sent: _____ Comments: _____ Other _____ Date Sent: _____ Comments: _____

APPENDIX A

References

10 USC 2701 et seq.
Defense Environmental Restoration Program.

10 USC 2687 et seq.
Base Closures and Realignments

42 USC 9601 et seq.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

PL 101-510
Defense Base Realignment and Closure Act of 1990.

PL 100-526
Base Realignment and Closure Act of 1988.

40 CFR Part 300
National Oil and Hazardous Substance Pollution Contingency Plan.

AR 25-400-2
Army Records Information Management System(ARIMS).

ER 5-1-11
U.S. Army Corps of Engineers Business Process.

ER 200-3-1
Environmental Quality- Formerly Used Defense Sites Program Policy.

ER 385-1-92
Safety and Occupational Health Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW) Activities

ER 385-1-95
Safety and Health Requirements for Munitions and Explosives of Concern (MEC) Operations.

ER 1110-1-8153
Military Munitions Support Services.

EP 200-1-19
Military Munitions Response Process.

EP 200-3-1
Public Participation Requirements for Defense Environmental Restoration Program.

EM 200-1-2
Technical Project Planning Process.

EM 385-1-1
Safety and Occupational Health Requirements Manual

EM 385-1-97
Explosives Safety and Health Requirements Manual

EM 1110-1-4009
Engineering and Design: Military Munitions Response Actions.

EPA 540-R-01-007, OSWER No. 9355.7-03B-P
Comprehensive Five-Year Review Guidance
http://www.epa.gov/superfund/accomp/5year/guidance.pdf

APPENDIX B

Five-Year Review Report Template

B-1. Introduction. This appendix provides a checklist and report template for Five-Year Review Reports, based on Appendix E of EPA's Comprehensive Five-Year Review Guidance (EPA 540-R-01-007/OSWER No. 9355.7-03B-P). The checklist appears first, followed by the report template. The Five-Year Review Report is a flexible document tailored to the scope of the Five-Year Review for the site. Each report should take into account site-specific circumstances, and the report format and content should be modified accordingly. For example, there may be site-specific questions that are not specifically addressed in the checklist /template presented in this appendix but that should be included in the Five-Year Review Report. At a minimum, the report will include all applicable information described in the checklist and template. Table B-1 is a checklist that may be used to verify that all appropriate information has been included in the Five-Year Review Report. Depending on site-specific circumstances, some items may not be applicable.

a. The suggested format for Five-Year Review Reports is presented in the report template, which also provides additional detail on the content of each section. The template provides details on the content of each section, boilerplate text, example tables, and protectiveness statements. Suggested boilerplate text is presented in text boxes. Within the boilerplate section, text enclosed in brackets ("[ ]") should be added as appropriate, and italicized text denotes discussions that the reviewer should add.

b. Use both the checklist and report template as guides for the types of information that should appear in the different sections of the Five-Year Review Report. Also include information that is relevant to the site and needed to ensure that the rationale behind the protectiveness determination is adequately documented.

Table B-1
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

Project Name: _____

Project Location: _____

Preparer's Name and Title: _____

Date of Preparation: _____

Reviewer's Name and Title: _____

Date of Review: _____

Type of Review: _____

	Y	N	N/A
Title page with signature and date	_____	_____	_____
Table of Contents			
• List of tables	_____	_____	_____
• List of figures	_____	_____	_____
• List of acronyms	_____	_____	_____
• List of appendices	_____	_____	_____
Executive Summary			
• Five-year Review Summary	_____	_____	_____
Introduction			
• Site name, location and FUDS number	_____	_____	_____
• Date of the Five-Year Review	_____	_____	_____
• Purpose of the Five-Year Review	_____	_____	_____
• Review number (e.g., first, second, etc.)	_____	_____	_____
– trigger date	_____	_____	_____
– date of the previous review	_____	_____	_____

Table B-1, continued
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

	Y	N	N/A
• If review covers only a portion of the site, define what areas are covered in the Five-Year Review and summarize the status of other areas	_____	_____	_____
• List of Project Deliver Team Members	_____	_____	_____
– Organizations providing analyses in support of the review (e.g., the contractor supporting the lead agency)	_____	_____	_____
– Other review participants or support agencies	_____	_____	_____
Site Chronology and Description			
• Chronological list of site history, including all important site events such as the date of initial discovery of problem and milestone dates for the military munitions response action at the site (e.g., list of documents created during the removal or remedial response process such as the EE/CA or RI/FS report, decision documents, etc.)	_____	_____	_____
• Response Action			
– Regulatory actions	_____	_____	_____
– Response action objectives	_____	_____	_____
– Response action selection	_____	_____	_____
– Response action description	_____	_____	_____
– Response implementation (e.g., status, history)	_____	_____	_____
Background			
• Physical characteristics of the site (e.g., size, topography, and geology)	_____	_____	_____

Table B-1, continued
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

	Y	N	N/A
• Land use history (e.g., former, current, and future land us(s) of the site and surrounding areas)	_____	_____	_____
• Site investigations	_____	_____	_____
Remedial Actions			
• Remedy Selection	_____	_____	_____
• Remedy Implementation	_____	_____	_____
• Systems operations/operations and maintenance (if applicable)	_____	_____	_____
Progress Since Last Review (as applicable)			
• Protectiveness Statements from last review	_____	_____	_____
• Status of recommendations and follow-up actions from last review	_____	_____	_____
• Results of implemented actions (whether they have achieved the intended purpose)	_____	_____	_____
• Status of any prior issues	_____	_____	_____
Five-Year Review Process			
• Administrative Components	_____	_____	_____
– Notification of potentially interested parties of initiation of review process	_____	_____	_____
– Identification of PDT members	_____	_____	_____
– Outline of components and schedule for the Five-Year Review	_____	_____	_____
• Community Notification and Involvement	_____	_____	_____
– Community notification (prior and post review)	_____	_____	_____

Table B-1, continued
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

	Y	N	N/A
– Other community involvement activities (e.g., notices, fact sheets, etc., as appropriate)			
– Stakeholder and Regulator Input			
o Summary of actions taken to provide information to and solicit input from stakeholders and regulators (e.g., public notices, direct mailings, meetings, interviews, etc.)			
o Regulatory and stakeholder concerns			
o A copy of significant stakeholder correspondence, minutes from public meetings, interview forms, etc., should be included as an appendix			
• Summary of Information Gathered and Relied Upon			
– Existing Information/documentation review (summary of existing documentation that was reviewed, information gathered during the site visit, and information gathered from stakeholders and regulators)			
– New information (e.g., photographs from the site visits that illustrate current site conditions, information provided by stakeholders and regulators, incident reports, etc.)			
– If a determination of Technical Impracticability was made for the site, discuss whether new technology is now available that could address the remaining explosives safety hazard at the site			

Table B-1, continued
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

	Y	N	N/A
• Progress Since Last Five-Year Review (if applicable)			
– Protectiveness statements from last review	_____	_____	_____
– Status of recommendations and follow-up actions from last review	_____	_____	_____
– Results of implemented actions, including whether they achieved the intended effect	_____	_____	_____
– Status of any other prior issues	_____	_____	_____
• Interviews			
– Interview date(s) and location(s)	_____	_____	_____
– Interview participants (name, title, and other contact information) Interview documentation	_____	_____	_____
– Interview summary	_____	_____	_____
• Site Visit Findings	_____	_____	_____
– Date of Site Visit	_____	_____	_____
– Site Visit participants	_____	_____	_____
– Site visit observations and conclusions	_____	_____	_____
– Maps, drawings, tables and photos (as necessary)	_____	_____	_____
Technical Assessment			
• Answer Question 1: Is the remedy functioning as intended by the decision documents?	_____	_____	_____
• Answer Question 2: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection still valid?	_____	_____	_____

Table B-1, continued
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

	Y	N	N/A
• Answer Question 3: Has any other information come to light that could call into question the protectiveness of the remedy?	_____	_____	_____
• In answering these questions, include:			
– Description of whether the response action continues to meet the response objectives	_____	_____	_____
– Description of any changes noted at the site and what impact they have on the protectiveness of the response (e.g., physical changes, changes in land use at the site or adjacent properties, changes in public accessibility, technology changes, etc.)	_____	_____	_____
– Analysis of the current protectiveness of the Military Munitions response action based on the information gathered during the Five-Year Review.	_____	_____	_____
Conclusions/Recommendations			
• Response Deficiencies	_____	_____	_____
• Conclusions	_____	_____	_____
– Protectiveness statement for each sector or area of the site, as appropriate (i.e., statement as to whether the response continues to minimize the explosives safety hazard and continues to be protective of human health, safety and the environment)	_____	_____	_____
• Recommendations/Follow-up Actions	_____	_____	_____

Table B-1, continued
Content Checklist for
Five-Year Reports for Military Munitions Response Actions

	Y	N	N/A
– If it is determined that the response is not currently protective or risk-related concerns are identified, include recommendations for follow-up actions to address the deficiencies. The report should indicate that the follow-up actions were identified and developed by the PDT in conjunction with stakeholders and regulators.	_____	_____	_____
• Responsibility Matrix			
– Parties responsible for further action (i.e., for developing, implementing, and overseeing the actions)	_____	_____	_____
– Target dates (i.e., schedule for completion of actions related to resolution of issues)	_____	_____	_____
• Next Review			
– Expected date of next review	_____	_____	_____
– Proposed changes to the scope of subsequent reviews	_____	_____	_____
– If the PDT has determined that no further Five-Year Reviews will be conducted at the site, provide a discussion of the justification for termination and documenting agreement among the PDT, stakeholders and regulators	_____	_____	_____

Five-Year Review Report

(First, Second, etc.) Five-Year Review Report

for

Site Name

FUDS Number *if applicable*

City

County, State

Month, Year

PREPARED BY:

Lead Agency
Name and
Location

Approved by: _____ Date: _____

[Name]
[Title]
[Affiliation]

Five-Year Review Report

Site Name
FUDS Number
City
County, State

The following Table of Contents notes typical major divisions and subheadings for Five-Year Review reports. Subheadings can be included as appropriate for a given review report. This is only a general example.

List of Acronyms

You should include a list of acronyms used in the report.

Executive Summary

You should include an Executive Summary at the beginning of the report. The Executive Summary should be brief, and should include a reiteration of the protectiveness statements included in Section 5.0 (Conclusions/Recommendations) of the Five-Year Review Report.

Sample Format for Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name:		
FUDS Number (*if applicable*):		
City:	County:	State:

SITE STATUS	
Selected Response Action Description:	
Response Action Status (choose all that apply): ___ Under Construction ___ Complete	
Initiation Date of On-site Field Work for Response Action Implementation: ___ / ___ / _____ Completion Date for Response Action Implementation: ___ / ___ / _____	
Does the site include multiple Sectors/Areas/Munitions Response Sites? __YES __NO If yes, list the areas included in this Five-Year Review and specify the type: _____ _____ _____	Has site been put into reuse? __ YES __ NO

REVIEW STATUS	
Lead agency: _____	
Author/District PM name:	
Author/District PM title:	Author affiliation:
Review period: ___ / ___ / _____ to ___ / ___ / _____	
Review number: __1 (first) __ 2 (second) __ 3 (third) __ Other (specify) _____	
Date(s) of site visit: ___ / ___ / _____	
Triggering date: ___ / ___ / _____	
Due date (five years after triggering date) : ___ / ___ / _____	

Sample Format for Five-Year Review Summary Form, cont'd

Issues:

Summarize issues.

Recommendations and Follow-up Actions:

Summarize recommendations and follow-up actions.

Protectiveness Statement(s):

Other Comments:

Five-Year Review Report

1.0 Introduction

Provide a synopsis of "who, what, where, when, and why." Detail the following:

- *The site name, location and FUDS number (include site location figure);*
- *The purpose of the review;*
- *Who conducted the review, when, and for what site or portion of the site;*
- *Whether it is the first review or a subsequent review at the site, including the trigger date and the date of the previous review (if applicable);*
- *A brief status of areas of a site not addressed in the current review and/or the status of Five-Year Reviews for other areas of the entire site.*

1.0 Introduction

The United States Army Corps of Engineers (USACE) has conducted a Five-Year Review for the military munitions Response Action at [site name] [FUDS number] in [city, county, state]. The site location is illustrated in Figure 1.1. The [name of the areas of the site included in the review] is the subject of this review. The location(s) of the area(s) included in this review are illustrated in Figure 1.2.

The purpose of a Five-Year Review for a military munitions response action is to determine whether the response action at a site continues to minimize the explosives safety hazard and continues to be protective of human health, safety, and the environment. The methods, findings, and conclusions of the review are documented in this report.

The [USACE District] conducted the Five-Year Review. The members of the Project Delivery Team (PDT) that conducted the review, including their titles and contact information, are provided in Table 1.1.

The Five-Year Review was conducted from [start date] to [finish date] and is the [number of review, i.e., first, second, etc.] Five-Year Review for this site. On-site fieldwork for the selected response action at this site began on [date]. The previous review was conducted in [year of previous review].

If the Five-Year Review does not include an entire site, also provide a brief synopsis of the status of response actions and/or Five-Year Reviews for other areas.

2.0 Site Chronology

List all important site events and relevant dates in the site chronology, such as those shown in Table 2.1. The identified events are illustrative, not comprehensive.

Table 2.1: Chronology of Site Events

Event	Date
Preliminary Assessment of Eligibility	
Site Inspection (incl. work plans and reports)	
Archives Search Report	
Time Critical Removal Actions	
Engineering Evaluation/Cost Analysis (EE/CA) or Remedial Investigation/Feasibility Study (RI/FS)	
Decision Document	
Explosives Safety Submissions	
Response Implementation	
Site-specific Response Report	
Previous Five-Year Reviews	

3.0 Background

Describe the fundamental aspects of the site, including:

- *Physical characteristics of the site (e.g., size, topography, and geology);*
- *Land use history (e.g., former, current, and future land use(s) of the site and surrounding areas);*
- *Summary of site investigation history and findings; and*
- *Description of the selected response action, including response action objectives, response selection, response implementation, and basis for taking response. You should delineate all response measures, for instance, include land use controls. Discuss any changes to or previously identified problems with the response.*

This information can be taken directly from existing site documents.

4.0 Remedial Actions

Discuss initial plans, implementation history, and current status of the remedy. Explain events identified in the chronology, and generally include discussions of remedy selection, remedy implementation, remedy performance, and system operations/O&M. Present – accurately, adequately, and concisely – relevant site activities from the signing of the ROD to the present. You should delineate all remedial measures; for instance, include monitoring, fencing, and institutional controls. Discuss any changes to or problems with remedial components. Include the following:

5.0 Progress Since the Last Five-Year Review

Progress since the last review should be discussed when follow-up actions which impact protectiveness were noted in the previous Five-Year Review report. Include the following:

– Protectiveness statements from the last review;

– Status of recommendations and follow-up actions from last review;

– Results of implemented actions, including whether they achieved the intended effect; and

– Status of any other prior issues.

Table 5.1 below presents one approach for providing information on the recommendations and follow-up actions stated in the past review and subsequent actions. The accompanying text should also discuss why any recommendations and follow-up actions have not been implemented if that is the case, and whether implemented actions achieved desired results.

Table 5.1: Actions Taken Since the Last Five-Year Review

Issues from Previous Review	Recommendations Follow up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action	Affects Protectiveness (Yes/No)

6.0 Five-Year Review Process

Describe activities performed during the Five-Year Review process and provide a summary of findings when appropriate. Include the following information:

- *Administrative Components*
  – Notification of potentially interested parties of initiation of review process
  – Identification of PDT members

– Outline of components and schedule for the Five-Year Review

- *Community Notification and Involvement*

  – Community notification (prior and post review)

  – Other community involvement activities (e.g., notices, fact sheets, etc., as appropriate)

  – Stakeholder and Regulator Input

    - *Summary of actions taken to provide information to and solicit input from stakeholders and regulators (e.g., public notices, direct mailings, meetings, interviews, etc.).*
    - *Regulator and stakeholder concerns*
    - *Include a copy of significant stakeholder correspondence, minutes from public meetings, interview forms, etc. as an appendix to the report.*

- *Summary of Information Gathered and Relied Upon*

  – Existing information/documentation review

    - *Provide a list of the existing documentation that was reviewed and the location of this information;*
    - *Describe existing information gathered during the site visit and information gathered from stakeholders and regulators.*

  – New information

    - *Include a description of new information that is not already included in the project files but which is necessary to support the findings of the Five-Year Review. This may include photographs from the site visit that illustrate current site conditions, information provided by stakeholders and regulators, and incident reports.*
    - *Include this new information as an appendix to the report.*

  – If a determination of Technical Impracticability was made for the site, discuss whether new technology is now available that could address the remaining explosives safety hazard at the site.

- *Interviews*

  – Provide a summary of interviews conducted to obtain new information about the site including:

    - *Interview date(s) and location(s)*
    - *Interview participants (name, title, and other contact information)*
    - *Interview documentation*
    - *Interview summary*

  – Include a detailed description of each interview in an appendix.

- *Site Visit Findings*

  – Date of Site Visit

  – Site Visit participants

– Site visit scope and procedures

– Site visit observations and conclusions

– Maps, drawings, tables and photos (as necessary)

7.0 Technical Assessment

Provide an analysis of the current protectiveness of the military munitions response action based on the information gathered during the Five-Year Review. In the analysis, provide the answers to the three questions that the Five-Year Review is intended to address:

- *Is the remedy functioning as intended by the decision documents?*
- *Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection still valid?*
- *Has any other information come to light that could call into question the protectiveness of the remedy?*

Provide the information that presents the basis for each answer as a framework for your protectiveness determination(s):

- *Description of whether the response action continues to meet the response objectives.*
- *Description of any changes noted at the site and what impact they have on the protectiveness of the response (e.g., physical changes, changes in land use at the site or adjacent properties, changes in public accessibility, technology changes, etc.).*
- *Analysis of the current protectiveness of the military munitions response action based on the information gathered during the Five-Year Review.*

Explain the conclusions of your review, based on the information presented in the previous section.

8.0 Issues

Detail issues related to current site operations, conditions, or activities, noting which issue, if any, currently prevent the remedy from being protective.

9.0 Recommendations and Follow-up Actions

Specify the required and suggested improvements to current site operations, activities, remedy, or conditions. Note the parties responsible for actions, milestone dates, and which agencies have oversight authority. At a minimum, address all issues that currently affect current and/or future protectiveness. Table 9.1 illustrates one way to include the necessary information.

Table 9.1 Conclusions/Recommendations

Issue	Recommendations Follow up Actions	Party Responsible for Implementation	Party Responsible for Oversight	Milestone Date	Affects Protectiveness (Yes/No)

10.0 Protectiveness Statements

Develop a protectiveness statement for each sector included in the Five-Year Review. This will be a statement as to whether the response continues to minimize the explosives safety hazard and continues to be protective of human health, safety and the environment.

Explain and provide supporting rationale of the protectiveness determination. This will include a description of any response deficiencies that were noted during the Five-Year Review. Address all issues that affect current and/or future protectiveness.

If it is determined that the response is not currently protective or risk-related concerns are identified, include recommendations for follow-up actions to address the deficiencies. These follow-up actions will be identified and developed by the PDT in conjunction with stakeholders and regulators.

Suggested protectiveness statements are provided below.

A. Response action is under construction:

Protective or will be protective:
"The response action at [area X of site X] is expected to be effective in minimizing explosives safety hazard and protective of human health, safety and the environment upon completion, and in the interim [insert time frame], conditions that could result in unacceptable risks are being controlled."

Not protective:
"The response action at [area X of site X] is not protective because of the following issues [describe the issue(s)]. The following actions need to be taken [describe the actions needed to ensure protectiveness]."

Protectiveness deferred:
"A protectiveness determination of the response at [area X of site X] cannot be made at this time until further information is obtained. Further information will be obtained by taking the following actions [describe the actions]. It is expected that these actions will take approximately [insert time frame] to complete, at which time a protectiveness determination will be made."

B. Response action at the property/MRS is operating or completed:

Protective:
"The response action at [area X of site X] continues to minimize explosives safety risks and continues to be protective of human health, safety and the environment."

Not protective:
"The response action at [area X of site X] is not continuing to minimize explosives safety risks and is not continuing to be protective of human health, safety and the environment because of the following issue(s) [describe the issue(s)]. The following actions need to be taken [describe the actions needed to ensure protectiveness].

Protectiveness deferred:
"A protectiveness determination of the response at [area X of site X] cannot be made at this time until further information is obtained. Further information will be obtained by taking the following actions [describe the actions]. It is expected that these actions will take approximately [insert time frame] to complete, at which time a protectiveness determination will be made."

11.0 Next Review

Document the year of the next Five-Year Review for the site and any proposed changes to the scope. If the PDT has determined that no further Five-Year Reviews will be conducted at the site, provide a discussion of the justification for termination and document agreement among the PDT, stakeholders and regulators.

Appendices

- Site maps (if not included in the body of the report)
- List of documents reviewed and their location
- New information obtained during the Five-Year Review that is not currently a part of the project files
- Interview forms
- Photos Documenting Site Conditions
- Copies of significant stakeholder correspondence, community outreach materials, minutes from public meetings, interview forms, etc.
- Comments received from stakeholders
- Site maps (if not included in the body of the report)
- List of documents reviewed and their location
- New information obtained during the Five-Year Review that is not currently a part of the project files
- Interview forms

- Photos Documenting Site Conditions
- Copies of significant stakeholder correspondence, community outreach materials, minutes from public meetings, interview forms, etc.
- Comments

GLOSSARY

Section I
Acronyms

AEDB-R.....Army Environmental Database-Restoration
AR.....Army Regulation
ARIMS.....Army Records Information Management System
BRAC.....Base Realignment and Closure
CEFMS .....Corps of Engineers Financial Management System
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act
CFR.....Code of Federal Regulations
CRP.....Community Relations Plan
DA.....Department of the Army
DERA.....Defense Environmental Restoration Account
DERP .....Defense Environmental Restoration Program
DMM.....Discarded Military Munitions
DoD.....Department of Defense
EE/CA.....Engineering Evaluation/Cost Analysis
EM.....Engineer Manual
EM CX.....Environmental and Munitions Center of Expertise
EOD .....Explosive Ordnance Disposal
EP.....Engineer Pamphlet
ER .....Engineer Regulation
FUDS .....Formerly Used Defense Sites
FUDSMIS .....Formerly Used Defense Sites Management Information System
HQDA.....Headquarters, Department of the Army
HQUSACE.....Headquarters, United States Army Corps of Engineers
HTRW.....Hazardous, Toxic, and Radioactive Waste
IMA.....Installation Management Agency
IRP .....Installation Restoration Program
LUC.....Land Use Control
MACOM.....Major Command
MC .....Munitions Constituent
MM DC.....Military Munitions Design Center
MMRP.....Military Munitions Response Program
NCP.....National Contingency Plan
NDAI.....No DoD Action Indicated
NPL.....National Priorities List
OE .....Ordnance and Explosives
PDF .....Portable Document Format
PDT.....Project Delivery Team
PIRS .....Project Information Retrieval System
PL.....Public Law
POC.....Point of Contact
PMP.....Project Management Plan

PM.....Project Manager
RCTCS.....Restoration Cost-to-Complete System
RI/FS.....Remedial Investigation/Feasibility Study
SARA.....Superfund Amendments and Reauthorization Act of 1986
TPP.....Technical Project Planning
USACE .....United States Army Corps of Engineers
USAESCH .....United States Army Engineering and Support Center, Huntsville
USC.....United States Code
UXO.....Unexploded Ordnance

Section II
Terms

Active Installations
Installations under the custody and control of DoD. This includes operating installations, installations in a standby or layaway status, and installations awaiting closure under the Base Realignment and Closure (BRAC) legislation (EP 200-1-19).

Administrative Record
The body of documents that "forms the basis" for the selection of a particular response at a site. Documents that are included are relevant documents that were relied upon in selecting the response action as well as relevant documents that were considered but were ultimately rejected (ER 1110-1-8153).

Anomaly
Any item that is seen as a subsurface irregularity after geophysical investigation. This irregularity should deviate from the expected subsurface ferrous and non-ferrous material at a site (i.e., pipes, power lines, etc.) (EP 200-1-19).

Anomaly Avoidance
Techniques employed by EOD or UXO personnel at sites with known or suspected military munitions to avoid any potential surface UXO, DMM, and any subsurface anomalies. This usually occurs at mixed hazard sites when HTRW investigations must occur prior to execution of a military munitions removal action. Intrusive anomaly investigation is not authorized during ordnance avoidance operations (ER 1110-1-8153).

Base Realignment and Closure (BRAC)
Program governing the scheduled closing of Department of Defense sites (Base Closure and Realignment Act of 1988, Public Law 100-526, 102 Stat. 2623, and the Defense Base Closure and Realignment Act of 1990, Public Law 101-510, 104 Stat. 1808).

Community Relations Plan (CRP)
The Community Relations Plan (CRP) serves as the framework to establish successful information exchange with the public for military munitions response actions. The CRP follows guidelines set forth under CERCLA and the SARA. Each CRP must be tailored to fit the individual site and situation and should also accommodate any site-specific agreements between the U.S. Army and the EPA or state environmental agencies. The CRP is not a static document and should be revised to reflect the project's development/progress (EP 200-1-19).

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)
CERCLA authorizes federal action to respond to the release or threatened release of hazardous substances into the environment or a release or threat of release of a pollutant or contaminant into the environment that may present an imminent or substantial danger to public health or welfare (42 U.S.C. 9601).

Decision Document
The Department of Defense has adopted the term Decision Document for the documentation of remedial action (RA) decisions at non-National Priorities List (NPL) FUDS Properties. The Decision Document shall address the following: Purpose, Site Risk, Remedial Alternatives, Cost Effectiveness Determination, Public/Community Involvement, Declaration, and Approval and Signature. A Decision Document for sites not covered by an interagency agreement or federal facility agreement is still required to follow a CERCLA response. All Decision Documents will be maintained in the FUDS Property/Project Administrative Record file.

Defense Environmental Restoration Program (DERP)
Established in 1986, DERP promotes and coordinates efforts for the evaluation and cleanup of contamination at Department of Defense installations (10 U.S.C. 2701).

Design Center
A specified USACE field office assigned a singular technical mission that is permanent and USACE-wide in scope. The designated office is to be considered the "lead activity" in a specialized area where capability needs to be concentrated for maximum effectiveness, economy, and efficiency. The OE Design Center (in coordination with the PM) will execute all phases of the OE response project after the approval of the INPR unless the removal action is transferred to an approved district. Only the USAESCH MM Design Center is authorized to execute any phase of a Non-Stockpile CWM response (ER 1110-1-8153).

Discarded Military Munitions
Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include UXO, military munitions that are being held for future use or planned disposal, or military munitions that have been property disposed of, consistent with applicable environmental laws and regulations (10 U.S.C. 2710(e)(2)).

Engineering Evaluation/Cost Analysis (EE/CA)
An EE/CA is prepared for all CERCLA non-time-critical removal actions as required by Section 300.415(b) (4)(i) of the NCP. The goals of the EE/CA are to identify the extent of a hazard, to identify the objectives of the removal action, and to analyze the various alternatives that may be used to satisfy these objectives for cost, effectiveness, and implement ability (EP 200-1-19).

Explosive Ordnance Disposal (EOD)
The detection, identification, field evaluation, rendering safe, recovery, and final disposal of unexploded ordnance or munitions (EP 200-1-19).

Formerly Used Defense Sites (FUDS)
FUDS includes those properties previously owned, leased, or otherwise possessed by the U.S. and under the jurisdiction of the Secretary of Defense; or manufacturing facilities for which real

property accountability rested with DoD but were operated by contractors (Government owned–contractor operated) and which were later legally disposed of. FUDS is a subprogram of the DERP. Restoration of military land was extended to formerly used sites in 1983 under Public Law 98-212 (DoD Appropriations Act of FY84).

Hazardous, Toxic, and Radioactive Waste (HTRW) Activities
HTRW activities include those activities undertaken for the Environmental Protection Agency's Superfund program, the Defense Environmental Restoration Program (DERP), including Formerly Used Defense Sites (FUDS), and Installation Restoration Program (IRP) sites at active DoD facilities, HTRW actions associated with Civil Works projects, and any other mission or non-mission work performed for others at HTRW sites (EP 200-1-19).

Information Repository
A repository, generally located at libraries or other publicly accessible locations, which contains documents reflecting the on-going environmental restoration activities. This may include the EE/CA, CRP, Restoration Advisory Board meeting minutes, public notices, public comments and responses to those comments, etc., (EP 200-1-19).

Land Use Controls (LUCs)
Physical, legal, or administrative mechanisms that restrict the use of, or limit access to contaminated property in order to reduce risk to human health and the environment. Physical mechanisms encompass a variety of engineered remedies to contain or reduce contamination and/or physical barriers to limit access to property, such as fences or signs. The legal mechanisms are generally the same as those used for institutional controls (ICs) as discussed in the National Contingency Plan. ICs are a subset of LUCs and are primarily legal mechanisms imposed to ensure the continued effectiveness of land use restrictions imposed as part of a remedial decision. Legal mechanisms include restrictive covenants, negative easements, equitable servitudes, and deed notices. Administrative mechanisms include notices, adopted local land use plans and ordinances, construction permitting, or other existing land use management systems that may be used to ensure compliance with use restrictions (DERP Management Guidance).

Long Term Management
The period of site management (including maintenance, monitoring, record keeping, 5-year reviews, etc.) initiated after response (removal or remedial) objectives have been met (i.e., after Response Complete).

Munitions Constituents
Any materials originating from UXO, DMM, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions (10 U.S.C. 2710(e)(3).

National Oil and Hazardous Substance Pollution Contingency Plan (NCP)
Revised in 1994, the NCP provides the regulatory framework for responses under CERCLA. The NCP designates the Department of Defense as the removal response authority for ordnance and explosives hazards and presents a procedural and organizational framework for preparing and conducting response actions to hazardous substances, pollutants and contaminants. In

regards to Five-Year Reviews it also provides: "If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after initiation of the selected remedial action" (40 CFR 300.430(f)(4)(ii)).

OE Safety Specialist
USACE Personnel, classified as a GS-018 Safety Specialist, and who is UXO qualified. OE Safety Specialists perform safety, quality assurance and UXO subject matter expert functions for the Government. The Safety Specialist may reside in and report to the construction field office or may reside in the engineering/construction office within the Military Munitions Design Center (ER 1110-1-8153).

Project Delivery Team (PDT)
The PDT is a multi-disciplined project team lead by the Project Manager with responsibility for assuring that the project stays focused, first and foremost on the public interest, and on the customer's needs and expectations and that all work is integrated and done in accordance with a PMP and approved business and quality management processes. The PDT focuses on the quality project delivery, with heavy reliance on partnering and relationship development to achieve better performance. The PDT shall consist of everyone necessary for successful development and execution of all phases of the project. The PDT will include the customer(s), the PM, technical experts within or outside the local USACE activity, specialists, consultants/contractors, stakeholders, representatives from other Federal and state agencies, and vertical members from division and headquarters that are necessary to effectively develop and deliver the project. The customer is an integral part of the PDT (ER 5-1-11).

Project Information Retrieval System
The Project Information Retrieval System (PIRS) was developed by the U.S. Army Corps of Engineers, Rock Island District, and the USAESCH. The purpose of PIRS is to make documents electronically accessible about the investigation and cleanup of sites in the DERP and the BRAC. See http://pirs.mvr.usace.army.mil.

Remedial Investigation/Feasibility Study (RI/FS)
An in depth study designed to gather the data necessary to determine the nature and extent of known contamination at a site, assess risk to human health and the environment, and establish criteria for cleaning up the site. During the FS, the RI data is analyzed and remedial alternatives are identified. The FS serves as the mechanism for the development, screening, and detailed evaluation of alternative remedial actions.

Stakeholders
Stakeholders include federal, state, and local officials, community organizations, property owners, and others having a personal interest or involvement, or having a monetary or commercial involvement in the real property which is to undergo a military munitions Five-Year review (EP 200-1-19).

Superfund Amendments and Reauthorization Act (SARA)
Enacted in 1986, this CERCLA amendment establishes standards for cleanup activities, requires federal facility compliance, and clarifies public involvement requirements (42 U.S.C. 9601).

Technical Impracticability
A decision that may occur when current technology is not available to address the UXO, DMM, or MC risks at a site. A technical impracticability (TI) decision indicates that restoration of a site to ARAR- or risk-based cleanup levels cannot be achieved using currently available or new and innovative methods or technologies, based on infeasibility or unreliability. As a result, the owner will not be required to meet these levels, but may be required to meet an alternative level or achieve an alternative remedial goal. Furthermore, a TI decision applies only to that portion of the contamination for which restoration to ARARs or risk-based levels is determined to be technically impracticable from an engineering perspective.

Technical Project Planning (TPP) Process
A four-phase, comprehensive and systematic planning process for designing a data collection program. The TPP process helps ensure that the requisite type, quality, and quantity of data are obtained to satisfy project objectives. The TPP process is a critical component of the USACE quality management system.

Unexploded Ordnance (UXO)
Military munitions that have been primed, fuzed, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause (40 CFR 266).