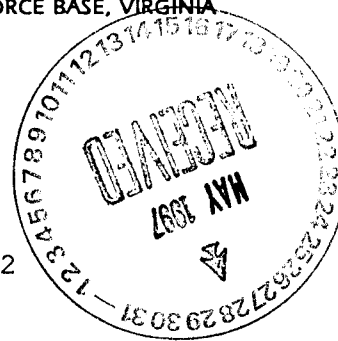




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MEMORANDUM FOR DISTRIBUTION

FROM: HQ ACC/CEVR
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SUBJECT: United States Air Force Presumptive Remedy Engineering
Evaluation/Cost Analysis (PREECA) 2nd Edition

1. This package contains your copy of the subject document. Please issue this material to the person(s) responsible for Environmental Restoration requirements.
2. The PREECA builds on the ongoing efforts of several organizations. A primary goal of the Department of Defense (DoD) Installation Restoration Program is to achieve early and substantial risk reduction at sites posing significant risk to human health and the environment.
3. The PREECA 2nd Edition continues to support the DoD goal by standardizing a significant portion of the remedy selection process. Please note the following areas which were included in this edition:
 - a. A technology criteria document was added for Multi-Phase Extraction which is one of the newest EPA approved presumptive remedy technologies for treating volatile organic compound (VOC) contamination in both groundwater and vadose zones.
 - b. An example Site Specific Action Memorandum (SSAM) replaced Part III of the original PREECA.
 - c. Information on EPA approved presumptive remedy application of military landfills was added to the Capping technology criteria document.
 - d. The Groundwater Pump and Treat for Containment Technology was renamed Groundwater Containment.
4. If you have any questions or comments or require additional copies, please contact Ms. Margaret Patterson by phone, (757) 764-6249, or e-mail <pattersm@hqacce.langley.af.mil>.

Edward G. Newsome

EDWARD G. NEWSOME
Chief, Environmental Restoration

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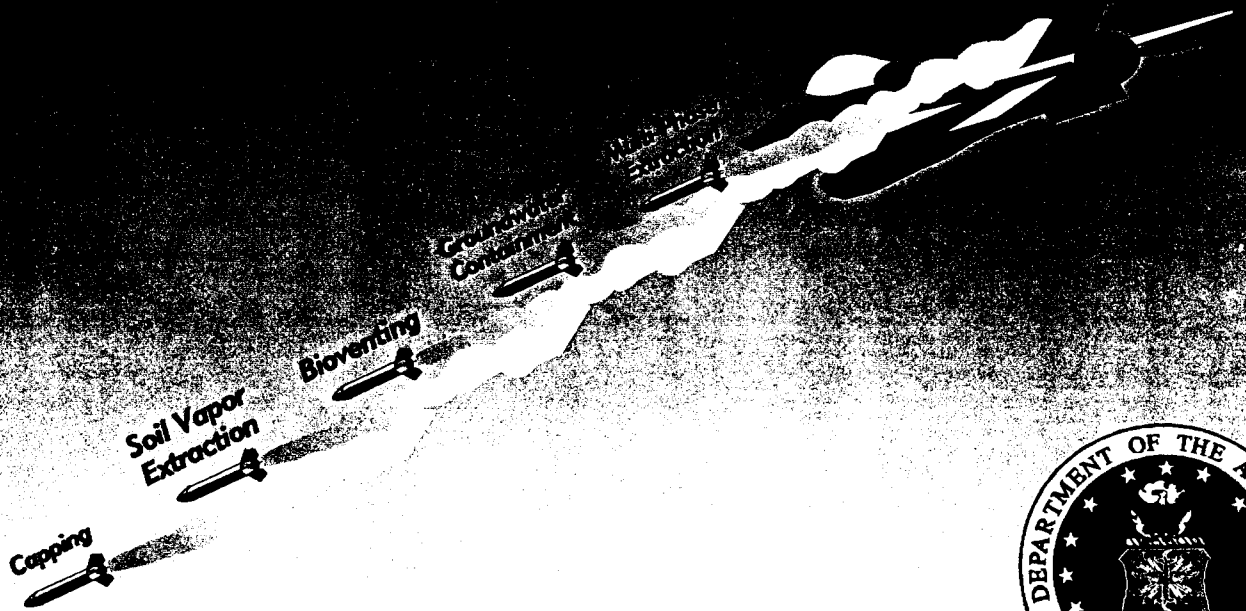
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United States Air Force

Presumptive Remedy Engineering Evaluation/ Cost Analysis (PREECA)



High Risk Sites



FINAL

May 1997

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UNITED STATES AIR FORCE PRESUMPTIVE REMEDY ENGINEERING
EVALUATION/COST ANALYSIS (PREECA)

2ND EDITION

FINAL

PREPARED FOR:

U.S. ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
OMAHA, NEBRASKA 68102-4978

15 May 1997

CONTRACT NO. DACA-45-93-D-0027
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This Air Force Presumptive Remedy Engineering Evaluation/Cost Analysis (PREECA) builds on the past efforts of several organizations. In particular, Radian would like to acknowledge the pioneering work of EPA Region IX and CH2M Hill, Inc., at the South Indian Bend Wash (SIBW) Superfund site in Tempe, Arizona. This was the first site in the country to advance and utilize the "plug-in" approach. Radian also acknowledges the extensive efforts currently ongoing at McClellan AFB, California. The McClellan AFB Installation Restoration Program (IRP) has embraced the presumptive remedy "plug-in" approach and was the first site to implement a "plug-in" presumptive remedy EE/CA for soil vapor extraction (SVE). Mitre Corporation was instrumental in producing this document. In addition, both Radian and CH2M Hill have continued the implementation of the "plug-in" approach at McClellan through the production of a basewide remedial investigation (RI) report and a basewide vadose zone feasibility study (FS), respectively.

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1.0 INTRODUCTION

1.1 Objective and Purpose

A primary goal of the Department of Defense (DoD) Installation Restoration Program (IRP) is to achieve early and substantial risk reduction at sites posing significant risk to human health and the environment. This document supports the DoD goal by standardizing a significant portion of the remedy selection process, so that streamlined implementation of cleanup actions at high-risk Air Force sites can occur.

The Air Force presumptive remedy Engineering Evaluation/Cost Analysis (PREECA) is a “plug-in” remedy selection document designed to be utilized by all Air Force installations. It establishes the contaminated site conditions and technology criteria that high-risk Air Force sites must meet in order to take a non-time-critical removal action with the following presumptive remedies; bioventing, soil vapor extraction (SVE), groundwater containment, capping, and the multi-phase extraction technologies. The multi-phase extraction (MPE) technologies include two-phase extraction (TPE), low-vacuum dual-phase extraction (LVDPE), and high-vacuum dual-phase extraction (HVDPE). The overall goal, strategies, objectives, actions, and measures of success for this PREECA initiative are detailed in Figure 1-1.

1.2 Benefits of PREECA Approach

A primary benefit of utilizing this PREECA is the significant time savings realized in selecting and implementing a cleanup remedy at high-risk sites. This streamlined remedy selection process is compared with the standard IRP approach in Figure 1-2. As shown in the figure, the

PREECA process saves several time-consuming steps. Other direct benefits of this approach are:

- Facilitates early and substantial risk reduction at high risk sites.
- Improves the consistency and predictability of the remedy selection process for DoD, regulatory agencies, and the public.
- Minimizes regional regulatory agency discrepancies in remedy selection.
- Maintains consistency with Superfund Accelerated Cleanup Model (SACM) and presumptive remedy guidance.

1.3 Background

USEPA’s (EPA) Superfund Accelerated Cleanup Model (SACM) promotes the rapid reduction of risk at sites posing the greatest threat to human health and the environment through the use of removal actions. SACM was initiated by EPA to streamline and accelerate the remedy selection and site cleanup process in order to facilitate early “risk reduction.” EPA recognized that this risk reduction could be more easily achieved through the “removal process” than the “remedial process.” **Unlike the remedial process where cleanup standards must be documented in the Record of Decision (ROD), cleanup standards do not have to be set for removal actions to commence.** Thus, the removal action mechanism provides the necessary flexibility to be implemented across various EPA regions and states.

The standard Comprehensive Environmental Response and Liability Act (CERCLA) process for implementing a non-time-critical