CAFB95

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous & Radioactive Materials Bureau
525 Camino De Los Marquez
P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-4358
Fax (505) 827-4389

GARY E. JOHNSON
GOVERNOR

MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY

July 7, 1995

Brigadier General William M. Guth
Base Commander
27 FW/CC
100 South DL Ingram Blvd., Suite 100
Cannon AFB, NM 88103-5214

Dear Gen. Guth:

The enclosed document was made available to the New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau (HRMB) for distribution to regulated entities.

Please direct your inquires concerning the document to Don Smith of Region VI EPA at (214) 260-2342.

Sincerely,

Barbara Hoditschek
Barbara Hoditschek
Program Manager
RCRA Permitting

cc: File

Document Not Found

Air Combat Command Installation Restoration Program (IRP) Remedial Project Manager's (RPM) Guide

LIBRARY COPY

May 1995

AIR COMBAT COMMAND

INSTALLATION RESTORATION PROGRAM

REMEDIAL PROJECT MANAGER'S GUIDE

May 1995

TABLE OF CONTENTS

		Page
	LIST OF TABLES	v
	LIST OF FIGURES	vi
	LIST OF ACRONYMS	vii
1.	**INTRODUCTION**	1-1
	1.1 BACKGROUND	1-1
	1.2 PURPOSE OF THIS GUIDE	1-3
	1.3 HOW TO USE THIS GUIDE	1-3
2.	**OVERVIEW OF THE IRP**	2-1
	2.1 THE IRP AT ACC	2-1
	2.2 IRP GOALS	2-2
	2.2.1 General	2-2
	2.2.2 Description of Specific Goals	2-3
	2.3 MAJOR ENVIRONMENTAL LAWS AND REGULATIONS GOVERNING THE IRP	2-4
3.	**THE IRP TEAM: RESPONSIBILITIES, COORDINATION AND COMMUNICATION**	3-1
	3.1 DEPUTY UNDER SECRETARY OF DEFENSE FOR ENVIRONMENTAL SECURITY DUSD(ES)	3-1
	3.2 DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH (SAF/MIQ)	3-3
	3.3 AIR FORCE CIVIL ENGINEER (HQ USAF/CE), DIRECTORATE OF ENVIRONMENTAL QUALITY (HQ USAF/CEV), ENVIRONMENTAL RESTORATION DIVISION (HQ USAF/CEVR)	3-4
	3.3.1 Air Force Center for Environmental Excellence (AFCEE), Regional Compliance Offices (RCOs)	3-5
	3.4 ACC	3-5
	3.4.1 Environmental Leadership Council (ELC) and Environmental Management Board (EMB)	3-5
	3.4.2 ACC Environmental Programs Division (HQ ACC/CEV)	3-6
	3.4.3 ACC Civil Engineering Squadron, Environmental Flight (ACC CES/ESV)	3-6
	3.4.4 Office of the Staff Judge Advocate, Environmental Law Division (HQ ACC/JAV)	3-8
	3.4.5 Public Affairs Office (HQ ACC/PA)	3-9
	3.4.6 Bioenvironmental Engineer's Office (HQ ACC/SGPB)	3-9
	3.5 INSTALLATION	3-9
	3.5.1 Installation Commander	3-9
	3.5.2 Environmental Protection Committee (EPC) and the Environmental Management Board (EMB)	3-10

3.5.3 Base Civil Engineer (BCE) and Civil Engineering Branches 3-10
3.5.4 Installation Environmental Office (CEV or EM) 3-11
3.5.5 Staff Judge Advocate Office (Installation/JA) 3-13
3.5.6 Public Affairs Office (Installation /PA) 3-13
3.5.7 Bioenvironmental Engineer (Installation BEE) 3-14
3.6 SERVICE CENTERS 3-14
3.7 ARCHITECT-ENGINEER (A-E) AND THE CONSTRUCTION CONTRACTOR 3-16
3.8 REGULATORY AGENCIES 3-17
3.8.1 State and Local Regulatory Agencies 3-17
3.8.2 Environmental Protection Agency 3-17
3.9 THE COMMUNITY 3-19

4. IRP POLICY AND INITIATIVES 4-1
4.1 IRP POLICY 4-1
4.1.1 Community Involvement 4-1
4.1.1.1 Community Involvement Activities Required by CERCLA and DUSD(ES) 14 Apr 1994 Memo Section XII 4-2
4.1.1.2 Suggested Community Involvement Activities 4-4
4.1.1.3 Restoration Advisory Board 4-4
4.1.2 RCRA/CERCLA Integration 4-7
4.1.3 NEPA Implementation 4-10
4.1.4 Natural Resources Trustee Coordination 4-12
4.1.5 Cultural Resource Consideration 4-14
4.1.6 Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Assessments (PHAs) 4-17
4.1.7 Range Policy 4-20
4.1.8 No Further Response Action is Planned (NFRAP) Policy 4-20
4.1.9 Air Force Economy Act Purchases 4-23
4.1.10 Peer Reviews 4-24
4.1.11 Radioactive Sites Policy 4-26
4.1.12 Access to Private Property 4-27
4.1.13 Remedial Action Permit Exemptions 4-28
4.1.14 Military Construction (MILCON) and the IRP 4-28
4.2 ACC INITIATIVES 4-30
4.2.1 Accelerated Cleanup Program 4-30
4.2.2 Information Management Action Plan 4-31
4.2.3 Environmental Data Management and Decision Support 4-32
4.2.4 Presumptive Remedy Engineering Evaluation/Cost Analysis 4-34
4.2.5 Rational National Standards Initiative 4-35
4.3 DoD INITIATIVES 4-37
4.3.1 Risk Management and Relative Risk Evaluation 4-37
4.3.2 Defense and State Memorandum of Agreement (DSMOA) 4-42

5. PLANNING A PROGRAM 5-1
5.1 RPM TOOLS 5-1
5.1.1 Desktop Resources 5-2
5.1.2 RPM Deliverable Chart 5-3
5.1.3 Management Action Plan (MAP) 5-3
5.1.4 Base Comprehensive Plan (BCP) 5-3
5.1.5 Remediation Technologies Screening Matrix 5-5
5.1.6 Remedial Action Cost Engineering and Requirements System (RACER) 5-6
5.1.7 Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA) 5-7
5.1.8 Environmental Data Management and Decision Support (EDMDS) 5-8
5.2 DETERMINE PROGRAM REQUIREMENTS AND DEVELOP PROGRAM DOCUMENTS 5-9
5.2.1 Investigation, Design and Construction Projects 5-10
5.2.1.1 Overview 5-10
5.2.1.2 General Guidance for Narrative Program Documents 5-11
5.2.1.3 General Guidance for DD Form 1391 and 1391c Program Documents 5-17
5.2.1.4 Guidance for Developing PA/SI Narrative Program Documents 5-23
5.2.1.5 Guidance for Developing Removal Action or IRA Program Documents 5-26
5.2.1.6 Guidance for Developing RI/FS Narrative Program Documents 5-29
5.2.1.7 Guidance for Developing RD Narrative Program Documents 5-32
5.2.1.8 Guidance for Developing RD/RA Program Documents 5-35
5.2.1.9 Guidance for Developing LTM Narrative Program Documents 5-38
5.2.1.10 Guidance for Developing LTO Narrative Program Documents 5-41
5.2.2 TDY, Training, Manpower and Computers 5-44
5.2.2.1 TDY and Training 5-44
5.2.2.2 Manpower 5-46
5.2.2.3 Computer Requirements 5-48
5.3 PRIORITIZING REQUIREMENTS 5-50
5.4 FUNDING LEVEL ADJUSTMENTS AND OUT-OF-CYCLE REQUIREMENTS 5-53

6. EXECUTION 6-1
6.1 AREAS OF CONCERN AND REOPENED SITES 6-1
6.2 SITE INVESTIGATION AND CLEANUP 6-5
6.2.1 Preliminary Assessment/Site Inspection (PA/SI) 6-10

6.2.2 Removal Action, Interim Remedial Action (IRA), or Presumptive Remedy 6-14
6.2.3 Remedial Investigation/Feasibility Study (RI/FS) 6-21
6.2.4 Remedial Design/Remedial Action (RD/RA) 6-29
6.2.5 Long Term Monitoring/Long Term Operation (LTM/LTO) 6-34
6.3 SITE CLOSEOUT OR RESPONSE COMPLETE 6-37

7. DOCUMENTATION 7-1
7.1 FILES 7-1
7.1.1 File Plan 7-1
7.1.2 Administrative Record and Information Repository Files 7-2
7.1.2.1 The Administrative Record File 7-3
7.1.2.2 The Information Repository File 7-3
7.2 REPORTS 7-4
7.2.1 Quarterly Reports to ACC 7-5
7.2.2 Commitment to Progress 7-6
7.2.3 Annual Report to Congress 7-7
7.2.4 A-106 7-7
7.3 DATABASE SYSTEMS 7-8
7.3.1 WIMS-ES 7-8
7.3.2 IRPIMS 7-8
7.4 OTHER 7-10
7.4.1 Management Action Plan 7-10
7.4.2 ECAMP Inspection 7-13

8. SPECIAL CONSIDERATIONS FOR NATIONAL PRIORITY LIST (NPL) BASES AND INSTALLATIONS WITH INTERAGENCY AGREEMENTS 8-1
8.1 OVERVIEW OF THE NPL PROCESS 8-1
8.2 FEDERAL FACILITY AND INTERAGENCY AGREEMENTS (FFAS AND IAGS) 8-2
8.2.1 Overview 8-2
8.2.2 Current FFA/IAG Guidance 8-3
8.2.3 FFA Provisions 8-4
8.3 THE IMPORTANCE OF COMMUNICATION 8-5
8.4 COMMUNITY INVOLVEMENT 8-6
8.5 AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR) PUBLIC HEALTH ASSESSMENTS (PHAS) 8-7
8.6 RECORD OF DECISION (ROD) SIGNATORY 8-8
8.7 ANNUAL REPORT TO CONGRESS 8-10

A. BIBLIOGRAPHY OF SUPPORTING GUIDANCE AND REFERENCES A-1
B. APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS B-1
C. IRP PROJECT VALIDATION CHECKLISTS C-1
INDEX I-1

LIST OF TABLES

No.	Title	Page
2.1	ACC IRP Goals	2-3
4.1	CERCLA-RCRA Comparison	4-8
4.2	Description of DUSD(ES) Relative Risk Categories	4-39
4.3	DUSD(ES) Priority Coding	4-40
5.1	RPM Deliverable Chart	5-4
5.2	DUSD(ES) Priority Coding	5-51
6.1	Coordination With the IRP Team	6-9

LIST OF FIGURES

No.	Title	Page
3.1	Organizational Structure of the IRP Team	3-2
3.2	Boundaries of EPA Regions	3-18
4.1	Relative Risk: Priority Setting Factors	4-41
5.1	Narrative Program Document Format	5-15 - 5-16
5.2	DD Form 1391 Program Document Format	5-21 - 5-22
5.3	Example PA/SI Program Document	5-24 - 5-25
5.4	Example Removal Action Program Document	5-27 - 5-28
5.5	Example RI/FS Program Document	5-30 - 5-31
5.6	Example RD Program Document	5-33 - 5-34
5.7	Example RD/RA Program Document	5-36 - 5-37
5.8	Example LTM Program Documents	5-39 - 5-40
5.9	Example LTO Program Document	5-42 - 5-43
5.10	TDY/Training Requirement Format	5-45
5.11	TDY/Training Completion report format	5-45
5.12	Manpower Program Document Format	5-46
5.13	Quarterly Manpower Report	5-47
5.14	Completed AF Form 3215	5-49
5.15	Relative Risk: Priority Setting Factors	5-52
5.16	Funding Line Adjustment Request	5-53
7.1	TDY Completion Report	7-6

LIST OF ACRONYMS

ABAL	Area Below Action Levels
ACHP	Advisory Council on Historic Preservation
ACL	Alternate Cleanup Level
ACP	Accelerated Cleanup Program
A-E	Architect-Engineer
AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
AFCEE/ESS-RCO	Air Force Regional Compliance Offices
AFCESA	Air Force Civil Engineering Support Agency
AFI	Air Force Instruction
AFIT	Air Force Institute of Technology
AFR	Air Force Regulation
ANSC	Area of No Suspected Contamination
AOC	Area of Concern
ARARs	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
BCE	Base Civil Engineer or Civil Engineer
BEE	Bioenvironmental Engineer
CA	Cooperative Agreement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act

CFR	Code of Federal Regulations
CHF	Contaminant Hazard Factor
CMS	Corrective Measures Study
COE	Corps of Engineers
CRA	Continuing Resolution Authority
CRP	Community Relations Plan
CWA	Clean Water Act
DUSD(ES)	Deputy Assistant Secretary of Defense for Environmental Security
DD	Decision Document
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOI	Department of the Interior
DPM	Defense Priority Model
DRC	Dispute Resolution Committee
DSMOA	Defense and State Memorandum of Agreement
EA	Environmental Assessment
ECAMP	Environmental Compliance Assessment and Management Program
EDMDS	Environmental Data Management and Decision Support
EEC	Environmental Education Center
EE/CA	Engineering Evaluation/Cost Analysis

EIS	Environmental Imapct Statement
ELC	Environmental Leadership Council
EO	Executive Order
EMO	Environmental Management Office
EMB	Environmental Management Board
EPA	Environmental Protection Agency
EPC	Environmental Protection Committee
FFA	Federal Facility Agreement
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FR	Federal Register
FS	Feasibility Study
FY	Fiscal Year
GIS	Geographic Information System
HAZWRAP	Hazardous Waste Remedial Action Program
HQ USAF	Headquarters U.S. Air Force
HQ USAF/CEV	Headquarters U.S. Air Force Directorate of Environmental Quality
HQ USAF/CEVR	Headquarters U.S. Air Force Environmental Restoration Division
HRS	Hazard Ranking System
HSWA	Hazardous and Solid Waste Amendments
IAG	Interagency Agreement
ID/IQ	Indefinite Delivery/Indefinite Quantity Contract

IRA	Interim Remedial Action
IRP	Installation Restoration Program
IRPIMS	Installation Restoration Program Information Management System
JA	Staff Judge Advocate
LTM	Long Term Monitoring
LTO	Long Term Operation
MAP	Management Action Plan
MCL	Maximum Contaminant Level
MILCON	Military Construction
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPF	Migration Pathway Factor
NAVFACENGCOM	Naval Facilities Engineering Command
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NFRAP	No Further Response Action Planned
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NOV	Notice of Violation
NPL	National Priority List
NRC	Nuclear Regulatory Commission or National Response Center

NTIS	National Technical Information Service
OCR	Office of Collateral Responsibility
O&M	Operations and Maintenance
OPR	Office of Primary Responsibility
OSWER	Office of Solid Waste and Emergency Response (EPA)
PA	Public Affairs or Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
PHA	Public Health Asssessment
PI/GIS	Photo Interpretation/Geographic Information System
POL	Petroleum, Oils and Lubricants
PREECA	Presumptive Remedy Engineering Evaluation/Cost Analysis
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RAB	Restoration Advisory Board
RAIP	Remedial Action In Place
RACER	Remedial Action Cost Engineering and Requirements System
RC	Response Complete
RCO	Regional Compliance Office
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REC	Regional Environmental Coordinator
RF	Receptor Factor

RFI	RCRA Facility Investigation
RFP	Request for Proposal
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RNSI	Rational National Standards Initiative
ROD	Record of Decision
RPM	Remedial Project Manager
RSO	Radiation Safety Officer
SACM	Superfund Accelerated Cleanup Model
SAF/MIQ	Deputy Assistant Secretary of the Air Force for Environment, Safety and Occupational Health
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SEC	Senior Executive Committee
SGPB	Bioenvironmental Engineering
SHPO	State Historic Preservation Officer
SIOH	Supervision, Inspection and Overhead
SWMU	Solid Waste Management Unit
TDY	Temporary Duty
TSCA	Toxic Substances Control Act
UEI	Unit Effectiveness Inspection

USACE	U.S. Army Corps of Engineers
USC	United States Code
USGS	U.S. Geological Survey
UST	Underground Storage Tank
WG	Working Group
WIMS-ES	Work Information Management System - Environmental Subsystem

1. *INTRODUCTION*

1.1 BACKGROUND

Implementing Laws and Regulations. The Installation Restoration Program (IRP) is a Department of Defense (DoD) Program, similar to the Environmental Protection Agency's (EPA's) Superfund Program. The program is designed to identify, investigate, and clean up past (prior to 1984) waste disposal/release sites that are causing or are expected to cause environmental contamination. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) established the Superfund program. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986. SARA Section 211 established the Defense Environmental Restoration Program (DERP) and the Defense Environmental Restoration Account (DERA). The objectives of the DERP are as follows:

> "(1) **The identification, investigation, research and development, and cleanup of contamination from hazardous substances, pollutants, and contaminants.**
>
> (2) **Correction of other environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare or to the environment.**
>
> (3) **Demolition and removal of unsafe buildings and structures, including buildings and structures of the Department of Defense at sites formerly used by or under the jurisdiction of the Secretary."**

The National Contingency Plan (NCP) is the regulation that outlines the terminology and framework for implementing the Superfund program and the IRP in accordance with CERCLA/SARA.

Scope. The IRP encompasses objectives **(1)** and **(2)** of the DERP. The DERA provides funds to implement the IRP. The IRP parallels EPA Superfund guidelines, rules, regulations and criteria in accordance with CERCLA Section 120. However, the IRP has a larger scope than the CERCLA Superfund program.

- First, the IRP addresses response actions at all sites regardless of whether or not they are on the National Priority List (NPL) (a list of sites scoring greater than 28.5 by the revised Hazard Ranking System (rHRS), a scoring system used by the Environmental Protection Agency (EPA) to rank the worst uncontrolled hazardous waste sites). The Superfund program only addresses sites on the NPL.

- Second, the IRP addresses past contamination by petroleum, oils, and lubricants (POL). CERCLA excludes petroleum contamination from Superfund investigation and cleanup.

- Third, the IRP addresses DERA-eligible Solid Waste Management Units (SWMUs) under the Corrective Action Program of the Resource Conservation and Recovery Act/ Hazardous and Solid Waste Amendments (RCRA/HSWA). The Superfund program only addresses sites on the NPL.

History. The DoD initiated the IRP In the early 1980s, prior to the DERP. Although the objectives of this initial program were essentially the same as CERCLA/SARA, the terminology and framework were different. In the early 1980s, under this initial program, many Air Force Commands initiated the Phase I Records Search (analogous to the Preliminary Assessment (PA)). Because the DERP was not established until 1986 (including the requirement that the framework and terminology parallel the Superfund program), it is common to find historic IRP documents that use the former terminology and framework (Phase I, II, III, IV).

For additional information on the legal and historical context of the IRP (with a comparison of the former and current program), refer to Chapter 3 of the ***Air Force Installation Restoration Program Management Guidance*, 1989** (also known as "The White Book").

Responsibility. The installation manages the IRP with assistance from the Air Combat Command Environmental Programs Division (ACC/CEV) and the ACC Civil Engineering Squadron, Environmental Flight (ACC CES/ESV). Each installation must appoint a Remedial Project Manager (RPM) to serve as the on-scene coordinator and single point-of-contact for IRP issues at the installation. The RPM is essentially the coordinator of an IRP team, which includes:

- ACC program managers,
- Service centers and contractors,
- Civil Engineering staff,
- Staff Judge Advocate,
- Bioenvironmental Engineer,
- Public Affairs,
- Regulatory agencies, and
- Community representatives.

The RPM's primary responsibility is the efficient cleanup and closeout of contaminated sites, reducing risk to human health and the environment. The RPM should ensure the cleanup is conducted:

- With responsible expenditure of government funds,
- In compliance with environmental laws and regulations, and
- In cooperation with the regulatory agencies and the community.

1.2 PURPOSE OF THIS GUIDE

The purpose of this Remedial Project Manager's Guide is to assist the RPM with IRP project management and execution at the installation. This guide was developed to specifically address the responsibilities of the RPM, including coordination with the IRP team. Although this document is intended to be a comprehensive guide that addresses typical duties and situations, it is not an exhaustive mandate. RPMs are encouraged to develop, implement and share their own management techniques to improve the cleanup process and communication among the Air Force team members, community and regulatory agencies.

1.3 HOW TO USE THIS GUIDE

This guide is designed for use by new and experienced RPMs. New RPMs should review the first four chapters to learn more about the background of the IRP, program execution, the responsibilities of the IRP team members, and pertinent IRP policies and initiatives. Experienced RPMs can find their topic of interest by consulting the table of contents or the index.

This document is a guide rather than an all-inclusive manual. Therefore, where appropriate, the guide highlights appropriate references to consult for additional information. Appendix A lists all supporting guidance and references.

2. *OVERVIEW OF THE IRP*

2.1 THE IRP AT ACC

Overview of Responsible Organizations. The Deputy Assistant Secretary of the Air Force for Environment, Safety and Occupational Health (SAF/MIQ) has overall responsibility for the execution of the Air Force IRP. The Directorate of Environmental Quality (HQ USAF/CEV), Restoration Division (HQ USAF/CEVR) has been delegated the responsibilities of managing the Air Force DERA and establishing Air Force policy. The ACC Civil Engineer (HQ ACC/CE), through the Environmental Program Division (HQ ACC/CEV) and the ACC Civil Engineer Squadron (ACC CES/ES), Environmental Flight (ACC CES/ESV) has been delegated the responsibility for executing the IRP at all installations within the command. Finally, the RPM, a component of the installation environmental office (CEV or EM), has been delegated the responsibility for executing the IRP at the installation.

Overview of Funding and Management. The IRP is a dynamic, multi-disciplinary program, funded on a single fiscal year basis. DERA is the IRP funding source. RPMs project IRP site funding requirements through site closeout, however RPMs program and receive funds for IRP requirements by single fiscal year. HQ USAF/CEVR allocates the Air Force share of the funds to the major commands based on the fair share of validated, prioritized requirements. Because requirements exceed available funds, project prioritization is an important aspect of program management.

HQ USAF/CEVR issues a fiscal year funding allocation to the major commands. (Although HQ USAF/CEVR may not issue the actual funding allocation until December, the major commands, operating on Continuing Resolution Authority, may start to distribute funds on 1 October.) Major commands obligate funds throughout the year as contracts are awarded. Due to the dynamic nature of the program (project uncertainties), the funding line changes throughout the year. Having projects ready to award ("on the shelf") as funds become available is the key to best use of limited, single-fiscal-year funding resources.

The IRP is a multi-disciplinary program, requiring expertise in chemistry, biology, geology, engineering, contracting, law, and public relations. ACC has traditionally used service centers for contracting and technical review of individual project requirements. With service centers, ACC can draw on the expertise of the many scientific, engineering and contracting specialties necessary

to execute the multi-disciplinary program. Using service centers for acquisition leaves the RPM free to manage the other aspects of the installation IRP:

- Project management Quality Assurance/Quality Control (QA/QC)
- Long-term planning
- Program development
- Regulatory compliance
- Administrative Record and Information Repository file management
- Community involvement
- Training and networking
- Reporting

ACC IRP management is decentralized. Installation RPMs have the overall responsibility of managing the base IRP by coordinating the activities of the IRP team. However, the ACC program manager retains approval authority for any changes in project scope, cost, or schedule.

2.2 IRP GOALS

2.2.1 General

Annual goals, established at every level of IRP management, keep IRP execution on track and insure progress toward cleanup. Refer to DUSD(ES), HQ USAF/CEVR and ACC CES/ESV memoranda to learn of specific goals. The following is a description of common performance measures:

- **Site closeout** -- Cleaning up and closing out sites is the ultimate goal of the IRP. (See Section 4.1.8)
- **Risk reduction** -- Focus resources and site cleanups on reducing risk to human health and the environment. (See Section 4.3.2)
- **Study vs. cleanup funds** -- Move toward site closeout and risk reduction by expending more funds toward cleanup than studies. (See Section 7.2.2)
- **Obligation of funds** -- Obligate funds responsibly throughout the fiscal year to insure that all allocated funds are used toward required environmental restoration. (See Table 2.1)
- **Manpower and Management** -- Manage the program efficiently to maximize the funding amount available for environmental restoration projects. (See Section 7.2.2)
- **Initiatives and Innovative Technologies** -- Develop methods of achieving environmental restoration that are more efficient, more effective and less costly. (See Section 4.2)

2.2.2 Description of Specific Goals

Table 2.1 provides an overview of the annual ACC IRP goals.

Table 2.1 ACC IRP Goals

ACC IRP GOALS							
CATEGORY	MEASUREMENT		SECTION	GOAL			
SITES	Risk Reduction		4.3.1	Remediate high risk sites to low risk.			
	Completion:	Finish/Closeout	4.1.8	Complete 10% of sites annually.			
EXECUTION	Quarterly Obligation Rate			1st	2nd	3rd	4th
				35%	65%	90%	100%
	Funds Expensed Toward Cleanup		7.2.2	Obligate 60% of funds toward Removal Action, IRA, RD, RD/RA, RA, LTM and LTO projects.			
	Funds Expensed Toward Manpower/Management		7.2.2	Keep funds expensed toward manpower/management at 10% of funded program.			
Management Action Plan (MAP)	Update		7.4.1	• Submit MAP updates 15 Apr and 15 Oct • Submit MAP table updates monthly.			
Restoration Advisory Board (RAB)	Functional		4.1.1.3	Quarterly RAB meetings at all installations. Active RAB participation.			

For more information, consult the following references.

ACC CES/ESV, May 1995, *Management Action Plan, Air Combat Command.*

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

DUSD(ES), 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program.

2.3 MAJOR ENVIRONMENTAL LAWS AND REGULATIONS GOVERNING THE IRP

CERCLA, SARA and the NCP are the main statutes that govern the IRP. CERCLA, SARA and the NCP address the multi-media (soil, ground water, surface water and air) and multi-pollutant (hazardous substances, pollutants and contaminants) nature of contaminated sites but do not prescribe cleanup standards. Instead, this legislation acts as an "umbrella," requiring cleanup to comply with other existing environmental laws and regulations. The following provides a citation and brief explanation of CERCLA/SARA; the NCP; RCRA/HSWA and the Corrective Action Rule; and NEPA. Appendix B lists other potentially applicable environmental laws and regulations. The *Bureau of National Affairs, Environment Reporter* lists the full text of each law or regulation. Page numbers follow each citation (e.g., BNA page 71:2001).

- **Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as "Superfund" as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), 42 U.S.C. 9601** (BNA page 71:0701)

  CERCLA establishes the programs to respond to releases (past, present and threatened) of hazardous substances, pollutants and contaminants that pose a threat to human health and the environment.

  SARA reauthorized Superfund and amended CERCLA, adding several new provisions. Of particular interest to the IRP is Section 120 (response actions at Federal Facilities) and Section 211 (establishes the DERP).

  CERCLA Sections 104(b)(2) and 107 discuss natural resources. If a CERCLA site impacts or may impact a natural resource, the lead agency must notify and coordinate with natural resource trustees and restore the impacted natural resource.

  CERCLA Section 105 requires the development of regulations to provide a framework for hazardous substance notification and response activities. The regulation developed to meet this provision is commonly known as the National Contingency Plan (NCP).

  Superfund Reauthorization. Attempts to reauthorize Superfund, as the proposed Superfund Reform Act of 1994, failed in the 103rd Congress. The following describes the major provisions (that apply to the IRP) of this proposed act.

  - **Public Participation:** The proposed act increases opportunities for public involvement in the cleanup process by providing for:
    - ⇒ More public meetings during site investigation, remedy selection and remedial action implementation,
    - ⇒ Public comments on reasonable current and future land use and proposed institutional controls,

⇒ Community working groups and statewide citizen information offices, and
⇒ Consideration of environmental justice issues and concerns.

- **Remedy Selection:** The proposed act allows more flexibility with remedy selection by:
  - ⇒ Establishing national risk goals -- single numerical acceptable risk levels for carcinogens and non-carcinogens.
  - ⇒ Developing a National Risk Protocol to:
    - Establish protective concentrations for 100 of the most common contaminants.
    - Develop standard, reasonable formulae and methodologies for site-specific risk assessment.
  - ⇒ Considering reasonable current and future land use in risk assessment and remedy selection.
  - ⇒ Balancing consideration of:
    - Effectiveness of the remedy,
    - Long-term reliability of the remedy,
    - Short-term risk posed by implementation of the remedy,
    - Acceptability of the remedy to the community, and
    - Reasonableness of the cost of the remedy.
  - ⇒ Allowing selection of containment remedy (vs. preference for treatment).
  - ⇒ Sanctioning and authorizing the Superfund Accelerated Cleanup Model (SACM) presumptive remedies and early treatment of high risk "hot spots."
  - ⇒ Requiring states to demonstrate that laws and standards they wish to impose are applied consistently at cleanups throughout the state and established properly (with public notice, opportunity for public comment, and opportunity for judicial review).

The future of Superfund reauthorization is uncertain. To learn of the latest issues being debated and the status of reauthorization efforts, refer to the Bureau of National Affairs, *Environment Reporter, Current Developments*.

- **Environmental Protection Agency National Oil and Hazardous Substances Pollution Contingency Plan under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, commonly known as the National Contingency Plan (NCP), 40 CFR Part 300** (BNA page 101:1001)

This regulation deals with spill response provisions of the Clean Water Act and hazardous substance response provisions of CERCLA. The NCP was initially promulgated in November, 1985 and revised 8 March 1990 to meet the requirements of SARA. The preamble of the revised NCP, published in the 8 March 1990 *Federal Register*, provides valuable background information on the rulemaking thought processes and responses to comments on the proposed regulation.

The NCP, its preamble, subparts and appendices are recommended reading for RPMs. This text will help RPMs understand the IRP process, the intent of the regulation and the flexibility offered by the regulation.

The following provides a description of the pertinent subparts and appendices of the NCP.

- Subparts E, G and I guide the execution of the IRP:

  ⇒ Subpart E (Hazardous Substance Response)
  ⇒ Subpart G (Trustees for Natural Resources)
  ⇒ Subpart I (Administrative Record for Selection of Response Action)

- Subpart K (Federal Facilities) is a reserved section in the revised 8 March 1990 NCP.

- Appendix A provides instructions for scoring sites under the Hazard Ranking System (HRS). The most recent amendment to this Appendix was on 14 Dec 1990 (the revised (rHRS) scoring system).

- Appendix B is the National Priority List.

- Appendix D - Appropriate Actions and Methods of Remedying Releases, added in the 8 Mar 1990 NCP amendment, provides a listing of cleanup technologies.

- **Executive Order 12580 of January 23, 1987 Superfund Implementation, 52 FR 2923 Jan 29, 1987** (BNA page 71:0341)

  This order delegates the authorities and responsibilities for implementing CERCLA/SARA to appropriate federal agencies. Hazardous substance response authority is delegated to Department of Defense (DoD) for DoD installations not on the NPL.

- **Resource Conservation and Recovery Act of 1976 (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. 6901** (BNA pages 71:3101 and 161:2020)

  These laws deal with "cradle-to-grave" (from generation to disposal) operational management and treatment, storage and disposal of hazardous waste (through a permitting and inspection process), management of underground storage tanks, and management of solid waste. RCRA may impact IRP sites via the HSWA Corrective Action program, underground storage tank regulations, as a source of Applicable and Relevant or Appropriate Requirements (ARARs), or whenever hazardous waste (as defined by RCRA) is removed from the site. CERCLA allows a RCRA permit exemption for waste treated entirely on-site (areas proximate to the contamination that are necessary to implement the response action).

HSWA Corrective Action impacts the IRP at RCRA-permitted and interim status facilities. The Corrective Action Program, similar but not identical to the CERCLA remedial action program, was established to clean up hazardous waste release sites (Solid Waste Management Units -- SWMUs), most of which either can be or are classified as IRP sites. HSWA requires the facility owner and operator to take financial responsibility for the cleanup of SWMUs, thereby avoiding the lengthy and expensive legal mechanisms required by CERCLA to determine private party financial responsibility for cleanup of hazardous waste sites.

Federal facilities are unique because they are required by CERCLA/SARA Section 120 to implement the provisions of CERCLA regardless of NPL status, and they may also be subject to the provisions of HSWA (RCRA-permitted or interim status facilities). Therefore, two separate authorities may exist for cleanup of the same IRP sites/SWMUs. This dilemma is called RCRA-CERCLA overlap, and the attempt to merge the authorities and clean up a site in compliance with both laws is called RCRA-CERCLA integration. This issue is not new, but neither regulatory agencies nor federal facility components have developed a comprehensive policy to resolve the dilemma. Although no policy exists, cleanups must still comply with RCRA and CERCLA.

In order to ensure compliance with both laws without duplicating efforts, the Environmental Compliance and Restoration staffs at the installation and ACC must work together with the RCRA and CERCLA regulatory staffs at EPA and state regulatory agencies to determine and implement the best strategy to ensure compliance and optimize the cleanup. Determining and coordinating the optimum regulatory strategy early on in the IRP process will save time and money in the investigation, review and cleanup process. Document the strategy in the installation Management Action Plan (MAP). Section 4.1.2 discusses RCRA-CERCLA integration in greater detail.

HSWA also established a program to regulate underground storage tanks (USTs) containing petroleum products and CERCLA hazardous substances. The authority to regulate USTs and develop corrective action requirements for releases may be delegated to the states.

- **Environmental Protection Agency Proposed Corrective Action Rule for Solid Waste Management Units, 55 FR 30798 27 Jul 1990** (Environment Reporter, Volume 21, Number 14, p. 666, 3 Aug 1990)

  This proposed rule is intended to amend the **Environmental Protection Agency Regulations for Owners and Operators of Permitted Hazardous Waste Facilities, Subpart F - Releases from Solid Waste Management Units under RCRA, 40 CFR Part 264** (BNA page 161:2000). The rule specifies the requirements for investigation and cleanup of SWMUs at RCRA-permitted and interim status facilities. The rule also provides for administration of Corrective Action by the states. The preamble, of particular interest in this proposed rule, recognizes RCRA-CERCLA overlap and the previous work conducted by DoD in the IRP.

- **National Environmental Policy Act (NEPA), 42 U.S.C. 4341** (BNA page 71:0101)

  NEPA applies to federal actions that impact the quality of the environment. NEPA requires the consideration of environmental impacts of a proposed action, keeping the public informed, and giving the public the opportunity to comment. The HQ USAF/CEV, 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, section 9.1, provides direction on integrating NEPA into the IRP process. Refer to section 4.1.3 of this guide for additional information on NEPA implementation.

For more information, consult the following references.

Bureau of National Affairs, *Environment Reporter.*

HQ USAF/CEV, 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

3. *THE IRP TEAM: RESPONSIBILITIES, COORDINATION AND COMMUNICATION*

Individuals with assorted backgrounds comprise the IRP team. Each individual's responsibilities as well as their ability to work as a team are important to the successful execution of the program. The organizational framework of the IRP team (Figure 3.1) illustrates the vertical and horizontal management structure and the importance of maintaining good communication among the team members. The following sections describe the roles and responsibilities of the members of the IRP team.

3.1 DEPUTY UNDER SECRETARY OF DEFENSE FOR ENVIRONMENTAL SECURITY (DUSD(ES))

Responsibilities. The Deputy Under Secretary of Defense for Environmental Security (DUSD(ES)) is responsible for DoD-wide implementation of the DERP and management of the DERA. DUSD(ES):

- Develops and defends the budget based on input from the services,
- Forms a committee with service representatives to address development and implementation of program policy and guidance, such as:
  - ⇒ Program categories,
  - ⇒ Eligibility criteria,
  - ⇒ Prioritization criteria, and
  - ⇒ Goals, objectives and performance measures,
- Conducts In Progress Reviews to monitor DERP execution by the services,
- Serves as liaison to other federal agencies, states and Congress,
- Submits Annual Report to Congress, and
- Signs Defense and State Memoranda of Agreement (DSMOAs).

Communication and Coordination. DUSD(ES) communicates policy and guidelines with service components via letters and memoranda. Service component headquarters report program status and budgets to DUSD(ES). DUSD(ES) must review and coordinate Federal Facility and Interagency Agreements.

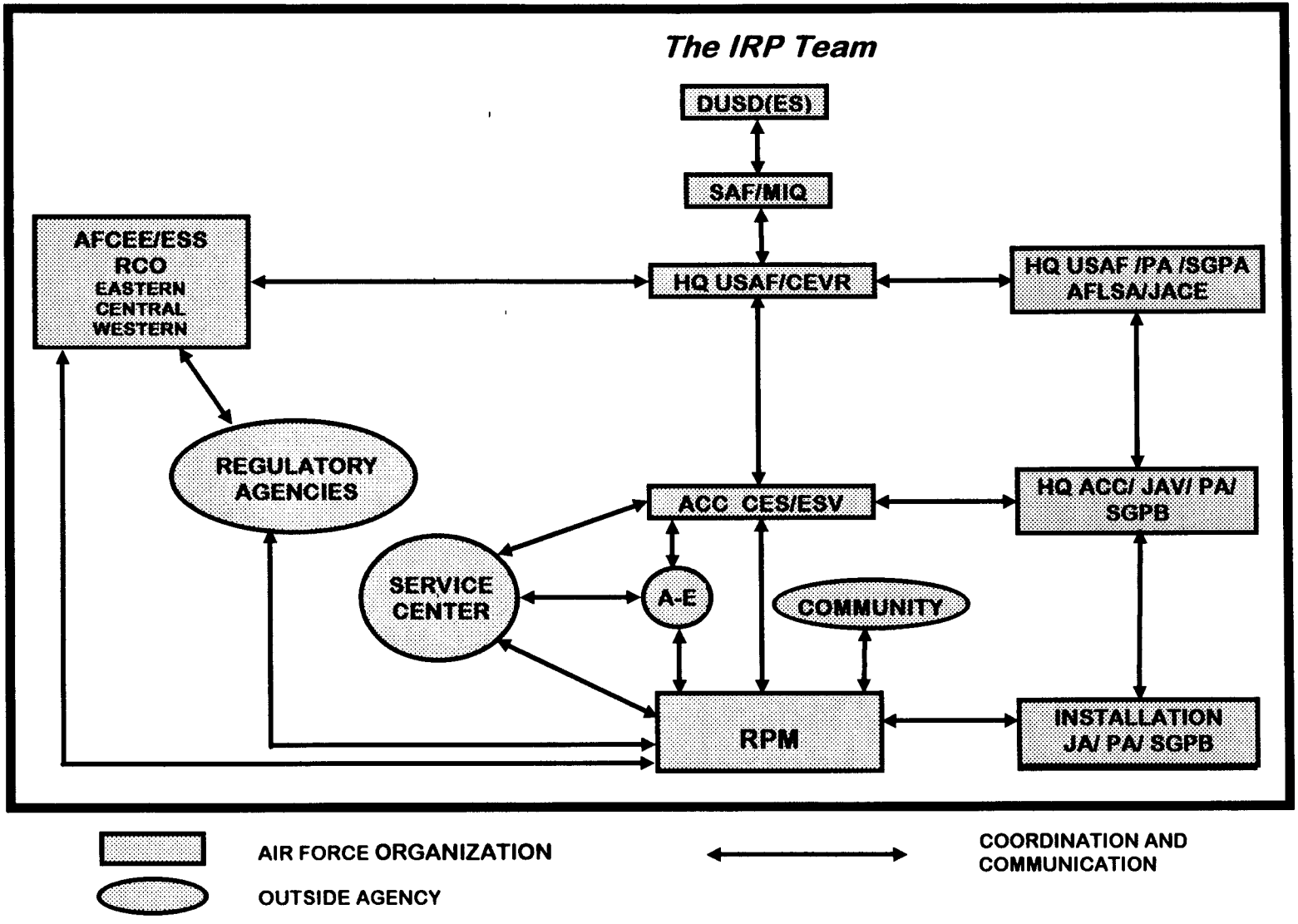


Figure 3.1 The Organizational Structure of the IRP Team

DoD Regional Environmental Coordinators. DoD established Regional Environmental Coordinators (RECs) in 1994 to:

- Identify and elevate issues (through the appropriate service agent) requiring DoD action, policy, or guidance.
- Promote consistency between the services regarding environmental regulations and initiatives.

REC assignments are divided between the services, by EPA Region:

• Regions IV, V, VII and VIII	Army
• Regions I, III, and IX	Navy
• Regions II, VI and X	Air Force

3.2 DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH (SAF/MIQ)

Responsibilities. The Deputy Assistant Secretary of the Air Force for Environment, Safety and Occupational Health (SAF/MIQ) represents the Air Force IRP to DUSD(ES), regulatory agencies, and Congress. SAF/MIQ is responsible for developing Air Force IRP policy guidelines and ensuring that Air Force policy is consistent with DoD policy. Additionally, SAF/MIQ may serve as the senior Air Force representative in dispute resolution.

The Air Force Office of General Counsel for Installations and Environment (SAF/GNC) provides legal counsel, and the Air Force Office of Public Affairs (SAF/PA) provides support and guidance for community and media relations to SAF/MIQ.

Communication and Coordination. SAF/MIQ issues policy and guidance to HQ USAF via letters and memoranda. SAF/MIQ also serves as the final level in dispute resolution. Major commands must seek approval from SAF/MIQ prior to entering into Federal Facility or Interagency Agreements.

3.3 AIR FORCE CIVIL ENGINEER (HQ USAF/CE), DIRECTORATE OF ENVIRONMENTAL QUALITY (HQ USAF/CEV), ENVIRONMENTAL RESTORATION DIVISION (HQ USAF/CEVR)

Responsibilities. The Air Force Civil Engineer (HQ USAF/CE) has overall execution responsibility for the Air Force IRP. Under the Directorate of Environmental Quality (HQ USAF/CEV), the Environmental Restoration Division (HQ USAF/CEVR) is the Office of Primary Responsibility (OPR) for day-to-day management of the Air Force IRP. HQ USAF/CEVR is responsible for:

- Developing and transmitting Air Force IRP policy and guidance to the major commands,
- Developing cleanup goals and program metrics,
- Monitoring major command program execution and ensuring that the IRP is conducted in accordance with current laws and regulations,
- Representing the Air Force at DUSD(ES) In Progress Reviews, and
- Managing Air Force IRP budgets, including:
  - ⇒ Budget guidance,
  - ⇒ Budget submittal,
  - ⇒ Budget defense,
  - ⇒ Allocation of funds to the major commands, and
  - ⇒ Reporting obligation/expense status.

HQ USAF/CEVR coordinates policy and program execution matters with the Judge Advocate and Environmental Law and Litigation Office (AFLSA/JACE) and the Surgeon General's Office of Bioenvironmental Engineering (AFMOA/SGPA). In addition, HQ USAF/CEVR coordinates policy with HQ EPA as necessary.

Communication and Coordination. HQ USAF/CEVR transmits guidance and policy to the major commands. HQ USAF/CEVR also distributes funding to the major commands. Major commands submit quarterly Commitment to Progress reports, manpower reports, and obligation and expense reports to HQ USAF/CEVR. Major commands also coordinate the Annual Report to Congress, Federal Facility Agreements (FFAs) and Interagency Agreements (IAGs) through HQ USAF/CEVR.

3.3.1 Air Force Center for Environmental Excellence (AFCEE), Regional Compliance Offices (RCOs)

Responsibilities. The three Regional Compliance Offices (RCOs) divide responsibilities along EPA regional boundaries (See Table 3.1). Each RCO is staffed with environmental and legal personnel. The RCO's major responsibility is to manage the IRP at Third Party Sites (NPL sites where the Air Force never had property interests but is alleged to have contributed to contamination). RCOs are also responsible for tracking the status of regulatory compliance issues (Notices of Violation, etc.) at installations within their region. RCO staff, as Air Force liaisons, meet regularly with representatives of state and federal regulatory agencies. RCOs are a valuable source of information on regional regulatory issues due to their contacts with regulatory agencies and Air Force installations

Communication and Coordination. RPMs must report the status of regulatory compliance issues to the major command (program manager and compliance manager) and appropriate RCO program manager. ACC program managers and RPMs communicate with RCO program managers to cross-feed information on technologies, program management and regulatory issues.

Table 3.1. Regional Compliance Offices

AFCEE/CCR-A	AFCEE/CCR-D	AFCEE/CCR-S
• Eastern Region	• Central Region	• Western Region
• Atlanta, GA	• Dallas, TX	• San Francisco, CA
• *EPA Regions I, II, III, and IV	• *EPA Regions V, VI, VII, and VIII	• *EPA Regions IX and X

* See Figure 3.2 for boundaries of EPA Regions.

3.4 ACC

3.4.1 Environmental Leadership Council (ELC) and Environmental Leadership Board (ELB)

ACC Deputy Chiefs of Staff comprise the Environmental Leadership Council (ELC), which is chaired by the ACC Vice Commander. ACC Directors comprise the ELB, which is chaired by the ACC Assistant Civil Engineer (ACE). The ELB directs cross-functional working groups for each environmental program. These working groups develop comprehensive coordinated proposals for transmitting policy and resolving problems. The ELC is briefed on overall environmental program status and Environmental Leadership Board (ELB) proposals requiring ELC decision. The ELC structure involves the senior leadership, in all functional areas of the command, in environmental status, policy, and decision-making.

3.4.2 ACC Environmental Programs Division (HQ ACC/CEV)

HQ ACC/CEV has overall responsibility for the ACC IRP. Specific duties include:

- Coordination and integration of all ACC environmental programs (compliance, cleanup and conservation).
- Validation of IRP projects between $4 million and $8 million.
- First level Air Force representative for formal dispute resolution (in accordance with Federal Facility Agreements (FFAs) and Interagency Agreements (IAGs).

3.4.3 ACC Civil Engineering Squadron, Environmental Flight (ACC CES/ESV)

HQ ACC/CEV has delegated IRP management and execution duties to ACC CES/ESV.

Organization. ACC CES/ESV is organized into three elements:

- ESVE -- Restoration Element (East) (Program Managers)
- ESVW -- Restoration Element (West) (Program Managers)
- ESVR -- Resources Element (Program Analysts)

The IRP management workload for ACC installations is equitably distributed between the East and West Restoration elements; there are no geographic boundaries for these elements.

The Restoration elements are comprised of program managers that interface directly with RPMs to assist and guide them in managing their IRP. The Resources element is comprised of program analysts who work directly with and provide support to RPMs, ACC program managers and HQ USAF/CEVR in the areas of data management, DERA funds management, cost reporting, project status tracking and program analysis.

Responsibilities. The following provides an overview of responsibilities within ACC CES/ESV.

- **Policy and guidance.** ACC CES/ESV is responsible for interpreting and transmitting HQ USAF policy, guidance, goals and metrics; and providing supplemental ACC policy, guidance, goals and metrics to the installations as required. ACC CES/ESV is also responsible for ensuring that the IRP is conducted in accordance with applicable policy, guidance, laws and regulations.

    ⇒ ESVE, ESVW and ESVR program managers and program analysts research, develop, review, coordinate and transmit:
    - Policy and guidance and

- A compilation of goals and metrics to measure progress toward cleanup.

⇒ ESVE, ESVW and ESVR program managers participate in cross-feed and transmit "lessons learned" to the installations, as required.

- **Initiatives.** ACC CES/ESV, with the assistance of program managers, program analysts and RPMs, is responsible for developing and implementing initiatives to improve and streamline the IRP cleanup process.

  ⇒ ESVE, ESVW and ESVR program managers and program analysts research, develop, review, manage, coordinate and transmit initiatives, as assigned.

- **Project Validation.** ACC CES/ESV is responsible for validating and prioritizing installation IRP projects up to $4 million.

  ⇒ ESVE, ESVW and ESVR program managers and program analysts review program documents and recommend validation.

  ⇒ ESVE, ESVW and ESVR program managers and program analysts enter and update project requirements in the Work Information Management System - Environmental Subsystem (WIMS-ES) (See Section 7.3.1 for information on WIMS-ES).

- **Program Execution.** ACC CES/ESV is responsible for managing the ACC DERA funds allocation consistent with HQ USAF policy and guidance. ACC CES/ESV must approve changes in scope and cost of IRP project requirements. ACC CES/ESV must also track and report ACC DERA funds status (obligation and expense rates of all requirements) to HQ USAF/CEVR.

  ⇒ ESVR program analysts update funding information in WIMS-ES.
  ⇒ ESVR program analysts generate funding and analysis reports (obligation and expense rates for project requirements and sites, TDY, training, manpower and computers).
  ⇒ ESVE and ESVW program managers track changes in project requirements (scope, cost and schedule).

- **Dispute resolution.** ACC CES/ESV participates in informal dispute resolution and provides consultation to HQ ACC/CEV on issues raised for formal dispute resolution.

  ⇒ ESVE and ESVW program managers may participate in informal dispute resolution.

⇒ If issues are raised for formal dispute resolution, ESVE and ESVW program managers coordinate with all functional areas affected by the dispute to develop recommendations for ACC CES/ESV to present to HQ ACC/CEV.

- **Measuring progress toward cleanup.** ACC CES/ESV is responsible for reporting ACC progress toward cleanup and ensuring that ACC meets DoD and HQ USAF cleanup goals, objectives and program metrics.

  ⇒ ESVE, ESVW and ESVR program managers and program analysts are responsible for compiling "Commitment to Progress" submissions and other performance measures (metrics) based on input from RPMs and WIMS-ES.

- **Communication and Coordination.** ACC program managers serve as the RPM's advocate. RPMs must maintain open and regular communication with assigned program managers, and address installation IRP issues to either the program manager or the Chief of the Restoration Element, if the program manager is absent. The program manager will communicate and coordinate with ACC CES/ESV, HQ ACC/CEV (and associated branches), program analysts, service centers and HQ USAF/CEVR as necessary to resolve installation IRP issues.

3.4.4 Office of the Staff Judge Advocate, Environmental Law Division (HQ ACC/JAV)

Responsibilities. HQ ACC/JAV is responsible for advising HQ ACC/CEV and ACC CES/ESV and installation JAs on IRP legal matters. The following are examples of IRP legal matters:

- FFA and IAG negotiation with regulatory agencies,
- Administrative Record and document review,
- Interpretation of environmental laws and regulations,
- Evaluation of policy and guidance,
- Assistance with obtaining off-base property access,
- Stipulated penalties, and
- Dispute resolution.

Communication and Coordination. RPMs should coordinate IRP legal issues with their ACC program managers and the installation JA. ACC program mangers and installation JAs will in turn communicate and coordinate with HQ ACC/JAV to resolve IRP legal issues.

3.4.5 Public Affairs Office (HQ ACC/PA)

Responsibilities. HQ ACC/PA is responsible for assisting ACC CES/ESV and installation PAs with IRP public affairs matters. The following are examples of IRP public affairs matters:

- Community Relations Plans (CRPs),
- Restoration Advisory Boards (RABs),
- Public notification, news letters and other community relations activities, and
- Public inquiries.

Communication and Coordination. RPMs should coordinate IRP public affairs issues with their ACC program managers and the installation PA office. ACC program managers and installation PAs will in turn coordinate with HQ ACC/PA to resolve IRP public affairs issues.

3.4.6 Bioenvironmental Engineer's Office (HQ ACC/SGPB)

Responsibilities. HQ ACC/SGPB is responsible for assisting ACC CES/ESV and installation Bioenvironmental Engineers (BEEs) with IRP technical matters related to Agency for Toxic Substances and Disease Registry (ATSDR) Health Assessments.

Communication and Coordination. RPMs should coordinate IRP ATSDR Health Assessment issues with their ACC program managers and the installation BEE. ACC program managers and installation BEEs will, in turn, coordinate with HQ ACC/SGPB to resolve IRP issues.

3.5 INSTALLATION

3.5.1 Installation Commander

The Installation Commander is responsible for the environmental compliance of the installation. The Installation Commander is a signatory on decision documents, FFAs and IAGs. The Installation Commander relies on the installation staff to execute the IRP in compliance with laws and regulations and Air Force policy and guidance.

3.5.2 Environmental Protection Committee (EPC)

EPC Membership. Senior leaders of base organizations comprise the EPC. The EPC is a forum for coordinating IRP activities and other environmental programs with overall base operation.

EPC Involvement in the IRP. The EPC is briefed regularly on the status of the installation IRP and provided with proposals on issues requiring decision or resolution. The EPC IRP working group meets as required to develop proposals and assist with IRP execution. The EPC working group may:

- Review and refine program documents and projects to maximize the installation's allocation of funds,
- Present the EPC with a RAB charter,
- Make nominations to the RAB that represent diverse community interests,
- Review and recommend documents for placement in the Administrative Record and Information Repository.

3.5.3 Base Civil Engineer (BCE) and Civil Engineering Branches

The BCE (Installation/CE) is usually a member of the EPC. The BCE is responsible for providing environmental program information to the Installation Commander. The RPM should keep the BCE up-to-date on IRP status via the Environmental Flight Chief.

The RPM should coordinate IRP matters with the appropriate branches within Civil Engineering, as follows:

- The RPM should coordinate scopes of work with the various Civil Engineering branches to ensure that the installation can support the government-provided services listed in the scopes of work.
- The RPM should coordinate field work with the appropriate Civil Engineering branches to avoid interference with underground and aboveground utilities and any ongoing or proposed construction or maintenance activities.
- The RPM should coordinate the Management Action Plan (MAP) with all Civil Engineering branches.
- The RPM should coordinate with community planners on issues related to the Base Comprehensive Plan (BCP).
- The RPM should coordinate natural and cultural resource issues with natural and cultural resource specialists.
- The RPM should coordinate NEPA issues with environmental analysis specialists.

- The RPM should coordinate environmental compliance issues with environmental compliance program personnel.
- The RPM should coordinate with Civil Engineering programmers and designers for assistance in reviewing not only IRP, but all forms of military program documents and design specifications, to prevent scope and cost problems associated with construction work on IRP sites.

3.5.4 Installation Environmental Office (CEV or EM)

Remedial Project Manager (RPM) Appointment and Charter. The installation Environmental Office is the focal point for IRP project management. Within the Environmental Office, the designated manager of the installation IRP is the Remedial Project Manager (RPM). The Environmental Flight Chief and Restoration Chief must appoint an RPM at the installation and provide written notification of the appointment to ACC CES/ESV. The RPM is responsible for the execution of the IRP at the installation, on behalf of the Installation Commander.

The RPM's charter is to manage all activities associated with the investigation and cleanup of IRP sites at the installation in accordance with Air Force policy and environmental laws and regulations. This may sound like an insurmountable task, but the RPM does not function alone. The RPM's resources include several installation organizations (Civil Engineering, ELB, EPC, JA, PA and SGPB), ACC program managers and program analysts, the service center, the RCO, the appropriate regulatory agencies and community representatives.

RPM Responsibilities. The following provides a more detailed description of the RPM's responsibilities:

- **Planning.** The RPM must plan strategies, requirements and resources necessary to achieve IRP site restoration. The following is a description of the two major planning tasks:

  ⇒ **Update Management Action Plan.** The RPM must maintain and update the base-wide Management Action Plan (MAP) as a coordinated road map to the execution of the installation IRP. First, the RPM must assemble and lead a project team consisting of representatives from the service center, A-E or construction contractor, and the regulatory agencies. Then, the project team must conduct a program review of ongoing IRP activities and compile a list of recommendations for streamlining and improving the installation IRP. Finally, the project team must update the MAP, documenting the status of the program and incorporating the list of recommendations, maps, schedules, and cost to close out each site. The MAP should be a working document, formally updated biannually (15 Apr and 15 Oct). Refer to Section 7.4.1 for additional information on the MAP.

⇒ **Develop Program.** Using the strategies and recommendations developed in the MAP, the RPM must determine fiscal year IRP project, manpower, TDY and training requirements for the base. Then the RPM must prioritize and program the requirements. Timely, accurate and comprehensive program documents that "sell" the requirements are the key to project validation. The RPM should consult with the ACC program manager, Civil Engineering programmers, the ELB and the service center (if applicable) to maximize the quality of the program documents. The RPM must also revise the program documents whenever there are significant adjustments in scope, cost and schedule (for ACC CES/ESV approval) to ensure that additional funds are available when required.

- **Execution.** The RPM must execute project requirements to achieve IRP site restoration. The following is a description of the five major execution tasks:

⇒ **Contract Management.** The RPM must conduct the following contract management tasks:

- Determine acquisition strategy in coordination with the ACC program manager and service center project manager.
- Review the scopes of work drafted in partnership with the service center to ensure consistency with the requirement and to ensure that the installation can support the government-provided materials and services listed (providing water, electricity, disposal of waste, etc.).
- Award projects to meet ACC obligation goals and direct projects to be ready to award to take advantage of fall-out funding.
- Participate in the Architect-Engineer (A-E) selection and negotiation process, if desired.
- Assist the A-E with site access and information and coordinate A-E field activities with appropriate organizations on the base (Civil Engineering, Flightline Operations, etc.).
- Review document submittals to ensure that they meet project requirements, data quality needs, and are responsive to regulatory concerns.

⇒ **Communication and Coordination.** The RPM must regularly communicate and coordinate with the IRP team to execute project requirements in a timely, cost-effective manner. RPMs must provide information to and request assistance from ACC program managers, base organizations (CE, JA, PA, BEE), the service center, the Architect-Engineer (A-E), regulatory agencies, the RAB and the community.

The following provides basic guidelines for communicating and coordinating with the IRP team members:

- Keep appropriate team members informed and up-to-date on actions, meeting and deliverable dates.
- Give appropriate team members early warning of potential problems (compliance violations, funding needs, etc.).
- Coordinate your file documents (letters, reports, etc.) with appropriate team members.

⇒ **Compliance.** The RPM must coordinate IRP activities with regulatory agencies and ensure that projects meet regulatory requirements. The RPM is responsible for meeting regulatory deadlines, and if delays occur, making timely requests for extensions.

⇒ **Documentation.** The RPM must maintain the Information Repository, the Administrative Record, and accurate project files.

⇒ **Community Involvement.** The RPM, with the assistance of PA, must arrange community involvement activities such as the RAB, newsletters and fact sheets, public notification, and public meetings.

3.5.5 Staff Judge Advocate Office (Installation/JA)

The base Staff Judge Advocate office (JA) provides the RPM with legal assistance and information on state and local environmental laws and regulations. The RPM should consult JA with any questions about regulatory compliance and the implications of regulatory correspondence. The JA office also provides legal representation in negotiations with regulatory agencies and reviews certain key documents and files (decision documents, the ARAR section of Remedial Investigation/ Feasibility Study (RI/FS) reports, and the Administrative Record).

3.5.6 Public Affairs Office (Installation/PA)

The base Public Affairs (PA) office provides support for community involvement activities. The PA office has experience with various community information forums, including public notices, public meetings, fact sheets, news letters and press conferences. RCRA, CERCLA/SARA and the NCP all emphasize public participation during the cleanup process. Therefore, RPMs must consult with PA to ensure regulatory compliance with these laws and regulations. Request the PA office take an active role in developing a CRP for the base and participating in the Restoration

Advisory Board (RAB). Additionally, designate PA as the point of contact for all public inquiries and inputs.

3.5.7 Bioenvironmental Engineer (Installation/SGB or BEE)

The base Bioenvironmental Engineer (SGB or BEE) can provide support for technical issues related to ATSDR Health Assessments and radioactive sites. BEEs have experience with sampling and analysis, human health impacts, and health and safety. Consult with the BEE to assist with coordination of any actions involving radioactive sites. The BEE is responsible for coordinating ATSDR Health Assessments.

3.6 SERVICE CENTERS

Overview. Because of the multi-disciplinary nature of the IRP investigation and cleanup process, it is often necessary to utilize established service centers' expertise in environmental engineering, geology, chemistry, industrial hygiene, as well as contract acquisition and management. There are several established service centers to choose from, each with their own specialties and management styles.

Additionally, the installation may wish to act as their own service center (through the Base Contracting office) or make arrangements with a non-traditional service center (another contractor, an academic or research institute, etc.). RPMs desiring this type of arrangement must ensure the expertise in contract and technical management (to meet the project requirements) is available at the installation or non-traditional service center. When using non-DoD service centers, the RPM must proactively comply with Economy Act provisions (Refer to Section 4.1.9) in order to prevent program delays.

Service center selection is the responsibility of the RPM and ACC program manager. When choosing a service center, consider the service center's experience and capabilities, past record, work load and manpower, locations, contracting mechanisms, management (contracting and technical) style and philosophy and supervision and administration costs. Also consider the existence of a MOU, potential for uniform execution over multiple fiscal years and continuity with current work. Once the service center is selected, it is important for RPMs to clearly communicate their expectations and requirements for executing the IRP and conduct periodic quality control checks so that the service center can effectively meet their needs.

ACC program managers and program analysts must provide the service center with program information and transfer funds for project requirements. Service centers are then responsible for the "nuts and bolts" technical project management and procurement support of the IRP. However, the Air Force is ultimately responsible for any decisions related to the execution and compliance of the IRP. Therefore, the service centers (including project managers, A-Es and construction

contractors) must not alter the prescribed project requirement nor contact the regulatory agencies without the permission and coordination of the installation RPM.

One mechanism to improve coordination and communication of the IRP team with the service center is to hold a partnering meeting. Attendees at a partnering meeting should include at a minimum: the RPM, the ACC program manager, service center personnel (project management, technical, and contract management), and the regulatory agencies. The purpose of a partnering meeting is to:

- Introduce the key players in the IRP process.
- Identify each party's role in the IRP process.
- Describe each party's method of doing business.
- Identify each party's expectations for communication and coordination.
- Identify how communication and coordination among the parties can be improved to contribute to an effective working relationship among the parties and improved efficiency in the IRP process.

Responsibilities. The following provides a description of the responsibilities of the service center.

- **Contract Acquisition and Technical Support.** One of the major responsibilities of the service center is contract acquisition. The service centers usually have a staff of contracting specialists experienced in the A-E acquisition process and construction contract procurement. They have access to several acquisition strategies and will help the RPM to determine the best strategy for the requirement in accordance with the long-term goals of the MAP. The service center develops the scope of work or bid specifications, awards the contract, monitors the contract (scope, cost and schedule), and modifies the contract as necessary with the review and approval of the RPM and the ACC program manager. The service center project manager is the Contracting Officer's technical representative. Therefore, all A-E taskings must go through the service center project manager for action by the Contracting Officer.

  Although the Air Force has the ultimate responsibility for the quality and compliance of all work conducted under the IRP, the service center is responsible for:

  ⇒ Technical review of all work conducted under the contract (ensuring Quality Assurance/Quality Control (QA/QC) of all field work, chemical analyses, and document submittals),
  ⇒ Regulatory review of all work conducted under contract (ensuring that work is conducted in accordance with applicable environmental, health and safety laws and regulations), and
  ⇒ Providing technical support to the RPM as needed, including attendance at meetings with regulatory agencies or the RAB.

- **Coordination and Communication.** The service center project manager should interface with the RPM and ACC program manager on a regular basis through the life of a project. Good communication is essential. The following are recommendations for maintaining communication:

  ⇒ A weekly phone call between the service center project manager and the RPM to review the status of projects, action items and open issues,
  ⇒ A biweekly phone call between the service center project manager, the ACC program manager and the RPM to review project scope, cost and schedule.
  ⇒ Formal written correspondence between parties.
    - Reference the Air Force project number, and
    - Provide information copies to all affected parties.

The RPM must discuss, coordinate and notify the service center project manager of any binding schedules. The service center project manager must realize the RPM's responsibility for compliance with regulations and policy and not alter scope, cost or schedule without approval from the RPM and the ACC program manager. Should there be a potential change in scope, cost or schedule, the RPM and the service center project manager must request approval from the ACC program manager prior to any alterations.

The service center should submit a monthly report to the ACC program manager and the RPM with the following information for each project:

⇒ Site number,
⇒ Percent of project complete,
⇒ Current status and actions taken,
⇒ Amount of contamination removed, if applicable, and
⇒ Future requirements.

3.7 ARCHITECT-ENGINEER (A-E) AND THE CONSTRUCTION CONTRACTOR

The A-E is responsible for conducting the investigation and design phases of the IRP and the construction contractor is responsible for conducting the cleanup actions (except for "turn-key" type projects where the design and construction is done by one firm). The A-E and the construction contractor are required to perform quality work on-time, within budget and in accordance with all applicable environmental legislation. The RPM should maintain good communication with the A-E and the construction contractor and assist them as required with gathering information and conducting field work. The RPM should utilize the expertise of the A-E at meetings with regulators and the RAB to present and interpret the investigation results. The PM

should not directly task the A-E or construction contractor to perform work, however, the RPM, in coordination with the ACC program manager, may direct the service center to task the A-E or construction contractor.

3.8 REGULATORY AGENCIES

3.8.1 State and Local Regulatory Agencies

All states have at least one regulatory agency that enforces state environmental laws and regulations. Each state or locality has its own environmental laws and regulations that cover everything from environmental resources (water, air) to hazardous waste and underground storage tanks. Most states do not have laws and regulations that parallel CERCLA/SARA and the NCP. However, state and local environmental laws and regulations may qualify as ARARs under CERCLA/SARA and serve as a source of cleanup standards and guidelines, or they may qualify as stand-alone cleanup policies, procedures and standards (i.e., hydrocarbon spills or leaks). In addition, EPA has delegated RCRA Corrective Action authority to some states. To ensure regulatory compliance, the IRP team must determine the current legal requirements as soon as possible and incorporate them into the MAP. To accomplish this, consult with JA and the state and local regulatory agencies.

The RPM should work closely with the regulatory agency or agencies toward the mutual goal of cleaning up the environment in the most efficient manner. Because of support from the Defense and State Memoranda of Agreement (DSMOA), a grant mechanism to reimburse states for their IRP oversight activities, many states have the resources to participate in the IRP process. For additional information on the DSMOA, refer to Section 4.3.2.

3.8.2 Environmental Protection Agency (EPA)

The EPA is divided into ten geographic regions, as shown in Figure 3.2. The EPA enforces CERCLA/SARA for installations on the NPL. Although EPA may not have the personnel to participate in the IRP at non-NPL installations, it is important to maintain communication with the regional EPA Federal Facility Coordinator, as follows:

- Forward copies of IRP documents (including decision documents).
- Forward copies of community involvement materials (fact sheets, newsletters, etc.).
- Extend an invitation to participate in the RAB.

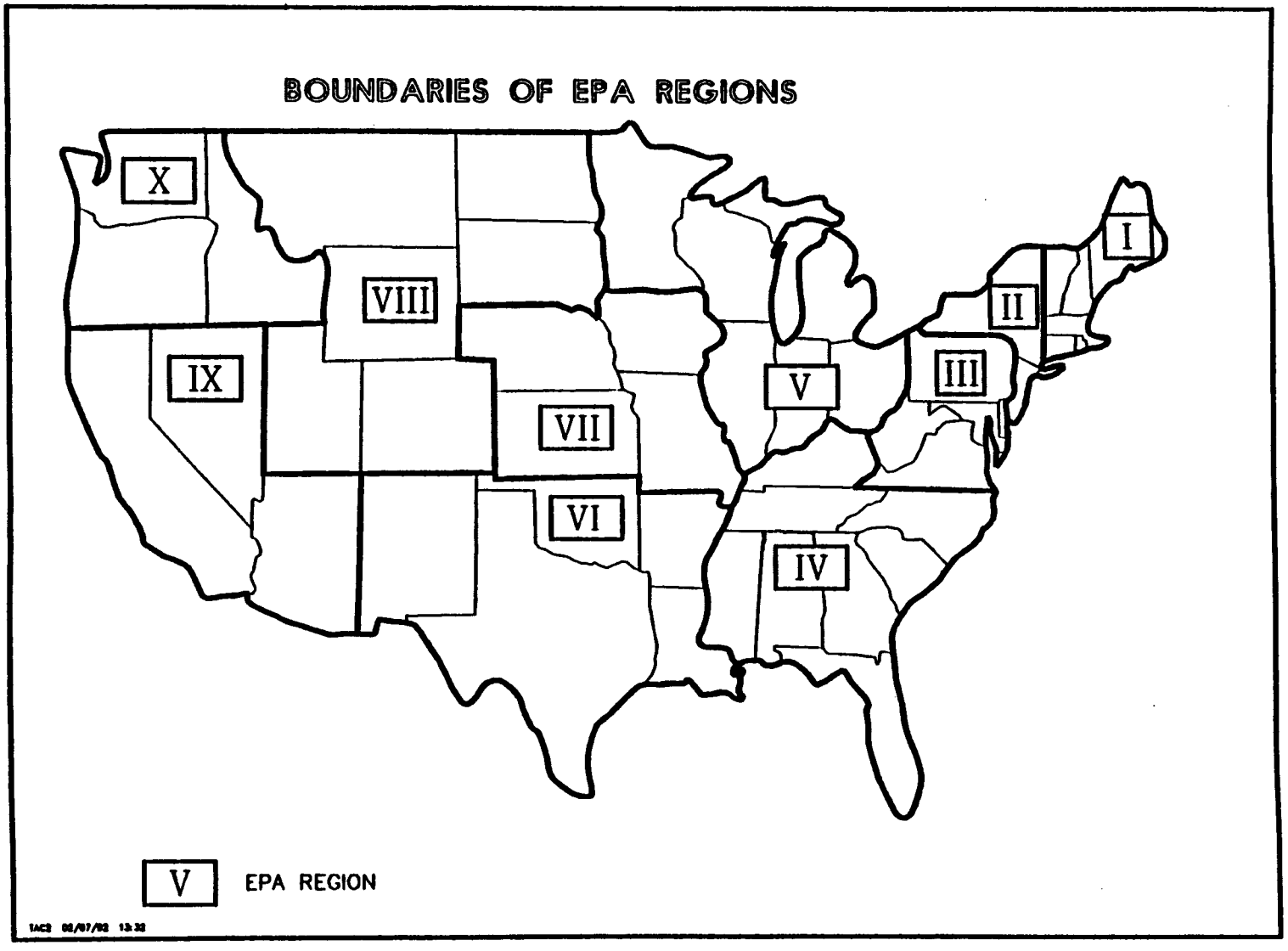


Figure 3.2 Boundaries of EPA Regions in the Continental United States

3.9 THE COMMUNITY

As stakeholders in the installation environmental cleanup effort, the community should be encouraged to participate in the IRP. The following mechanisms provide opportunities for community involvement:

- The Community Relations Plan (CRP) determines and documents the strategy for involving the community in the IRP.
- An accessible, up-to-date Information Repository and Administrative Record provide the community with the opportunity to review IRP information.
- Media advertisements provide the community with updates on IRP actions and notification of opportunities to review and comment on IRP documents and participate in public meetings.
- The Restoration Advisory Board represents the diverse interests of the community and offers the community the opportunity to provide their inputs to IRP decision-makers.

The community, as a stakeholder, is responsible for taking advantage of opportunities to review and comment on IRP documents and activities by providing timely and meaningful comments, voicing concerns, and participating in public meetings. The community members should focus comments on the environmental restoration effort and not use the IRP community involvement forum to address other unrelated issues. RAB members should represent the diverse interests of the community and partner with the Air Force and regulatory agencies to achieve cost-effective, protective environmental restoration.

4. *IRP POLICY AND INITIATIVES*

4.1 IRP POLICY

4.1.1 Community Involvement

Community involvement is an important part of the IRP process, whether CERCLA, RCRA or NEPA guidelines are followed for investigation and cleanup. Each law has minimum, specific requirements for public participation, but they all share the goal of involving the public in the cleanup decision-making process. Each installation is different -- environmental contamination problems vary from base to base as do the concerns of the on-base and surrounding community. For this reason, each installation must develop a site-specific community involvement program that addresses the legal requirements of CERCLA, RCRA, and NEPA and encourages diverse community participation in the cleanup decision-making process. The community involvement program must be a cooperative effort between the RPM and the Public Affairs Officer (PAO), clearly dividing the responsibilities between each office. Address the following issues when developing your community involvement program:

- Identify stakeholders (community members or groups potentially affected by cleanup activities).
- Open lines of communication with community representatives.
- Encourage community involvement in the cleanup process by
  - ⇒ Publicity,
  - ⇒ Making draft reports available for review, and
  - ⇒ Showing consideration for community inputs into the cleanup decision-making process.
- Develop or update a base Community Relations Plan (CRP) as a road map for community involvement activities.
- Establish Restoration Advisory Boards.

The following sections describe community involvement activities required by CERCLA. Consult HSWA and your Part B permit to determine community involvement activities required by RCRA. Incorporate the required and suggested community involvement activities into your community involvement program.

4.1.1.1 Community Involvement Activities Required by CERCLA and DUSD(ES) 14 Apr 1994 Memo Section XII

This section provides a general description of required community involvement activities. Refer to Chapter 6 for specific community involvement activities during each phase of the IRP.

Develop and Update a Community Relations Plan. The Community Relations Plan (CRP):

- Provides an analysis of community interest at the site,
- Documents the history of community involvement, and
- Develops a plan and schedule for conducting community involvement activities.

The CRP is a living document -- the RPM should update or supplement it if there are changes in IRP actions (e.g., removal actions) or changes in the needs of the community. The Public Affairs Officer must play an active role in developing the CRP, since this individual will be conducting or assisting with many of the community involvement activities. The following outlines the steps for developing and updating the CRP:

- **Conduct Community Interviews.** Interview representatives of the affected community to determine their knowledge and perceptions of IRP issues at the installation, their level and area of interest in IRP issues, and the best means for disseminating information to them and members of their group. Include representatives of minority and underrepresented groups in the interview process. If a major change has occurred at the installation (e.g., base closure, NPL nomination), it may be necessary to conduct additional interviews. Community interviews may also provide the installation with an opportunity to solicit nominees for the Restoration Advisory Board (RAB) and develop an IRP mailing list.

- **Determine Community Involvement Activities.** Use the information from community interviews to determine which community involvement activities will best meet the needs of the community for disseminating information and encouraging participation. Determine the community involvement activities required by statute (CERCLA, RCRA and NEPA).

- **Draft CRP.** Develop the CRP in full coordination with PA. Include the following in the CRP:

  - ⇒ A history of the IRP efforts at the base,
  - ⇒ Current status of IRP efforts and future IRP plans,
  - ⇒ A summary of the community interviews,
  - ⇒ Points of contact in the community and the media,
  - ⇒ A mailing list,
  - ⇒ A schedule of planned community involvement activities, and
  - ⇒ A description of the responsibilities of members of the IRP team in implementing the community involvement activities.

Designate a Point of Contact for Cleanup Information. HQ USAF guidance recommends designating the installation Public Affairs Officer as the point of contact for responding to community concerns and providing cleanup information. The RPM may be designated as a secondary point of contact. In addition, designate the ACC program manager as a point of contact for the community to notify if they have difficulty obtaining cleanup information. It is at the installation's discretion to designate a point of contact for cleanup information.

Ensure Administrative Record and Information Repository are Available for Review. In order for the community to participate in the cleanup decision-making process, up-to-date Administrative Record and Information Repository files must be available for review in a location accessible to the public. Place all draft documents related to cleanup activities in the Information Repository at the same time they are provided to the regulatory agencies. Refer to section 7.1.2 for more information on the Administrative Record and the Information Repository.

Notify Public of Availability of Documents for Review. At certain points in the IRP process, CERCLA *requires* the installation to formally notify the public of the availability of IRP documents and the Administrative Record for review and comment (after the RI/FS, after the ROD, during a non-time-critical removal action, etc.). The installation must publish a notification in local newspapers with wide circulation -- in advertising space rather than as a legal notice in the classified section. The installation should also use other methods, such as fact sheets, press releases, and newsletters, to notify the public that IRP documents are available for review. DUSD(ES) 14 Apr 1994 memorandum recommends offering the public an opportunity to review all draft documents related to cleanup activities, not just those required by CERCLA. Refer to Chapter 6 for more information on specific public notification requirements during each phase of the IRP.

Solicit and Consider Public Comments Prior to Document Finalization. Use the notification techniques listed in the paragraph above to solicit public comments. Consider public comments in the decision-making process, and provide responses to comments. These measures will assure the public that their inputs are valuable to the cleanup decision-making process.

Offer the Opportunity for a Public Meeting. When the RI/FS and Proposed Plan are released for the 30-day public comment period, the installation must offer the public an opportunity for a public meeting and record a formal transcript of this meeting.

Develop a Responsiveness Summary. A responsiveness summary summarizes comments on the RI/FS and Proposed Plan and provides responses to these comments. Include the Responsiveness Summary in the Record of Decision.

Form a Restoration Advisory Board. SARA Section 211 requires DoD facilities, where practical and possible, to form a Technical Review Committee (TRC) consisting of representatives of federal, state and local regulatory agencies, state and/or local governing authorities, and optionally, a member of the community-at-large to participate in the planning and selection of cleanup actions. The Restoration Advisory Board (RAB), a DoD initiative to encourage the involvement of stakeholders in the cleanup decision-making process, is an extension of a TRC and fulfills the requirements of a TRC. The RAB includes all the members of the TRC and actively extends membership to stakeholder representatives in the community. A community

representative co-chairs the RAB with the installation representative. RAB meetings are open to the public. Refer to Section 4.1.1.3 for additional information on the RAB.

Ensure Administrative Record Reflects Community Involvement Activities. Since the Administrative Record serves as a legal record of the cleanup decision-making process, it must document community involvement activities, especially those required by law.

4.1.1.2 Suggested Community Involvement Activities

Depending on the community's level of interest in the IRP, some of the following community involvement activities may be appropriate for the installation.

Fact sheets. Fact sheets are one-page summaries of the status of IRP activities or descriptions of pending actions, written in non-technical terms. Fact sheets may be produced at any time during the IRP process, to inform the public of IRP actions. Fact sheets may be:

- Published in newsletters,
- Distributed to the RAB,
- Included in the Information Repository,
- Distributed at public meetings,
- Used or distributed to help answer public inquiries.

Newsletters. The installation may publish a newsletter periodically (on a monthly or quarterly basis), to provide information and updates on the progress of IRP activities. The installation should distribute the newsletter to interested persons on the CRP mailing list.

Open House. The installation may hold an open house and a site visit to exhibit the installation's environmental program and IRP progress. An open house may encourage community involvement and trust.

Press Release. The installation may issue press releases as necessary to announce IRP progress, notify the public of document availability, and encourage public participation. Press releases should not, however, replace formal public notification requirements under CERCLA, as noted above.

Clipping File. The installation should keep a clipping file with all media items related to the IRP. A clipping file, however, should not replace the record of community involvement activities in the Administrative Record.

4.1.1.3 Restoration Advisory Board

Overview. The Restoration Advisory Board (RAB) is a group of representatives from the community, installation and regulatory agencies whose charter is to provide advice to environmental restoration decision-makers. The RAB fulfills the requirements of the Technical Review Committee (TRC) required under SARA 211, but encourages increased community

involvement in the IRP. DoD and EPA jointly developed detailed guidelines for setting up and running a RAB. The document, *Restoration Advisory Board Implementation Guidelines*, May 1994, Draft Version 2.4, presents these guidelines. In addition, a guidebook was provided at RAB workshops held during the summer of 1994. This joint DoD and EPA guidebook, *Restoration Advisory Board Workshop Guidebook*, contains a section (2.5) on Air Force guidance for implementing RABs. HQ ACC/CEV also released a guidance document, Reference Number 93-022, Effective Date: 5 Feb 94. The following sections provide highlights of RAB guidelines.

RAB Purpose. The RAB serves as a regular forum of communication, discussion and cross-feed for all groups involved in (installation, regulatory agencies) and impacted by (community organizations) the IRP. The RAB is not a decision-making body, nor does it replace community involvement activities required by CERCLA. Rather, it serves as an exchange of information, concerns and recommendations; complementing other community involvement activities.

RAB Basics.

- The RAB should consist of 10-20 members representing the installation, the regulatory agencies and the diverse interests of the community.
- All RAB members have equal status. The RAB is co-chaired by the installation representative and a community representative.
    - ⇒ EPC/ELC Chair or designate is RAB Co-chair.
    - ⇒ Community representatives may either appoint a permanent RAB Co-chair or rotate co-chairmanship among themselves.
- The RAB should develop and sign a charter (See Section 3.3 of USAF RAB Guidance) outlining the mission or purpose; the membership; and the structure and operating procedures of the RAB (See Appendix 1 of ACC RAB Guidance for an example charter).
- The RAB should hold meetings on a regular basis (at least quarterly) at a time and location acceptable to all members. The RAB administrator must:
    - ⇒ Publish an announcement in widely circulated newspaper, giving the time and location of the RAB meeting. Formulate and disseminate a press release about the RAB meeting.
    - ⇒ Establish agenda (See Section 4.1 of USAF RAB Guidance). Distribute to members 14 days before meeting date. Solicit agenda items from board members and general attendees.
    - ⇒ Record a transcript of the meeting; generate and distribute minutes to RAB members and persons on the community involvement mailing list within ten working days of the RAB meeting.
    - ⇒ Include meeting transcript and minutes in the Administrative Record. Include minutes in the Information Repository.

RAB Administration. The EPC Chair serves as the RAB co-chair, and will most likely appoint the RPM as RAB administrator. The RPM should request assistance from the PAO to carry out administrative responsibilities. The following is a list of RAB administrator responsibilities:

- **Solicit RAB Nominations.** Together with the PAO, lay the ground work for soliciting and receiving RAB nominations, using the following techniques:
  - ⇒ Community interviews
  - ⇒ Correspondence (local government officials, public organizations, mailing lists)
  - ⇒ Newspaper notice
  - ⇒ Press releases
- **Develop Charter.** Draft a RAB charter (outlining the RAB mission and operating procedures) for discussion, coordination and signature of RAB members. Coordinate RAB charter with JA.
- **Meeting.** Arrange the meeting location.
- Together with the PAO, advertise the time and location of the RAB meeting and announce that it is open to the public.
- Arrange administrative, technical and legal support for the RAB meeting.
  - ⇒ Set up personnel and equipment to record a transcript of the meeting
  - ⇒ Request service center personnel and A-E personnel to attend meeting to field questions and make pertinent presentations
  - ⇒ Request JA and BEE attend meeting.
- **Agenda.** Prepare and distribute a RAB meeting agenda for coordination and input among the RAB members, 14 days prior to the RAB meeting.
- **Minutes.** During the RAB meeting, list attendees' comments and recommendations and develop them into an action item list.
- Develop abridged RAB meeting minutes based on the transcript and the action item list. Include written responses to action items in the meeting minutes. Distribute the abridged minutes within ten working days of the meeting to:
  - ⇒ RAB members
  - ⇒ Mailing list
  - ⇒ Administrative Record
  - ⇒ Information Repository
- Prepare a brief to present responses to and status of action items at the next RAB meeting.

RAB Training. RAB members may require some type of IRP training or orientation in order to fully participate in the group. Orientation to the installation IRP may take the form of:

- Informal presentations;
- Fact sheets and maps;
- Site tours.

Training sessions or workshops may also be conducted by the installation, the regulatory agencies, or a RAB contractor.

RAB Issues. The following is a list of issues to present to the RAB members for discussion and advice:

- Using DUSD(ES) Relative Risk Evaluation to prioritize sites
- The status and progress of IRP projects.
- Future direction of installation IRP
- Project scopes of work.
- Impacts of the IRP on socioeconomic issues and natural and cultural resources.

For more information, consult the following references.

HQ USAF/CEV, 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

DoD and U.S. EPA, Summer 1994, *Restoration Advisory Board Workshop Guidebook, which includes* U.S. EPA and DoD, May 1994, Draft Version 2.4 of *Restoration Advisory Board Implementation Guidelines and* U.S. Air Force, March 1994 *Draft Guidance on Restoration Advisory Boards (RABs).*

DUSD(ES), 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program, Section XII.

HQ ACC/CEV 5 Feb 1994 Guidance Document, subject: ACC Guidance on Restoration Advisory Boards, Reference Number 93-022.

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Chapter 7.

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program, Management Action Plan (MAP) Guidebook*, Section 2.4.6.

U.S. EPA, January, 1992, *Community Relations in Superfund: A Handbook.*

4.1.2 RCRA/CERCLA Integration

Explanation. Section 120 of CERCLA requires federal facilities to clean up past contamination in accordance with the Superfund procedures (in the NCP), regardless of NPL status. RCRA, amended by HSWA in 1984, established a program (Corrective Action) to require RCRA-permitted or interim status treatment, storage or disposal (TSD) facilities to clean up past hazardous waste releases (Solid Waste Management Units (SWMUs)) in accordance with HSWA procedures (The Proposed Corrective Action Rule). Consequently, many IRP sites are also classified as SWMUs; so the same site may be subject to two different cleanup rules. EPA does

not enforce CERCLA/SARA actions at non-NPL installations. However, at RCRA-permitted or interim status facilities, EPA or the authorized state regulatory agency enforce cleanup requirements via a Corrective Action Order or as conditions to the Part B permit. If the conditions of the Part B permit are not met, the permit can be revoked, thus affecting base operations.

Department of Defense facilities are unique in that they conduct the IRP in accordance with CERCLA at permitted or interim status RCRA facilities that may or may not be on the NPL. Federal facilities subject to Corrective Action are not deferred from the NPL, and federal facilities that are on the NPL are not deferred from Corrective Action requirements. Therefore, federal facilities are subject to RCRA and CERCLA simultaneously at sites classified as both IRP sites and SWMUs. Table 4.1 shows a comparison of the two cleanup programs.

Table 4.1 CERCLA-RCRA Comparison

	CERCLA	RCRA
Law	CERCLA/SARA	RCRA/HSWA
Regulation and Framework	NCP	Proposed Corrective Action Rule
Contaminated Site	IRP site	SWMU
Enforcement Document	FFA	Part B Permit Conditions
Phases	PA/SI	RCRA Facility Assessment
	RI	RCRA Facility Investigation
	FS	Corrective Measures Study
	RD/RA	Corrective Measures Implementation

The proposed Corrective Action Rule under HSWA describes a remediation process similar to the NCP. The Corrective Action process includes the development of work plans, community involvement activities, exposure assessments, interim measures, and the determination of action levels, just like the NCP. However, the proposed Corrective Action Rule has not been finalized, and regulatory agencies have little experience implementing the rule.

Policy. When a RCRA-CERCLA overlap occurs, assemble the MAP project team to determine the best regulatory strategy for achieving cleanup (i.e., CERCLA or RCRA but not both). Work with the regulatory agencies to implement the strategy. In most cases, site cleanup is eligible for DERA funds under the CERCLA IRP process and the RCRA Corrective Action process. So from a funding standpoint it doesn't matter which rule is followed. Consider the following when determining the best regulatory strategy:

- Find out how other DoD installations in the state or region are handling RCRA-CERCLA integration. Other installations may have set precedents.

- The Air Force is the lead agency for CERCLA cleanups and has the authority to conduct Removal Actions.
- EPA or the EPA-authorized state regulatory body is the lead agency for RCRA Corrective Action cleanups.
- The preamble to the **EPA Proposed Corrective Action Rule for Solid Waste Management Units** published in the July 27, 1991 ***Federal Register*** recognizes DoD's IRP and recommends that investigations and cleanups under the IRP be considered toward meeting cleanup requirements under the proposed Corrective Action Rule.
- The proposed Corrective Action Rule is not yet finalized. Learn the provisions of the rule and determine how they may affect the sites on the installation.
- When negotiating conditions to the Part B permit or provisions of the Corrective Action order, analyze the impacts of the conditions or provisions on achieving efficient, cost-effective cleanups. Propose changes that are in line with Air Force site restoration and risk reduction goals.

Eligibility for Funding. HQ USAF/CEVR 16 Sep 1994 memorandum states that the investigation and cleanup of SWMUs under 3004(u), 3004(v) and 3008(h) of RCRA are eligible for DERA funds, at the discretion of the Major Command. However, they offer the following guidelines:

- RCRA Facility Assessments (RFAs) are not eligible for DERA funds.
- Closure or Corrective Action at a regulated TSD unit is DERA-eligible only if the unit was identified as a site prior to 30 Sep 1990.
- New construction or improvements required to meet RCRA operating standards at TSD units are not DERA-eligible.
- DERA funds are intended for cleanup of "past" contamination (prior to January 1984).
- Manpower to manage DERA-eligible RCRA Corrective Action projects is DERA eligible.
- Non-DERA-eligible RCRA Corrective Action projects and associated manpower must be funded by Environmental Compliance Program accounts.

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, Section 8.8.

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Section 3.3.2.

HQ USAF/CEV 1 March 1993 Letter, Subject: Defense Environmental Restoration Account (DERA) Eligibility and Programming Guidance.

HQ ACC/CEV undated Letter, Subject: Final Rule for Corrective Action Management Units (CAMU) and Temporary Units (TU).

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program, Management Action Plan (MAP) Guidebook*, Section 1.5.1.

Resource Conservation and Recovery Act of 1976 (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), Sections 3004 (u), 3005 (e) and 3008 (h).

EPA Proposed Corrective Action Rule for Solid Waste Management Units, 27 Jul 1990 Federal Register.

EPA Memorandum on Enforcement Actions at Federal Facilities Under RCRA and CERCLA, Signed 25 Jan 1988. (BNA page 41:3341)

4.1.3 NEPA Implementation

The Department of Justice (DOJ) has determined that NEPA does not apply to CERCLA actions. However, the Council on Environmental Quality (CEQ) maintains that IRP cleanups are considered federal actions and subject to the requirements of NEPA and associated regulations. The CEQ has stated that the goals and process of implementing CERCLA/SARA and NEPA are not in conflict and can be integrated to build public confidence in federal facility cleanups. Therefore, until DOJ Office of Legal Counsel settles the dispute between CEQ and DOJ on the applicability of NEPA to CERCLA, it is Air Force position that NEPA be considered in the IRP process.

To avoid duplication of effort, it is recommended that the public participation and environmental analysis requirements of NEPA and CERCLA/SARA be combined. The difference in the two laws is in their scopes and public participation requirements. CERCLA considers site-specific environmental impacts while NEPA considers the entire affected environment and the ecological, economic, cultural and health impacts. Public participation in NEPA occurs during the scoping process, allowing public comment on the range of actions, alternatives and impacts while public participation and comment in CERCLA occurs only on the preferred alternative in the proposed remedial plan.

HQ USAF/CEV DERP Management guidance recommends integrating CERCLA and NEPA documentation, using the community involvement aspects of CERCLA to incorporate NEPA requirements and working with natural resources organizations and trustees to evaluate potential impacts of remedial actions. HQ ACC/CEVA can offer assistance as required. Meeting NEPA requirements should not slow down cleanup.

NEPA integration can work with operable units. First conduct an Environmental Assessment (EA). If the EA results in a Finding of No Significant Impact, the NEPA process is over. If not, the installation must conduct a full EIS, with Notice of Intent (NOI), scoping and a Record of Decision (ROD).

A categorical exclusion (CATEX) from environmental analysis may be considered for the following activities:

- Analysis and assessment of the natural environment without altering it.
- Investigation and monitoring activities (soil sampling, monitoring wells) to support environmental restoration.
- Studies (pilot studies, treatability studies), conducted in accordance with state and/or federal interagency agreements, administrative orders, or approved work plans, that support the determination of cleanup actions.
- Emergency response actions for releases of oil or hazardous materials.

However, if the following situations either apply or are present, further environmental analysis may be necessary:

- Potential for environmental degradation from the activity.
- Use of an unproven technology.
- Presence of protected resources (threatened or endangered species, archaeological sites, historical sites).
- Potential for the activity to cause adverse impacts to areas of critical environmental concern (prime or unique agricultural lands, wetlands, coastal zones, wilderness areas, floodplains, or wild and scenic river areas).

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, Section 9.1.

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Section 3.3.2.

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program, Management Action Plan (MAP) Guidebook*, Section 1.1.

SAF/MIQ 26 Mar 1992 Memorandum, Subject: Applicability of NEPA to the IRP -- ACTION MEMORANDUM.

Air Force Instruction (AFI) 32-7061, *Environmental Impact Analysis Process.*

4.1.4 Natural Resources Trustee Coordination

Overview. When an IRP site or work at an IRP site impacts or may impact a natural resource, CERCLA Sections 104(b)(2) and 107, Executive Order 12580 and the NCP, Subpart G require notification of and coordination with natural resource trustees and restoration of impacted natural resources. Subpart G of the NCP designates natural resource trustees to act on behalf of the public to protect natural resources. Air Force Instruction (AFI) 32-7064, *Integrated Natural Resource Management* provides Air Force guidance on managing natural resources in accordance with federal, state and local standards, coordinating natural resource management with federal, state and local agency natural resource co-trustees, and integrating natural resource management with other Air Force programs.

Designated natural resource co-trustees are:

- Department of Commerce (for natural resources managed or protected by the department or those found in coastal areas),
- Department of the Interior (for natural resources managed or protected by the department),
- Department of Defense (for natural resources on, over, or under land managed by the department),
- State agency (for natural resources under state control),
- Indian tribes (for resources under tribal control) and
- Other federal agency (for resources managed or protected by that agency).

Natural resources that the IRP may impact include:

- Marine and freshwater fisheries,
- Migratory birds,
- Endangered species,
- Wildlife habitat
- Wetlands,
- Rare ecosystems (e.g., Riparian),
- Land use (grazing and cropland leases, outdoor recreation, hunting, fishing), and
- Ground or surface water.

Natural resource trustee responsibilities may overlap if other agencies also manage installation natural resources. The co-trustees are expected to coordinate and cooperate in protecting and restoring natural resources.

Responsibilities.

1. The RPM, with the assistance of installation natural resource specialists, should determine which natural resources may potentially be impacted by IRP activities and which agencies serve as co-trustees of these particular natural resources. Sources of information on natural resources include:
    - The installation Integrated Natural Resources Management Plan. This plan is a road map for natural resources management. The plan identifies, classifies and maps

installation natural resources management units. This is a living document, so RPMs must coordinate with natural resource specialists to obtain the latest information.

- The Base Comprehensive Plan.
- Ecological risk assessment documents (natural resource co-trustees should be given an opportunity to provide inputs to these documents).
- Installation NEPA documents.

2. The RPM must involve the installation natural resources manager in all decisions and activities affecting natural resources on or associated with the installation. The RPM must also involve the installation natural resources manager in any dealings with natural resource management agencies (natural resource co-trustees).

3. The RPM should work with the installation natural resources manager to notify natural resource co-trustees if a release from an IRP site or work at an IRP site impacts or is expected to impact natural resources under their jurisdiction.

4. As lead agency representative in the cleanup process, the RPM should work with the installation natural resources manager to coordinate and solicit inputs from the co-trustees when scoping and conducting assessments, investigations and cleanups. Co-trustee involvement will ensure proper assessment and restoration of natural resource damage. AFI 32-7064 attachments 3 - 5 provide wetlands, coastal and marine resources, and endangered species coordination flow charts. These flow charts are applicable to IRP projects.

5. If natural resources are impacted by an IRP site or work at an IRP site, the RPM should work with the installation natural resources manager to take steps to restore the natural resource or mitigate the impacts in coordination with all natural resource trustees.

6. If natural resources are potentially impacted by an IRP site or work at an IRP site, the RPM should work with the natural resources manager to take the necessary steps (including obtaining necessary permits, specifying construction standards, obtaining approvals) in coordination with natural resource trustees, to minimize harm to natural resources.

6. The RPM should address questions concerning manpower support and cost reimbursement for co-trustees to HQ USAF/CEVR, as there are currently no DoD MOUs.

7. The RPM must work with ACC CES/ESV, installation natural resource specialists and HQ ACC/CEVA to implement specific natural resource protection and trustee coordination requirements, to avoid costly backtracking.

For more information, consult the following references.

HQ USAF/CEV 16 September 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

AFI 32-7064, 22 July 1994, *Integrated Natural Resources Management.*

HQ USAF/CEV 1 March 1993 Letter, Subject: FY 1993-97 Defense Environmental Restoration Program Management Guidance for Non-Closure Bases.

AFCEE/ESS 24 Jan 1992 Letter, Subject: Natural Resource Co-Trustee Coordination under CERCLA.

Executive Order 12580.

CERCLA Sections 104(b)(2) and 107.

National Contingency Plan, Subpart G, 40 CFR Section 300.600.

4.1.5 Cultural Resource Consideration

Overview. When work at an IRP site may impact an eligible cultural resource (defined as property eligible for or included on the National Register of Historic Places), federal law requires the installation, as lead agency, to offer the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) the opportunity to comment on the action. If IRP actions may have an adverse impact on eligible cultural resources, the installation is required to examine alternative actions or develop a plan to minimize or mitigate the impacts. The following paragraphs provide a road map for considering cultural resources during the IRP process.

Legal Basis. Cultural resource consideration is governed by the National Historic Preservation Act (NHPA) Sections 106 and 110 and Section 2 of Executive Order 11593 "Protection and Enhancement of the Cultural Environment." The implementing regulation is 36 CFR Part 800.

National Register of Historic Places -- Criteria for Eligibility. The installation must consider the impacts of IRP actions on cultural resources eligible for listing or listed on the National Register of Historic Places ("National Register"). The NHPA implementing regulation (36 CFR section 60.4) provides criteria for evaluating whether cultural resources should be included on the National Register. At installations, the criteria applies to archeological sites, buildings, or structures (includes aircraft). To be included on the National Register, a cultural resource must:

- Be significant in American history, architecture, archeology, engineering or culture;
- Posses integrity of location, design, setting, materials, workmanship, feeling, and association; and
  - ⇒ Be associated with significant events or people in history; or
  - ⇒ Portray distinctive characteristics of a type, period or method of construction; or
  - ⇒ Represent work of high artistic value or the work of master craftsmen, or
  - ⇒ Have yielded or be likely to yield important historic or prehistoric information.

Cultural Resource Survey. To avoid delays or unexpected alterations to IRP cleanup projects, the installation must consider cultural resources early on and throughout the IRP study and remedy

selection process, in consultation with the SHPO. Similar to the IRP study process, the cultural resource survey (CRS) process is a phased approach :

- Phase I: Initial reconnaissance (literature search, limited field investigation) to identify cultural resources requiring additional evaluation,
- Phase II: Detailed evaluation of sites identified as significant in Phase I to determine:
  - ⇒ For archeological sites: site boundaries, depth, integrity, and eligibility for listing on the National Register;
  - ⇒ For buildings: features which do or do not contribute to its historic significance and eligibility for listing on the National Register.
- Phase III: Development of plan to mitigate adverse effects from IRP projects, such as:
  - ⇒ Avoidance,
  - ⇒ Data recovery (archeological sites),
  - ⇒ Site protection, or
  - ⇒ Reduction of direct impact.

Cultural Resource Consideration in the IRP Process. The following section describes how cultural resource consideration can be implemented in conjunction with the IRP cleanup process. The RPM should work closely with the cultural resource manager at the installation or major command and the SHPO to implement and coordinate the cultural resource survey. In addition, the RPM should use the Environmental Data Management and Decision Support (EDMDS) (See Section 4.2.3) approach as a tool for coordinating the results of the cultural resource survey with the area of potential effect (APE) of remediation.

- **RI/FS Scoping:** Cultural resource consideration should start as early as the planning phases of the RI/FS. The RPM should start by:

  - ⇒ Involving the cultural resource manager in the RI/FS scoping process.
  - ⇒ Reviewing the most recent base-wide cultural resource survey.
  - ⇒ Identifying preliminary APEs represented by each IRP site. The APE may change as additional data is gathered and analyzed during the RI/FS and remedy selection process.
  - ⇒ Identifying cultural resources within and adjacent to the preliminary APEs.
  - ⇒ Identifying Phase I or Phase II cultural resource survey requirements.

- **RI/FS Field Work:** During the RI/FS, the cultural resource survey and evaluation should occur on a parallel track with the RI field work and FS evaluation of remedial alternatives. The goals are as follows:

  - ⇒ To have sufficient information to determine (in coordination with the SHPO) whether or not a resource is eligible for the National Register.
  - ⇒ To have sufficient information to evaluate the effect of remedial activities on cultural resources eligible for or listed on the National Register.

- **RI/FS Report, Proposed Plan and ROD:** The RI/FS report should include:

  - ⇒ Cultural resource survey results.

⇒ Cultural resource impact evaluation and a determination of:

- No effect
- No adverse effect --
  - ⇒ The effect does not meet any of the "Criteria of Adverse Effect" or
  - ⇒ The nature of the impact is limited and appropriate data recovery actions are implemented.
- Adverse effect -- An adverse effect may be expected when the remedy meets any of the "Criteria of Adverse Effect," defined as an effect on a cultural resource eligible for or listed on the National Register which may diminish the integrity of the resource's:

  - ⇒ Location,
  - ⇒ Design,
  - ⇒ Setting,
  - ⇒ Materials,
  - ⇒ Workmanship,
  - ⇒ Feeling, or
  - ⇒ Association.

The evaluation of alternatives should consider the NHPA as an ARAR. The Proposed Plan and ROD should identify the mitigation measures, if any, required to avoid or minimize cultural resource impacts and comply with the NHPA.

- **Remedial Design:** During the Remedial Design process, if necessary (if there is an adverse effect), the RPM should ensure the development of a detailed cultural resource mitigation plan. The installation should coordinate the plan with the SHPO and the ACHP and develop a Memorandum of Agreement (MOA).

- **Remedial Action:** During the Remedial Action, the RPM should ensure the implementation of the mitigation plan prior to or simultaneous with remedial construction activities.

For more information, consult the following references.

AFI 32-7065, *Cultural Resources Management.*

Green, P., 1994, "Managing a Successful Cultural Resources Program," *Proceedings of the 1994 Air Combat Command Environmental Quality Symposium, 14-18 February 1994,* Langley AFB, VA, pp. 613-622.

Green, P., 1993, "Cultural Resources Requirements," *Proceedings of the 1993 Air Combat Command Environmental Quality Symposium, 1-5 March 1993,* Langley Air Force Base, VA, pp. 341-352.

EPA, 1989, "*CERCLA Compliance with Other Laws Manual: Part II. Clean Air Act and Other Environmental Statutes and State Requirements*, EPA/540/G-89/009, August 1989, pp. 4-2 to 4-11.

4.1.6 Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Assessments (PHAs)

Overview. CERCLA 104 requires that ATSDR Public Health Assessments (PHAs) be performed at all NPL sites. The Air Force is considering conducting PHAs at all installations in the United States. The purpose of the ATSDR PHA is four-fold:

- To determine whether a hazardous waste site has a past, present or potential future impact on public health,
- To assist the parties in determining whether immediate or short-term actions should be taken to limit human exposure to hazardous substances at the site,
- To determine whether additional human exposure and health risk information is required (toxicological profiles, epidemiological studies, disease registries, data gap identification and sampling, health surveillance) and
- To determine whether the installation requires additional health-related services (emergency response, health consultations, health education , health advisories).

The PHA evaluation is implemented by:

- Conducting a site visit,
- Reviewing IRP data to determine contaminants of concern and human exposure pathways,
- Using health outcome data to compare local public health with national public health, and
- Soliciting community health concerns to determine if a site impacts health or quality of life.

ATSDR and DoD signed a Memorandum of Understanding (MOU) on 4 Oct 1989. Pursuant to this agreement, on 6 Jul 1990, the U.S. Air Force entered into an Interagency Agreement with ATSDR to conduct PHAs and other health-related activities at all Air Force installations. On 26 May 1994, HQ ACC/SGB released ACC ATSDR Program Management and Policy Guidance. This guidance specifies the plan and organizational framework for conducting ATSDR PHAs.

To prepare for the PHA, HQ ACC has initiated Data Gap Sampling and Analysis Plan (DGSAP) contracts for NPL installations. Because the Air Force is considering conducting PHAs at all installations, HQ ACC has expanded the DGSAP to non-NPL installations. Each installation EPC must also establish an ATSDR Working Group, to be chaired by the Bioenvironmental Engineer (BEE or SGPB) and consisting of the installation Military Public Health officer (SGPM), the installation Aerospace Medicine officer (SGP), the installation JA, the installation PA, and the RPM.

PHA Team. A PHA requires the cooperation and coordination of a multi-disciplinary team. Members of the PHA team include: the ACC ELC, HQ ACC/SGB, the installation EPC or ELC, and the installation Medical Group. The following outlines the responsibilities of each of the team members within ACC, with emphasis on team members at the installation.

HQ ACC Environmental Leadership Council

- Chairman signs comments on ATSDR PHA documents.
- Establishes a Working Group (WG) consisting of representatives from Bioenvironmental Engineering, Aerospace Medicine, Military Public Health, Civil Engineering, Public Affairs and the Judge Advocate. The **ATSDR WG:**
  - ⇒ Reports on status of ATSDR activities,
  - ⇒ Reviews documents and
  - ⇒ Develops solutions to any problems.

HQ ACC/SGB (Bioenvironmental Engineering)

- OPR for ACC ATSDR Activities
- Chair of ATSDR WG

Installation Environmental Protection Committee (EPC)

- Chairman signs installation comments on ATSDR PHAs
- Establishes a WG
- Approves PHA Action Plan

Installation Medical Group

The Medical Group is responsible for coordinating ATSDR activities, through the offices of Bioenvironmental Engineering (SGPB), Military Public Health (SGPM) and Aerospace Medicine (SGP). SGPB serves as the OPR for ATSDR health assessments at the base. SGPM and SGP serve as consultants and reviewers in the areas of epidemiological and toxicological pathways, biota and exposure pathways, and health and medical effects. To support the ATSDR health assessment, SGPB consults with Armstrong Laboratory (AL/OEMH) for technical support, assists the ATSDR health assessor with data collection, staffs the review of the PHA, and prepares a PHA Action Plan to implement recommendations of the PHA. SGPB's responsibilities are outlined below.

Bioenvironmental Engineering (SGPB)

⇒ **Installation OPR for ATSDR activities**

- Chairs installation ATSDR WG
- POC for ATSDR health assessors
- Provides DERA budget and programming inputs to RPM
- Participates in public meetings
- Ensures members of ATSDR WG have received training
- Prepares PHA Action Plan

RPM

Although the RPM is not the OPR for ATSDR activities, the RPM is, nevertheless, an important member of the PHA Team for the following reasons:

- Most of the data used in developing the PHA is derived from IRP reports and analyses.
- ATSDR activities are DERA-funded.
- The results of the PHA may have impacts on IRP plans.

Therefore, the RPM must work closely with SGPB to:

- Access ATSDR health assessment training,
- Provide accurate up-to-date data and information about the IRP,
- Plan, budget and program ATSDR requirements,
- Incorporate ATSDR data requirements into new projects to improve investigative efficiency and avoid future data gaps,
- Closely review PHA documents for accuracy, noting any recommendations that impact the IRP at the installation and taking a proactive approach to planning and negotiation,
- Participate in ATSDR WG,
- Participate in public forums,
- Inform installation CE, PA and JA and ACC/ESV of any potentially contentious issues or issues that may cause adverse publicity,
- Ensure the SAP and CRP are updated to reflect ATSDR PHA requirements, and
- Update the MAP to include requirements and issues related to ATSDR health assessments.

Installation Public Affairs (PA) and Installation Judge Advocate (JA)

As members of the PHA team, the base PA and JA assist SGPB as required. Representatives from these offices should :

- Access ATSDR training,
- Review PHA documents,
- Respond to requests for information from the public (PA), and
- Participate in public meetings.

For more information, consult the following references.

HQ ACC/SGB 26 May 94 Memorandum, Subject: AF and ACC Agency for Toxic Substances and Disease Registry (ATSDR) Policy and Guidance -- ACTION MEMORANDUM, which transmits:

- **HQ USAF/CV 20 Apr 94 letter (*USAF ATSDR Activities Management Guidance*)**

- **HQ ACC/CV 9 May 94 letter *(ACC ATSDR Activities Management Guidance)***
  HQ USAF/SGP 20 Aug 90 Letter, Subject: Interagency Agreement Between the US Air Force and the Agency for Toxic Substances and Disease Registry (ATSDR).

U.S. EPA, 1987, *Guidance for Coordinating ATSDR Health Assessment Activities with the Superfund Remedial Process*, OSWER Directive 9282.4-02, 11 Mar 1987.

CERCLA Section 104.

4.1.7 Range Policy

Cleanup of active Air Force Ranges is a complex issue due to the type of waste (unexploded ordnance), the ongoing operations, and the expense. Detecting and clearing DoD-owned and abandoned ordnance and explosive wastes that present a hazard to human safety falls under the DERP program category "Ordnance and Explosive Waste" (OEW). DUSD(ES) limits funding of requirements in this category to Formerly Used Defense Sites (FUDS) unless otherwise approved. Ordnance clearing at active Air Force Ranges is not DERA-eligible. However, facility-related IRP projects on active ranges, that otherwise meet DERA-eligibility criteria, are eligible for DERA funds. Address any special issues related to range cleanups and DERA-eligibility to your ACC program manager.

For more information, consult the following references.

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program.

HQ USAF/CEVR 17 Jun 1992 Letter, Subject: Cleanup of AF Ranges.

4.1.8 No Further Response Action is Planned (NFRAP) Policy

Overview. The HQ USAF *NFRAP Guide,* Summer 1994 provides guidance and definitive criteria for making "No Further Response Action is Planned" (NFRAP) decisions at each IRP phase. The NFRAP decision should indicate that the site or AOC poses no significant risk to human health and the environment and complies with applicable laws and regulations.

The categories of and documentation for NFRAP decisions are as follows:

- **Category I**
  - ⇒ Based on results of PA or equivalent.
  - ⇒ No hazardous substances, petroleum products or their derivatives stored, released or disposed of at the site or AOC.

⇒ If, in addition, no hazardous substances, petroleum products or their derivatives migrated to the site or AOC from an adjacent location, the area can be classified as an *area of no suspected contamination* (ANSC).

⇒ Documented in a Decision Document (DD) or technical report (i.e., PA report).

- **Category II**
  - ⇒ Based on results of PA/SI or equivalent.
  - ⇒ Hazardous substances, petroleum products or their derivatives released, disposed of or migrated to the site or AOC, but concentrations are below risk screening levels (i.e., cumulative cancer risk less than 10E-6 and hazard index (HI) less than one).
  - ⇒ Classified as an *area below action levels* (ABAL).
  - ⇒ Documented in a DD, technical report (i.e., PA/SI report), or regulatory agreement (i.e., FFA, RCRA permit).

- **Category III**
  - ⇒ Based on results of RI, RI/FS or equivalent
  - ⇒ Hazardous substances, petroleum products or their derivatives released, disposed of or migrated to the site, but response action not required based on compliance with ARARs and results of the quantitative baseline risk assessment (i.e., cumulative cancer risk less than 10E-4 and hazard index (HI) less than one).
  - ⇒ FS conducted and the "No Action" alternative selected.
  - ⇒ Classified as an ABAL.
  - ⇒ Documented in a DD, ROD or regulatory agreement.

When reporting NFRAP **Category I, Category II and Category III** decisions for metrics and "Commitment to Progress" submissions, use the following classifications:

- **Response Complete** -- Air Force certification of NFRAP decision.
- **Site Closeout** -- Regulatory concurrence with NFRAP decision.

- **Category IV**
  - ⇒ After final site removal or remedial action is constructed, operational, and functional.
  - ⇒ After final site removal or remedial action is complete:
    - Remediation goals in ROD, DD or Action Memorandum have been met.
    - LTO no longer required
    - Contamination remaining on site does not pose a significant threat to human health and the environment.
  - ⇒ Documented in a DD or a Final Closeout Report.

When reporting NFRAP **Category IV** decision for metrics and "Commitment to Progress" submissions, use the following classifications:

- **Remedial Actions in Place (RAIP)**-- Construction complete; remedy operational and functional.
- **Response Complete** -- Air Force certification of NFRAP decision.
- **Site Closeout** -- Regulatory concurrence with NFRAP decision.

RPM Responsibilities. The following is a list of RPM responsibilities in making NFRAP decisions:

- Pre-NFRAP Guidance DDs

  ⇒ Review DDs prepared prior to issuance of NFRAP guidance to ensure they meet the requirements of NFRAP decisions. Refer to Section 3 of the *NFRAP Guide* for evaluation criteria and scoring guide.
  ⇒ If the DDs are not acceptable, develop and program projects to gather additional information as necessary and revise the DDs.
  ⇒ Prioritize projects to revise unacceptable DDs according to the priority setting factors (including site relative risk) outlined in Sections 4.3.1 and 5.3.
  ⇒ Even if projects to revise unacceptable DDs are low priority (2 or 3), unlikely to be eligible for funding, include them in the installation program to ensure accountability of sites and to provide an indication of funding needs for the future.

- Investigation Activities

  ⇒ Use the NFRAP decision checklists when reviewing statements of work, to ensure that they include the necessary tasks to support an NFRAP decision.
  ⇒ Monitor investigative activities to ensure the minimum level and quality of information (as outlined in the *NFRAP Guide*) is gathered, as required, to support the NFRAP decision.

- NFRAP DD Review

  ⇒ Refer to Section 3 of the *NFRAP Guide* for review criteria.
  ⇒ Disseminate the NFRAP DD to the entire IRP team for review.
  ⇒ Coordinate the NFRAP DD with the regulatory agencies for informal review and comment.
  ⇒ Release the NFRAP DD for public review and comment.

- NFRAP DD finalization and signature

  ⇒ Prepare a responsiveness summary and ensure the Administrative Record is complete.
  ⇒ Determine requirements for regulatory review, approval and signature. Depending on the type of site or AOC and the type of regulatory agreement(s) governing the site or AOC, regulatory approval and signature may not be necessary. However, RPMs

should still keep the regulatory agencies informed of NFRAP decisions and provide supporting documentation.

⇒ Staff the NFRAP DD to the Installation Commander for signature.

⇒ Implement requirements for regulatory review, approval and signature *or* send copy of signed NFRAP DD to the regulatory agencies.

⇒ Distribute the signed NFRAP DD to ACC CES/ESV, HQ USAF/CEVR, AFLSA/JACE and SAF organizations (See Section 4.1.1.3).

⇒ Update metrics and "Commitment to Progress Submissions" with new site classification.

⇒ Incorporate NFRAP DD or technical report summary into MAP NFRAP appendix.

For more information, consult the following reference.

U. S. Air Force, Summer 1994, *NFRAP Guide, A Resource for Making Documenting and Evaluation No Further Response Action Planned Decisions.*

4.1.9 Air Force Economy Act Purchases

The Economy Act permits the Air Force to order supplies and services from other non-DoD federal agencies under certain situations. ACC and ACC installations may choose to request a non-DoD servicing agency to procure or provide environmental restoration-related services under the following condition of AFFARS 5317.5 -- INTERAGENCY ACQUISITIONS UNDER THE ECONOMY ACT:

> "(2) The servicing agency is better qualified to enter into or administer the contract for such goods or services (or is producing the good or service in-house) because they possess capabilities or expertise not available within the Air Force;"

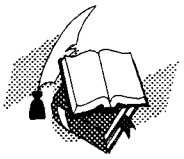
Recent changes in the Federal Acquisition Regulation (FAR) the DoD supplement (DFARS) and the Air Force supplement (AFFARS) require the requesting agency to develop and secure approval of Determination and Findings (D&F) before funds are released to the servicing agency. The D&F must be reviewed by a contracting officer and approved by an SES/General Officer or Commanding Officer at the requesting agency. Some of the important provisions of the D&F include:

- Ensuring that the administration fees of the servicing agency do not exceed the agency's actual or estimated costs (no profit for the servicing agency).
- Ensuring contract administration procedures comply with Air Force and DoD regulations and policies.
- Ensuring the services requested are within the scope of services that the servicing agency usually supplies or contracts for itself.

- The servicing agency has a unique expertise not found within DoD.

To request services from a non-DoD servicing agency, the Air Force must:

- Specify contract administration requirements and audit responsibilities.
- Provide supporting information required to prepare contract documents.
- Attach contract terms and requirements to use of Air Force funds (funds tracking and reporting).
- Enter into interagency agreements for long-term servicing relationships. Agreements should include:
  - ⇒ Management controls to review agreement periodically (at least every five years) to determine if it is still required and relevant.
  - ⇒ Scope of work which specifies required reports and deliverables.
  - ⇒ A term limit.



For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

HQ ACC/LGCP 8 Jun 1994 Memorandum, Subject: Revised Interim Air Force Policy on Economy Act Purchases.

4.1.10 Peer Reviews

Overview. Peer reviews are conducted as an independent check of costly and long-term IRP projects -- a second opinion to ensure the Air Force is conducting IRP activities in the most up-to-date, efficient and cost-effective manner. Peer reviews are required at the following phases in the IRP process:

- RI/FS with programmed cost exceeding $1 million
  - ⇒ Conduct at draft SI phase
- RD or RA
  - ⇒ Conduct at draft FS phase
- IRA or Removal Action
  - ⇒ Conduct at draft SI or EE/CA phase
- The following remedies are exempted from peer reviews:
  - ⇒ Tank removals
  - ⇒ Natural attenuation
  - ⇒ Bioventing
  - ⇒ Presumptive remedies

Peer reviews are performed by an agency or A-E with significant practical experience conducting environmental investigation and cleanup projects using conventional and innovative technologies.

Peer reviewers should review the cost-effectiveness and the technical-effectiveness of each project using IRP reports (PA/SI, RI/FS, EE/CA), program documents, MAPs, and statements of work. Pertinent review items include:

- Regulatory requirements
  - ⇒ Compliance requirements
  - ⇒ Permit or notification requirements
- Risk assessment
  - ⇒ Data correct
  - ⇒ Assumptions reasonable and conservative
- Cleanup levels
  - ⇒ Established for all affected media (soil, water, air)
  - ⇒ Meet regulatory requirements
  - ⇒ Protective of human health and the environment
  - ⇒ Technologically feasible of achieving
- Site characterization requirements
  - ⇒ Data gaps
  - ⇒ Level of effort (data quantity and quality)
  - ⇒ Methods of characterization (on-site screening vs. lab analysis; innovative techniques)
  - ⇒ Characterization to support remedy selection, including treatability testing
- Cleanup technology
  - ⇒ Thorough evaluation of alternatives, including innovative technologies or presumptive remedies
  - ⇒ Preferred remedy type, in order
    - Natural attenuation
    - In-situ
    - On-base treatment
    - Off-base treatment
    - Off-base landfill
  - ⇒ Applicability of project phasing to significantly reduce site relative risk at a minimal cost
  - ⇒ Technical implementability of proposed remedy and ability to meet cleanup levels based on past experience.
  - ⇒ Treatability testing requirements
  - ⇒ Consideration of O&M requirements
- Costs associated with investigation and cleanup tasks

Responsibilities. RPMs are responsible for notifying ACC program managers of upcoming peer review requirements and ensuring that the ACC program manager has a copy of the most up-to-date MAP. ACC program managers are responsible for activating the peer review contract and forwarding the necessary documents to the contractor. The RPM and the ACC program manager should both attend the peer review meeting. Following the meeting, the RPM and ACC program

manager should analyze the peer review summary report and work to institute the agreed-upon recommendations.

For more information, consult the following references.

Project MUHJ 947064, Statement of Work for Peer Review of IRP Projects.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, Section 8.4.

4.1.11 Radioactive Sites Policy

In accordance with guidelines established by AFI 40-201, *Managing Radioactive Materials in the USAF*, low level radioactive waste burial sites must be fenced, marked and inspected yearly by the Radiation Safety Officer (RSO). If the installation decides to investigate or exhume these sites, the RPM must take the following actions:

- Perform an exhaustive records search on past uses of radioactive materials on the installation and the use of the burial site in coordination with the RSO.
- Ensure that intrusive investigations or exhumations are performed by an agency with a Nuclear Regulatory Commission (NRC) or Agreement State radioactive materials license and site decommissioning experience.
- Coordinate the Statement of Work, site specific work plans, and safety and health plans with the RSO and appropriate ACC organizations.
- Obtain AFMOA/SGPR approval for the Statement of Work, site specific work plans, and safety and health plans.
- Ensure a commercial disposal site exists to take wastes, on schedule, from intrusive investigations or exhumations.

The following references also list policy letters relating to radioactive sites.

For more information, consult the following references.

AFI 40-201, 25 July 1994, *Managing Radioactive Materials in the USAF.*

HQ USAF/SGPR 1 Dec 1989 Letter, Subject: Management of Radioactive Waste Burial Sites Under the Installation Restoration Program.

HQ USAF/SGPR 9 Aug 1988 Letter, Subject: Maintenance Requirements for Radioactive Waste Burial Sites on Air Force Installations.

4.1.12 Access to Private Property

Occasionally, RPMs may need to obtain access to off-base property or gather information about that property in order to investigate or clean up a contaminated site. CERCLA 104(e) provides the authority to request (upon reasonable notice) information and documents that relate to hazardous substances, pollutants or contaminants at the adjacent site, specifically:

- The type, nature and quantity of materials and
- The nature and extent of any releases.

CERCLA 104(e) also provides a legal mechanism (issuance of an Administrative Order) to obtain property access for specific activities related to investigation and cleanup. However, the Administrative Order should be the last resort for obtaining property access because the order requires the concurrence of the Department of Justice (DOJ). The preferable method of obtaining property access is to request the consent of the landowner using the standard right-of-entry forms. The landowner may orally agree to allow access, but the consent should be documented in a letter. If the property will be used on a long-term basis (i.e., installing and sampling monitoring wells), then the installation may seek a real estate interest in the property (license or easement) to compensate the owner for the inconvenience. If the property is contaminated, the installation should acquire the property rights (lease, license or easement). If necessary, the installation can use a condemnation proceeding to acquire the property from an unwilling landowner The RPM must work closely with the legal and real estate offices to obtain the necessary property access Service centers may also assist with property access, upon request.

In accordance with AFI 32-7066 *Environmental Baseline Surveys in Real Estate Transactions*, an Environmental Baseline Survey (EBS) is usually required prior to property acquisition to identify any potential contamination liabilities associated with a transaction . However, the EBS requirement may be waived if certain conditions, as outlined in Section 1.5 of AFI 32-7006, are met. The waiver may be granted by the installation EPC or ELC chairperson.

Gaining property access can be a lengthy process. To avoid significant delays in obtaining construction easements, RPMs should allow a sufficient planning period (6-10 months) prior to RD/RA or RA award.

Additionally, FFAs for NPL installations should include provisions for securing EPA assistance in gaining property access or information (since EPA does not require DOJ concurrence for Administrative Orders). FFAs should also include provisions allowing schedule adjustment due to delays from property access procedures.

For more information, consult the following references.

AFI 32-7066, 25 April 1994, *Environmental Baseline Surveys in Real Estate Transactions.*

HQ USAF/JACE 17 Apr 1990 letter, subject: Access to Private Land for Installation Restoration Program (IRP) Activities.

CERCLA Section 104(e).

4.1.13 Remedial Action Permit Exemptions

CERCLA Sections 121(d) and (e) allow an exemption from obtaining permits for Remedial and Removal Actions conducted "on-site" (areas proximate to the contamination that are necessary to implement the response action). The exemption is intended to streamline the cleanup process by avoiding the iterative permit review process. However, permit conditions are considered ARARs, so the cleanup must meet the standards that would typically be imposed by the permit (i.e., air quality standards for air stripper effluent). The permit exemption does not apply to any waste removed from the site.

For more information, consult the following reference.

CERCLA Sections 121(d) and (e).

4.1.14 Military Construction (MILCON) and the IRP

Construction projects should not be sited on or near IRP sites or contaminated SWMUs. However, if the site is the only possible location for the proposed construction, the installation must request a waiver from HQ ACC/CEV prior to proceeding with the MILCON process. In order to request a waiver, the following criteria must be met:

- The construction must not impact cleanup options or schedules.
- The construction must not impact migration of contaminants from the site.
- The site must be adequately characterized (type, quantity, limits or contamination; direction and rate of contaminant plume migration) prior to determining that the proposed construction will not impact cleanup options or contaminant migration.

In addition, the following steps must be taken:

- Notify regulatory agencies of the proposed construction.
- Notify service center and construction contractor of site contamination.

Finally, the source of funding for addressing site contamination needs to be identified and programmed through the appropriate budgetary channels. DERA funds cannot be used to support MILCON projects. Therefore, remediation required due to construction activities is not eligible for DERA funds (e.g., if natural attenuation is selected as the remedial alternative for a site, DERA funds would not be eligible to pay for excavation and disposal of contaminated soil resulting from construction activities). If necessary, increase the programmed amount of funding for MILCON projects to cover costs of addressing contamination at the site.

Prior to requesting a waiver, the construction manager must be aware of the following potential pitfalls that may impact a construction project:

- **Funding and Schedules.**
  - ⇒ Changes in DoD and HQ USAF DERP policies, DERA funding priorities, level of funding available and ACC funding requirements may cause IRP cleanup project priorities and schedules to slip.
  - ⇒ Delays caused by regulatory review and input or community review and input may cause IRP cleanup project schedules to slip.
- **Project Modifications.** Modifications caused by regulatory review and input, community review and input, and development of new technologies, may cause IRP cleanup projects to be canceled or modified.
- **Unknown Subsurface Conditions.** Site characterization is an inexact science. Significant potential exists for unknown and unplanned subsurface contamination at an IRP site, even at sites fully characterized according to industry standards.

To request a waiver for construction, the installation should submit a written Request for Waiver to HQ ACC/CEV, with a copy to ACC CES/ESP. The waiver request should include the following:

- Describe the proposed construction, the IRP site and the impact of the construction on the IRP site.
- Indicate whether or not the regulatory agencies and the RAB have been notified, in writing, regarding the proposed construction.
- Provide plans for disposition of soil or ground water removed from the site.
- Describe potential conflicts between the construction activities and any ongoing or proposed IRP projects.
- Identify any alternative sites for the construction.
- Indicate plan of action if unexpected contamination is encountered during construction.
- Include schedules and points of contact for implementing NEPA environmental analysis requirements to prevent MILCON design/construction delays (the waiver request does not substitute for environmental analysis requirements under NEPA).

The waiver request is staffed and reviewed by ACC CES/ESV and either approved, returned for additional information, or disapproved (with explanation) by HQ ACC/CEV. After an approved

Waiver to Construct has been received, the installation must monitor construction activities to ensure compliance with waiver requirements.

For more information, consult the following reference.

Senn, M.R., Diamonti, D.A., Ross, M., Ross, J. and Poland, J., 1993, "Environmental Requirements and the MILCON Cycle," ***Proceedings of the 1993 Air Combat Command Environmental Quality Symposium.***

4.2 ACC INITIATIVES

4.2.1 Accelerated Cleanup Program (ACP)

The ACC Accelerated Cleanup Program (ACP), similar to EPA's Superfund Accelerated Cleanup Model (SACM), promotes the use of Removal Actions and Interim Remedial Actions (including Presumptive Remedies) to reduce site risk as quickly and efficiently as possible. Although the intent of the ACP is to reduce site risk quickly, the ACP Removal Action or IRA may, in fact, be the final action in site restoration. The ACP process allows a bias for early action and risk reduction because:

- Total site characterization is not required and
- The remedy selection process is streamlined,
- Documentation requirements are streamlined.
  - ⇒ EE/CA or draft RI/FS vs. final RI/FS
  - ⇒ Action Memorandum or IRA ROD vs. final ROD

ACC's ACP encourages the installation IRP team to:

- Make decisions, reduce review times and accelerate the follow-on project planning process,
- Establish partnering relationships with the regulatory agencies,
- Use PREECA to streamline remedy selection and document development,
- Use RNSI (risk-based, land-use-based) cleanup levels, and
- Use the Total Environmental Restoration Contract (a single contractor performs all IRP investigations and cleanups on the installation) to promote continuity of effort.

For more information, consult the following reference.

Air Combat Command, May 1995, ***Management Action Plan.***

4.2.2 Information Management Action Plan (IMAP)

Large amounts of technical data (field data, chemistry data, and spacial data) are generated while conducting environmental investigations and selecting remedies for IRP sites and AOCs. Members of the IRP team need to use the technical data in support of one or more of the following:

- Site characterization,
- Remedy evaluation and selection,
- Compliance with environmental laws and regulations,
- Presentations to the regulatory agencies and the community,
- Management Action Plan development,
- IRP project planning and budgeting,
- Cleanup status reporting, and
- Policy development to improve the effectiveness and efficiency of environmental restoration efforts.

The Installation Restoration Program Information Management System (IRPIMS) (See Section 7.3.2) is the Air Force-wide system for collecting and archiving electronic IRP (field and chemistry) data. All IRP contracts require submission of technical data in this electronic format. In order to provide the IRP team with access to IRPIMS and other IRP data, ACC tasked the U.S. Army Corps of Engineers, Omaha District (CEMRO), with developing an ACC IRPIMS Satellite Service Center/Technical Information System (ISS/TIS). The ACC ISS/TIS receives, stores and distributes:

- IRPIMS data,
- Spacial data,
- Graphical data, and
- Supplemental project management data.

The ACC ISS/TIS also includes GIS, modeling, simulation, visualization and other interpretive software to promote optimum use of the IRPIMS and IRP data. The ACC ISS/TIS allows IRP technical data to be distributed to installations in a format that can be used in conjunction with the Environmental Data Management and Decision Support (EDMDS) application for decision-making, reporting, MAP development, project planning, and presentations to the major command, regulatory agencies and the community.

To provide the IRP team (both data generators and data users) with an efficient mechanism of managing and utilizing the technical data, ACC developed an information management strategy based on electronic data and automated data analyses. The Information Management Action Plan (IMAP) outlines the information management strategy, the responsibilities of the IRP team with respect to information management, and operating policies for supporting the information management strategy. RPMs should become familiar with the IMAP to learn about and take advantage of the capabilities of electronic data transfer and analysis, to determine IRP team information management responsibilities, and to ensure IRP contractor compliance with the policies outlined in the plan.

For more information, consult the following references.

ACC CES/ESV, 28 March 1995 Memorandum, Subject: ACC Information Management Action Plan (IMAP).

Air Combat Command, March 1995, *Installation Restoration Program Information Management Action Plan and Operating Policy.*

4.2.3 Environmental Data Management and Decision Support (EDMDS)

Overview. The Environmental Data Management and Decision Support (EDMDS) application is a powerful PC-based tool that allows RPMs to collect the vast quantities of historical and current technical and spacial data into one product so the data may be used for:

- Identifying environmental conditions that may impact future property transfer or land use,
- Decision-making,
- Presenting status reports to the major command, community and regulatory agencies,
- Planning future IRP project requirements, and
- Coordinating IRP activities with other environmental programs.

Determination of Environmental Condition of Property. The EDMDS application allows RPMs to overlay various types of environmental data interactively on one map in order to easily and confidently make determinations of environmental condition of property on the installation. Category designations of environmental conditions are defined for areas where the following has occurred:

- **Category 1:** No storage, release, disposal or migration (from adjacent areas) of hazardous substances or petroleum products.
- **Category 2:** Storage of hazardous substances or petroleum products; no release, disposal or migration (from adjacent areas).
- **Category 3:** Storage and release, disposal and/or migration (from adjacent areas) of hazardous substances or petroleum products; concentrations do not require removal or remedial action.
- **Category 4:** Storage and release, disposal and/or migration (from adjacent areas) of hazardous substances or petroleum products; all remedial actions have been taken to protect human health and the environment.
- **Category 5:** Storage and release, disposal and/or migration (from adjacent areas) of hazardous substances or petroleum products; remedial or removal actions are underway but are not complete.
- **Category 6:** Storage and release, disposal and/or migration (from adjacent areas) of hazardous substances or petroleum products; remedial or removal actions not yet implemented.

- **Category 7:** No evaluation or additional evaluation required to make a determination.

To determine environmental condition of property, the EDMDS application uses the following comprehensive data sources:

- Air Photos (using the Photo Interpretation/Geographic Information System (PI/GIS) to view, store and interpret historic and current air photos from various sources).
- CAD Maps (to determine base industrial infrastructure and base map representation).
- Management Action Plan (references base industrial operations, operable units, land use plans, IRP site location, extent, and conceptual contaminant models, IRP reports containing environmental information and data).
- Off-base environmental records.
- IRPIMS chemistry and field data.

The analysis of each of these data sources is overlaid to derive a composite environmental condition of property map, with each area color-coded according to category. This composite map, using all known environmental data for the installation, provides a great deal of confidence in the designation of environmental condition of property. Environmental condition of property is important to the installation because it drives property disposition, land use planning, and the future direction and focus of IRP investigations and cleanups.

Applications to Other Environmental Requirements and Programs. The EDMDS has applications to other environmental requirements and programs within the IRP. The ability to derive a comprehensive, composite map of environmental conditions will assist RPMs in determining areas or sites:

- Eligible for NFRAP or
- Requiring additional investigation (the composite map will help target sampling activities).

The ability to overlay spacial and technical data from other environmental programs (compliance, conservation) will assist RPMs with:

- Environmental compliance,
- NEPA implementation,
- Natural resource trustee coordination, and
- Cultural resource consideration.

For more information, consult the following references.

ACC, 1995, *Environmental Data Management and Decision Support (EDMDS) Report* (installation-specific).

Haecker, M., Edwards, S., Moore, B. and Zaruba, B., 1995, "Exploiting Desk-Top GIS for Effective Environmental Information Presentation and Communication at U.S. Air Force Bases," *Proceedings, Air and Waste Management Association Annual Meeting*, San Antonio, TX.

Edwards, S., Yonkers, T., Moore, B., Briesmaster, B., Dappen, P., Haecker, M., and Cuttino, S., 11 March 1994, "Meeting the Environmental Information Management Challenge at US Air Force Bases," *Proceedings of the 20th Environmental Symposium & Exhibition: "Department of Defense Environmental Security – Strategies for the 21st Century,"* March 14-17, San Antonio, TX.

4.2.4 Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA)

Presumptive remedies are proven technologies, presumed to be most appropriate for remediating certain common types of sites. EPA developed these remedies by reviewing and comparing selection criteria and performance data for previously selected technologies. Presumptive remedies streamline the remedy selection process by focusing site characterization on data needed to support the remedy and eliminating the duplication of effort in the identification and screening of remedial alternatives.

ACC has an Air Force initiative to:

- Review cost and performance of existing/ongoing ACC Remedial Action technologies.
  - ⇒ Type of remedial action
  - ⇒ Time in operation
  - ⇒ Success in meeting remedial goals
  - ⇒ Cost
- Screen high risk sites (sites with contaminant levels significantly higher than RNSI target levels; sites classified as "high risk" under DoD's risk characterization scheme) to determine if the following non-time-critical removal action presumptive remedies are appropriate to meet risk-based or technology-based standards:
  - ⇒ In-situ bioventing,
  - ⇒ Soil vapor extraction (SVE),
  - ⇒ Ground water pump and treat for containment, or
  - ⇒ Capping.
- Develop a generic "plug-in" remedy selection justification document to streamline the remedy selection documentation process for the chosen sites.
- Provide complete instructions for implementing presumptive remedy removal actions.
- Provide technical protocols for each presumptive remedy, including:
  - ⇒ Detailed technology criteria,
  - ⇒ Conceptual design,
  - ⇒ Relative costs, and
  - ⇒ O&M requirements.
- Develop site-specific action memoranda for eligible sites.

RPM's Role. RPMs should use the PREE/CA document:

- In conjunction with the program review team to identify and program candidate sites for presumptive remedy removal actions or Interim Remedial Actions (IRAs).
- When developing EE/CAs and removal action/IRA designs.

For more information, consult the following references.

U.S. Air Force, 5 May 1995, *Air Force Presumptive Remedy Engineering Evaluation/Cost Analysis.*

ACC CES/ESV 3 May 1995 Memorandum, Subject: Presumptive Remedy Engineering Evaluation/Cost Analysis (PREECA).

Air Combat Command, May 1995, *Management Action Plan.*

ACC CES/ESV 3 Jan 1995 Memorandum, Subject: Presumptive Remedy MAJCOM EE/CA (PREE/CA) Initiative.

4.2.5 Rational National Standards Initiative

Purpose. ACC's Rational National Standards Initiative (RNSI) is intended to answer the question: How clean is clean? First, the initiative focuses on developing rational risk-based cleanup standards for sites using site-specific data -- the chemicals of concern and projected future land use as documented in the base planning document, the Base Comprehensive Plan (BCP). Next, the initiative focuses on evaluating and estimating the cost of cleanup technologies that achieve these cleanup standards. Finally, the initiative incorporates the results of the analysis in the MAP to assist with decision-making and cleanup strategies. RNSI focuses efforts toward cleanup rather than study by proposing achievable and protective cleanup standards for sites early on in the process. RPMs can use RNSI results as a risk-management and decision-making tool -- to focus investigation and evaluation efforts on achieving cleanup.

Overview. ACC initiated a RNSI prototype at Ellsworth and Shaw AFBs, then implemented RNSI at the remaining ACC bases. RNSI shows a conservation of effort by accounting for the similarities between common Air Force base sites, but RNSI also factors site-specific parameters into the calculations. RNSI does not invent any new evaluation techniques nor does it collect new data, but rather uses existing techniques and data to develop cleanup standards and strategies. RNSI uses the following tools and data sources in its evaluation:

- Base Comprehensive Plan (BCP) provides information on projected future land use scenarios (industrial, commercial, residential, open space)

- MAP, DPM scoring package and RI/FS reports provide information on conceptual site models (contaminants of concern, contaminant source, exposure pathways, human and environmental receptors)
- EPA, 1989, *Risk Assessment Guidance for Superfund Volume I, Human Health Evaluation Manual (Part B)* (RAGS) provides the guidelines for deriving risk-based cleanup standards.
- DoD and EPA, 1994, *Remediation Technologies Screening Matrix and Reference Guide* provides an evaluation of state-of -the-science remedial technologies.
- Remedial Action Cost Engineering and Requirements System (RACER) software provides cost estimates for cleanup technologies.

RNSI takes the following steps to estimate risk-based cleanup standards and cost of remediation:

- Develop a conceptual site model showing potential contaminant sources, exposure pathways and human and/or environmental receptors.
- Develop exposure factors based on current and future land and ground water use as documented in the BCP.
- Calculate screening/cleanup levels for each chemical of potential concern for each land use scenario.
- Screen and evaluate potential remedial technologies for each land use scenario based on the *Remediation Technologies Screening Matrix*.
- Calculate costs for each remedial alternative using RACER.

The RNSI analysis produces a set of site-specific, risk-based cleanup standards that are protective of human health and the environment for four different land use scenarios (industrial, commercial, residential, open space). The RNSI analysis produces a list of applicable remedial technologies and the associated cost of each technology. The following reports present the results of the RNSI analysis:

- A Pathways, Parameters and Equations (PPE) Report that includes the conceptual site models, assumptions, default values and site-specific data used in calculations, and equations and methodologies used in the risk assessment.
- An update to MAP Chapter 4 "ENVIRONMENTAL RESTORATION STRATEGY." The update includes an explanation of the RNSI analysis for risk-based cleanup.
- Updates to MAP Chapter 6 "TECHNICAL AND OTHER ISSUES TO BE RESOLVED " sections on "Risk Assessment" and "Cleanup Standards." Updates include an explanation of the assumptions used in calculations, an explanation of how the BCP is used in determining current and future land use, and the approach used to determine the cleanup standards. This chapter also includes a chart presenting the cleanup standards for each site.
- An update to MAP Appendix A. The update includes a table showing remedial alternatives and costs for each site.
- Updates to MAP Appendix F. The update includes a conceptual model and site-specific risk assumptions for each site.

RPM's Role. The RNSI analysis is expected to be a valuable cleanup decision-making tool for the RPM. The RPM must provide information and status updates on the RNSI analysis to the regulatory agencies and the RAB to ensure these entities have input into the decision-making process. RPMs should use the RNSI analysis as follows:

- Review RNSI reports to ensure that conceptual site models, data, assumptions and equations are accurate.
- Develop a clear understanding of the RNSI process -- the parameters (default and site-specific), the assumptions and the calculations -- in order to use the analysis in remedial decision-making.
- Present the RNSI concept to regulatory agencies and the RAB and provide updates as necessary.
- Use the RNSI analysis in cleanup decision-making and planning.

For more information, consult the following references.

Air Combat Command, April- May 1995, *(Installation-specific) Rational National Standards Initiative Pathways, Parameters, and Equations Report.*

Air Combat Command, May 1995, *Management Action Plan.*

Warren, T., Wang, V. and Ross, J., "Rational National Standards Initiative for the Installation Restoration Program."

4.3 DOD INITIATIVES

4.3.1 Risk Management and Relative Risk Evaluation

Overview. DUSD(ES) 14 April 1994 memorandum states that "The objective of the IR Program is to reduce in a cost effective manner, the risk to human health and the environment from contamination resulting from past DoD activities." To achieve this objective, DoD has developed a risk management framework. This framework consists of:

- A procedure to evaluate relative risk of AOCs or sites, categorizing them as "high," "medium," or "low" risk.
- A prioritization scheme based on relative site risk and regulatory enforcement to ensure that funding is directed toward sites posing the greatest risk to human health and the environment.
- Designated milestones for site cleanup based on reducing relative site risk to "low" or "no further action necessary" by a certain year, considering budgetary and program constraints.

When developing the FY96 -2000 program, RPMs must consider mechanisms to reduce site risk and prioritize requirements accordingly. The following paragraphs provide a brief description of the risk management framework.

Relative Risk Evaluation. Relative risk evaluation is a qualitative assessment of the conditions at an AOC or site to determine the relative risk (high, medium or low) of the AOC or site to human health and the environment. The evaluation uses existing data about an AOC or site (when available) to determine the relative risk. The evaluation should be conducted with inputs from the RAB and the regulatory agencies.

The evaluation is based on a matrix of three factors: contaminant hazard factor (CHF), migration pathway factor (MPF) and receptor factor (RF). The following is a brief description of these factors.

- Contaminant Hazard Factor: *comparison of contaminant concentrations at an AOC or site to:*
  - ⇒ Established risk-based standards
  - ⇒ Preliminary Remediation Goals
  - ⇒ Health/Ecological risk-based criteria
- Migration Pathway Factor: *potential for contaminants to reach a receptor by migrating through:*
  - ⇒ Ground water
  - ⇒ Surface water
  - ⇒ Air
  - ⇒ Soil
- Receptor Factor: *potential for human or ecological receptors to be present at a site currently or in the future.*

First, for each AOC or site, rate each factor (CHF, MPF and RF) for the following media: ground water, surface water/sediment, and surface soil. Next, refer to the relative risk matrices, using the factor ratings, to determine the relative risk category (high, medium or low).

Refer to DUSD (ES) 14 Apr 1994 Memorandum, Attachment 3, "Hazardous and Petroleum Waste Sites Relative Risk Evaluation" or *Risk-Based Site Evaluation Primer*, Summer, 1994 (DRAFT 2) for a complete discussion of how to evaluate the relative risk factors and use the relative risk matrix.

Table 4.2 describes each risk category (DUSD(ES), 14 Apr 1994).

Table 4.2. Description of DUSD(ES) Relative Risk Categories

High	Medium	Low
• Contamination is present. • Migration pathway completed to human, ecological or sensitive species receptors.	• Contamination is present. • Migration pathway completed to human, ecological or sensitive species receptors.	• Contamination is present. **and either** • Contaminant hazard is low **and/or** • Migration pathway to receptors not complete **and/or** • No human, ecological or sensitive species receptors present.
• Present or near future (< 5 years) health or environmental threat to receptors.	• Health or environmental threat to receptors not expected to occur for 5-10 years.	• No current or potential future health or environmental threat to receptors.

RPMs should remember the following points when evaluating relative risk:

- Be conservative in evaluating relative risk. Assume highest risk factor if data is insufficient.
- Evaluate specific media affected (ground water, surface water/sediment and surface soil) for each site. Assign site relative risk category based on the media with the highest relative risk.
- Update site relative risk as new data becomes available or cleanup actions are taken.
- Coordinate relative risk evaluation with the RAB and regulatory agencies.

Risk Management Concept for Prioritizing Requirements. Use the risk management concept to prioritize IRP projects for the FY96 -2000 DERA program. For hazardous and petroleum waste sites, the risk management concept requires the consideration of relative site risk and the existence of a regulatory agreement/order when assigning project priority codes (See Table 4.3). The highest priority is assigned to high relative risk sites with regulatory agreements/orders or sites where the contaminant migration pathway is complete.

Table 4.3. DUSD(ES) Priority Coding

PRIORITY	RELATIVE RISK	REGULATORY AGREEMENT/ORDER?
1A*	HIGH	YES
1B	HIGH	NO
2A*	MEDIUM	YES
2B	MEDIUM	NO
3A	LOW	YES
3B	LOW	NO

* Priorities 1A and 2A may also include sites without legal agreements if contaminant migration pathway is complete.

For ordnance and explosive waste (OEW) projects, the risk management concept requires consideration of human safety risks when assigning project priorities. The highest priority is assigned to sites that are imminent threats to human safety. Figure 4.1 provides a listing of factors that RPMs should consider when ranking and prioritizing requirements for the installation IRP.

Risk Reduction Milestones. The DoD IRP objective is to lower site risk or have a remedial system in place for all sites within the following time frames:

- **High Risk Sites:** The end of FY2002 for currently identified sites or within three years for newly identified sites.
- **Medium Risk Sites:** The end of FY2008.
- **Low Risk Sites:** The end of FY2015.

Program Implications. The risk management concept changes the IRP objective from site restoration to site risk reduction. The concept requires RPMs to evaluate the current program and develop requirements that support the new IRP objective. DoD developed new groupings and prioritization criteria based on the risk management concept.

The new groupings are:

- IRP Group A - Program Management and Support
- IRP Group B - Hazardous and Petroleum Waste Projects (prioritized by relative risk and existence of regulatory order/agreement)
- IRP Group C - Ordnance and Explosive Waste Projects (prioritized by threat to human safety)
- IRP Group D - Demonstration and Validation Projects (FY96 only)

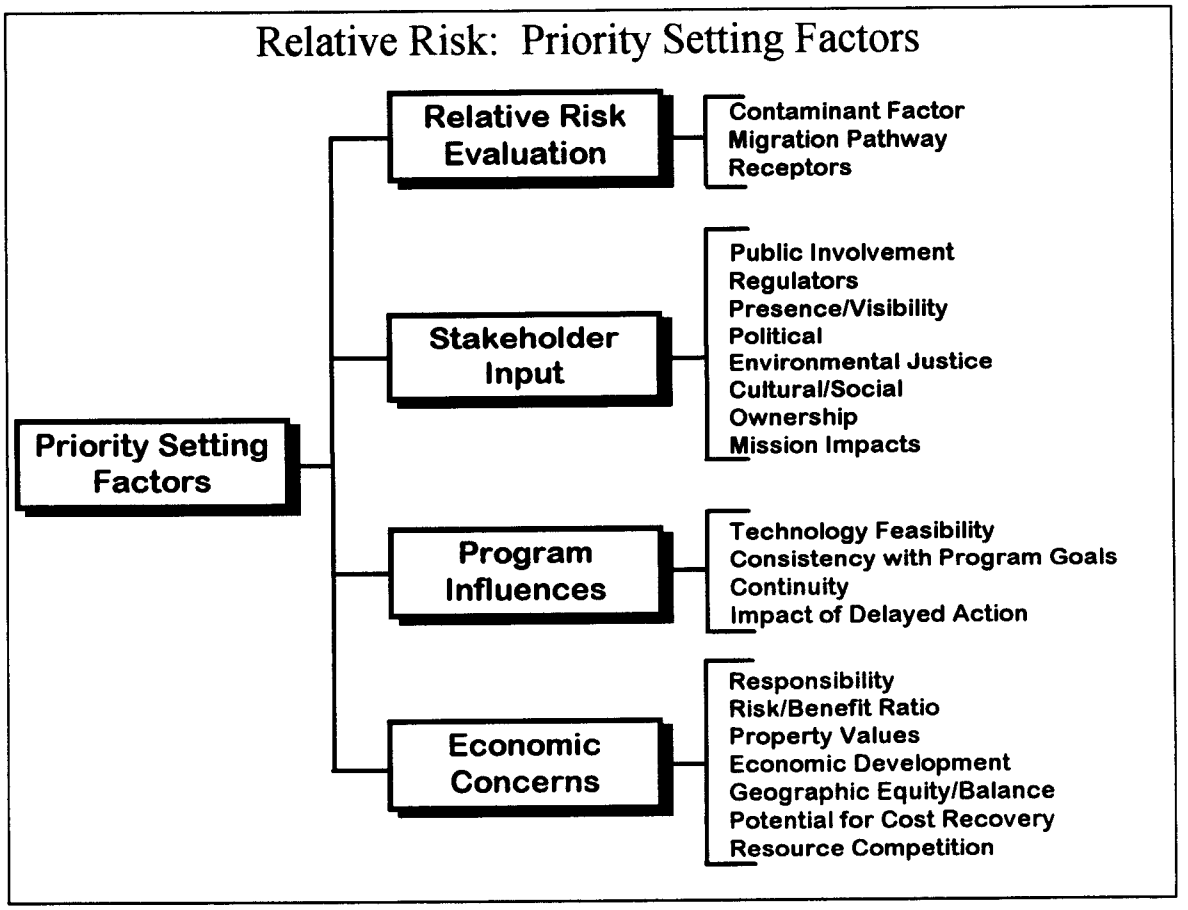


Figure 4.1 Relative Risk: Priority Setting Factors

The RPM should do the following to implement the risk management concept:

- Evaluate the relative risk of each IRP site.
- Consider the IRP objective of risk reduction when reviewing and updating the MAP.
- Develop project requirements that support risk reduction.
- Include relative risk code (high, medium or low) on program documents.
- Include IRP priority code on program documents.
- Prioritize and rank requirements according to the relative risk priority setting factors.
- Address risk management strategy in new or renegotiated regulatory agreements (IAGs) and schedules.
- Coordinate with and accept input from the RAB on relative risk evaluation and program development.

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance (Section 6.8).

DUSD(ES)/CL 13 Sep 1994 Memorandum, Subject: Relative Risk Evaluation Primer (Summer 1994 - Interim Edition).

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program (IX Priorities and Attachment 3).

4.3.2 Defense and State Memorandum of Agreement (DSMOA)

Overview. DoD initiated the Defense and State Memorandum of Agreement (DSMOA)/Cooperative Agreement (CA) program in 1989 as a mechanism to cooperatively involve states in the DERA cleanup process and reimburse them for their services. The intent of the DSMOA is to improve state regulatory agency responsiveness on IRP document submittals, support participation in other IRP activities and improve relations between DoD components and states, resulting in greater cleanup efficiency. A DSMOA covers the following issues for all DoD installations within a state:

- Establishes the terms and conditions of state reimbursement for past, present and future IRP support activities. States may receive reimbursement for costs incurred after 17 Oct 1986. Reimbursement may not exceed one percent of total DERA expenditures over the lifetime of the cleanup (1.5% of Base Realignment and Closure expenditures). This provision of the DSMOA replaces state reimbursement provisions in an IAG for an NPL installation.
- Establishes reporting requirements. States must submit a quarterly summary of IRP support activities.

- Establishes a dispute resolution process (between the installation and the state) for non-NPL installations, third party installations, and NPL installations without IAGs.

The CA serves as the vehicle for state reimbursement.

The U.S. Army Corps of Engineers (USACE), as administrator of the DSMOA/CA program:

- Negotiates and recommends approval of DSMOAs.
- Processes and approves CA applications.
- Distributes money to the states.
- Receives and distributes state-prepared quarterly reports (to the Air Force Regional Compliance Office).
- Conducts state/installation evaluations to determine if the program is meeting the objective of more efficient cleanup.

Dispute Resolution Process. One of the DSMOA provisions outlines the process of dispute resolution -- a mechanism of elevating a contentious issue to higher management levels for resolution. The purpose of dispute resolution is to avoid deadlocks in the cleanup process caused by disagreements among the parties. The RPM should first attempt to resolve disputes at the local level by involving the ACC program manager, the installation commander and the appropriate state regulatory counterpart. If the project managers cannot resolve the issue informally, they should elevate the issue to ACC CES/ESV and the appropriate state regulatory counterpart. If ACC CES/ESV and the state counterpart cannot resolve the issue within the specified time frame, they must elevate the issue to SAF/MIQ and the appropriate state regulatory counterpart.

To facilitate the dispute resolution process, when a dispute arises, the RPM should immediately prepare an information package containing the following:

- Overview of the base IRP using maps, tables, charts and brief narratives (pertinent information from the MAP),
- Concise discussion of the dispute, stating each party's position,
- Chronology of events leading to the dispute,
- Impacts of the dispute on the cleanup process,
- Technical and legal information and references supporting each party's position,
- Recommended resolution and/or compromise among parties, and
- Proposed milestones and schedules.

When preparing this information package, the RPM should keep in mind that dispute resolution representatives may not be intimately familiar with the dispute itself, and will need to come up to speed quickly. The information package should persuasively advocate the installation's position. Following dispute resolution, the RPM is responsible for writing a summary of the issues disputed and the terms of resolution.

RPM Role. In December, 1989, major commands provided DoD and the state agencies with an estimate of DERA site costs through site closeout, a narrative of planned IRP activities for the coming fiscal years and the points of contact for dispute resolution. DoD and the states used this information to negotiate the DSMOA, prepare the CA, and determine the level of effort and

funding required to support IRP activities. Many states are currently participating in the DSMOA/CA program. Refer to Appendix E of the *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook* or contact your Regional Compliance Office to determine which states are participating. To continue support for the DSMOA/CA program, the RPM must:

- Provide an annual update of total installation DERA costs through site closeout, at the beginning of the fiscal year,
- Review CA applications, state technical services work plans and state-prepared installation narratives.
- Update DSMOA points of contact list biannually (end of first and third quarters).
- Update DSMOA dispute resolution points of contact list as necessary.
- Use dispute resolution when necessary to resolve issues that are impacting cleanup.
- Maintain file copies of DSMOA and CA. (Request copies from ACC program manager)
- Request copies of state quarterly reports from the Regional Compliance Office.
- Cooperate with USACE program evaluations.

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY 94/95 and development of the FY96 Defense Environmental Restoration Program.

U. S. Air Force, December 1993, *U. S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Appendix E.

HQ USAF/LEEV 22 Nov 1989 letter, subject: DoD and State Memoranda of Agreement.

5. *PLANNING A PROGRAM*

RPMs have many tools at their disposal to assist them in determining and budgeting IRP requirements. Throughout the planning process, the RPM should keep in mind, the ultimate goal of cost-effective environmental restoration and site risk reduction. The following sections discuss the tools available to the RPM to assist with developing requirements and the process of developing requirements into justifiable budgeting documents.

5.1 RPM TOOLS

The following tools are available to RPMs to assist them in managing the installations program:

- 5.1.1 Desktop resources (a list of manuals and guidance documents containing IRP information)
- 5.1.2 Deliverable chart (a chart showing dates of report submittals, meetings, inspections, etc.)

The following tools are available to RPMs, to assist them in developing IRP requirements:

- 5.1.3 The Management Action Plan (MAP)(a long range environmental program planning and direction document),
- 5.1.4 The Base Comprehensive Plan (BCP)(a long-range installation planning document),
- 5.1.5 Remediation Technologies Screening Matrix (a matrix for screening remediation technologies based on site parameters), and
- 5.1.6 The Remedial Action Cost Engineering and Requirements System (RACER)(a PC-based IRP requirements cost estimating system).
- 5.1.7 Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA) (a method of streamlining remedy selection and implementation)
- 5.1.8 Environmental Data Management and Decision Support (EDMDS) (a PC-based environmental Geographic Information System (GIS))

The following sections provide a brief overview of each of these tools and how they are used in the planning process.

5.1.1 Desktop Resources

RPMs should have, at a minimum, the following manuals and guidance documents readily available to use as references in managing the program:

DoD References

- DUSD(ES), 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program (or most recent DERP guidance memorandum)
- DoD and U.S. EPA, Summer 1994, *Restoration Advisory Board Workshop Guidebook.*

HQ USAF References

- HQ USAF/CEV, 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance (or most recent DERP guidance).
- U.S. Air Force, Summer 1994, *NFRAP Guide, A Resource for Making, Documenting and Evaluating No Further Response Action Planned Decisions.*
- U.S. Air Force, March 1994, *Draft Guidance on Restoration Advisory Boards (RABs).*
- U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook.*
- U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program. Management Action Plan (MAP) Guidebook.*

ACC References

- HQ ACC/CEV 5 Feb 1995 Guidance Document. Subject: ACC Guidance on Restoration Advisory Boards, Reference Number 93-022.
- Air Combat Command, May 1995, *ACC IRP RPM Guide.*
- U.S. Air Force, 5 May 1995, *Presumptive Remedy Engineering Evaluation/Cost Analysis Document*
- Air Combat Command, April - May 1995, *(Installation-specific) Rational National Standards Initiatives Pathway, Parameters, and Equations Report.*
- Air Combat Command, 1995, *Environmental Data Management and Decision Support (EDMDS) Report* (installation-specific).

Appendix A provides a more comprehensive list of references by category and by subject. In addition, references are provided after each major section of this guide.

5.1.2 RPM Deliverable Chart

Table 5.1 shows due dates for typical deliverables, tasks, meetings and inspections throughout the fiscal year. RPMs should use this chart for planning purposes. For more information on a particular deliverable, task, meeting or inspection, refer to the section listed on the table.

5.1.3 Management Action Plan (MAP)

The Management Action Plan (MAP) is a long-range planning document covering all aspects of environmental restoration. Section 7.4.1 provides details on the MAP. The MAP accounts for the environmental condition of all property on the base; past, present and future status of IRP requirements; regulatory compliance; and community involvement. The MAP is a living document -- RPMs are required to formally update it at least twice per year (15 Apr and 15 Oct) to refine the program.

RPMs should use MAP update sessions as program planning sessions by developing strategies and requirements to meet program goals. An up-to-date MAP is useful during program document preparation.

In addition to the semiannual MAP update, the following MAP tables must be updated every month:

- Table 3-1, IRP Site Summary
- Table A1-1, Estimated Annual Cost Summary (By Site -- from site identification through site completion)
- Table A1-2, Estimated Annual Cost Summary (By PA/SI, RI/FS, etc.)

5.1.4 Base Comprehensive Plan (BCP)

The Base Comprehensive Plan (BCP) presents current and future land-use and facilities' development plans for the installation. The BCP accounts for all the factors considered in developing the long-range community plan: constraints of physical or environmental features, safety restrictions in airfield, range or industrial areas, and compatibility with surrounding development.

Base planners and RPMs should initiate a two-way flow of information. RPMs should include IRP site location, site status, and affected area in the BCP as a consideration for base planners. Base planners should coordinate facility development plans with the RPM at the earliest planning stages to determine whether an IRP site will affect or be affected by the proposed development. If the RPM determines that an IRP site is incompatible with future development plans, the RPM should take the following steps:

- Provide notification in writing that a potential problem exists.
- Develop a plan of action for addressing the site, if possible. Document the plan in the MAP with a proposed time line.
- Program the action. Cite specific mission impacts.

Table 5.1 RPM Deliverable Chart

Task	Section [a]	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
ACC Symposium	5.2.2.1												
Administrative Record File Update [b]	7.1.2.1												
AFIRM Conference	5.2.2.1												
Annual Report to Congress (NPL)	8.7												
Commitment to Progress	7.2.2			31			31			30			30
DSMOA POC List	4.3.2			30						30			
ECAMP Inspection, External [c]	7.4.2												
ECAMP Inspection, Internal [c]	7.4.2												
IRP FY Program, Initial Submission	5.2.1												
IRP FY Program, Final Submission	5.2.1												
Manpower Quarterly Report	5.2.2.2	10			10			10			10		
MAP Review and Update	7.4.1	15						15					
MAP Submittal to HQ USAF	7.4.1			30									
MAP Table Update	7.4.1												
NOV/OEA Status Report	3.3.1												
Peer Review [d]	6.2.2, 6.2.3, 6.2.4												
RAB meeting [e]	4.1.1.3												
TDY/Training Completion Report	5.2.2.1	10			10			10			10		
TDY/Training Request	5.2.2.1			15			15			15			15

[a] Refer to guide section listed for more information on topic.

[b] Update required quarterly. Shading only provided as reference point

[c] External and internal ECAMP inpections alternate, every other year. Shading provided only as a reference point

[d] Conduct peer reviews as required in accordance with Section 4.1.10.

[e] Hold RAB meetings on a quarterly basis, at a minimum. Shading provided only as a reference point.

Since the BCP is a long-range community plan, it provides reliable information on future installation land use. Land use exposure scenarios are paramount in establishing protective and cost-effective cleanup level goals under ACC's Rational National Standards Initiative (RNSI). Since the BCP is electronically linked with a GIS system, RPMs can display environmental condition of property data and sampling data in relation to base facilities and land use designations. This link will allow RPMs to:

- Consider the base mission and future development when determining IRP requirements.
- Consider future land use in remedial and removal action selection.

For more information, consult the following reference.

Air Combat Command, May 1995, *Management Action Plan.*

5.1.5 Remediation Technologies Screening Matrix

The Environmental Technology Transfer Committee and the Federal Remediation Technology Roundtable developed the *Remediation Technologies Screening Matrix and Reference Guide ("Matrix Guide")* to assist RPMs in selecting workable remedial actions by a streamlined and systematic method. The guide authors compiled information on the performance of innovative and commonly used technologies (i.e., presumptive remedies) and developed a matrix for screening and evaluating the applicability of certain technologies to specific sites.

RPMs can use the *Matrix Guide* as a planning tool to:

- Focus RI/FS efforts on gathering data to support remedy selection.
- Streamline the evaluation of remedial alternatives to allow faster completion of the RI/FS.
- Develop a more realistic outyear program.
- Review the RI/FS report.

Section 2 of the *Matrix Guide* provides information on five contaminant groups (volatile and semivolatile organic compounds, fuels, inorganics and explosives) -- their physical properties and their behavior in soil, water and air. This section also discusses the most common treatments and presumptive remedies for these contaminants. The RPM should consult this section when programming and scoping the RI/FS; this section describes site characterization data requirements based on past site activities and the behavior of contaminants in the physical media (soil, water, air). The RPM should also consult this section when programming follow-on actions, to develop a list of reasonable future remedial actions.

Section 3 of the *Matrix Guide* provides information on treatment process groups. This section includes a screening matrix for use as the first step in identifying potentially applicable treatment

technologies. This section also includes a text description of treatment processes, the factors that affect the success of the process group, and other considerations that may impact remedy selection (e.g., cost, residuals, cleanup time, etc.). This section also contains information and references on completed projects. The RPM should refer to this section when programming and scoping the RI/FS, to determine data requirements for site physical parameters. Some technologies are limited by site-specific parameters (e.g., soil type). Therefore, it is wise to collect site physical parameter data early in the RI/FS process to allow early screening of remedial technologies. Also consult the information in Section 3 of the *Matrix Guide* during the FS evaluation of alternatives.

Section 4 of the *Matrix Guide* provides detailed information and references on individual treatment technologies. This section provides details on the applicability, limitations, data needs, performance and cost of each technology. Again, consult this section when programming and scoping the RI/FS, conducting the FS and planning and programming follow-on activities.

The *Remediation Technology Screening Matrix and Reference Guide* is a valuable tool for the RPM. Not only does the guide assist RPMs in developing realistic program requirements, but the guide also assists RPMs in evaluating statements of work, reports and designs. Because new technologies are being developed and tested, the RPM should look for updates of this guide and consult the other listed remedial technology information sources.

For more information, consult the following reference.

DoD Environmental Technology Transfer Committee, October 1994, *Remediation Technologies Screening Matrix and Reference Guide*, Second Edition.

5.1.6 Remedial Action Cost Engineering and Requirements (RACER) System

The Remedial Action Cost Engineering and Requirements system (RACER) is a PC-based environmental cost-estimating tool. RACER estimates costs for the RI/FS (or RFI/CMS), RD, and RA (including LTO, site work and utilities) based on generic engineering solutions and site-specific project data. RPMs should use RACER to:

- Develop and evaluate scopes of work for RI/FS and RFI/CMS,
- Develop project budgets for programming purposes,
- Develop and evaluate project proposals and bid documents, and
- Develop and evaluate modifications or change orders.

RPMs should remember that RACER is a cost-estimating tool -- the quality and quantity of data has a direct impact on the confidence-level of the cost estimate. To obtain the best possible cost estimate, the RPM should use the best available data and override default parameters with site-specific information.

For more information, consult the following reference.

Remedial Action Cost Engineering and Requirements System (RACER) User Manual.

5.1.7 Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA)

Presumptive remedies are proven technologies, presumed to be most appropriate for remediating certain common types of sites. EPA developed these remedies by reviewing and comparing selection criteria and performance data for previously selected technologies. Presumptive remedies streamline the remedy selection process by focusing site characterization on data needed to support the remedy and eliminating the duplication of effort in the identification and screening of remedial alternatives.

ACC's Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA) initiative (See Section 4.2.4) provides the following tools for selecting and implementing non-time-critical removal actions:

- Criteria for screening the contamination profile at high risk sites (sites with contaminant levels significantly higher than RNSI target levels; sites classified as "high risk" under DoD's risk characterization scheme) to determine if the following non-time-critical removal action presumptive remedies are appropriate to meet risk-based or technology-based standards:
  - ⇒ In-situ bioventing,
  - ⇒ Soil vapor extraction (SVE),
  - ⇒ Ground water pump and treat for containment, or
  - ⇒ Capping.
- A generic "plug-in" remedy selection justification document to streamline the remedy selection documentation process for the chosen sites.
- Complete instructions for implementing presumptive remedy removal actions.
- Technical protocols for each presumptive remedy, including:
  - ⇒ Detailed technology criteria,
  - ⇒ Conceptual design,
  - ⇒ Relative costs, and
  - ⇒ O&M requirements.

RPMs should use the information contained in the ACC PREE/CA documents to:

- Screen sites to determine potential presumptive remedy candidates,
- Focus sampling and analysis efforts, and
- Develop project requirements in conjunction with the program review team.

For more information, consult the following references.

U.S. Air Force, 5 May 1995, *Air Force Presumptive Remedy Engineering Evaluation/Cost Analysis.*

ACC CES/ESV 3 May 1995 Memorandum, Subject: Presumptive Remedy Engineering Evaluation/Cost Analysis (PREECA).

Air Combat Command, May 1995, *Management Action Plan.*

ACC CES/ESV 3 Jan 1995 Memorandum, Subject: Presumptive Remedy MAJCOM EE/CA (PREE/CA) Initiative.

5.1.8 Environmental Data Management and Decision Support (EDMDS)

The Environmental Data Management and Decision Support (EDMDS) application is a powerful PC-based tool that allows RPMs to collect the vast quantities of historical and current technical and spacial data into one product so the data may be used for:

- Identifying environmental conditions that may impact future property transfer or land use,
- Decision-making,
- Presenting status reports to the major command, community and regulatory agencies,
- Planning future IRP project requirements, and
- Coordinating IRP activities with other environmental programs.

The EDMDS application uses the following comprehensive data sources:

- Air Photos (using the Photo Interpretation/Geographic Information System (PI/GIS) to view, store and interpret historic and current air photos from various sources).
- CAD Maps (to determine base industrial infrastructure and base map representation).
- Base Comprehensive Plan (to determine land use planning issues).
- Management Action Plan (references base industrial operations, operable units, land use plans, IRP site location, extent, and conceptual contaminant models, IRP reports containing environmental information and data).
- Off-base environmental records.
- IRPIMS chemistry and field data.
- Information from other environmental programs (analysis, compliance, conservation).

The RPM can overlay information from any of these data sources to derive a composite map showing information necessary for decision-making, planning or presentation. The ability to derive a comprehensive, composite map of environmental conditions will assist RPMs in determining:

- Areas or sites eligible for NFRAP,
- Areas or sites requiring additional investigation (the composite map will help target sampling activities),
- Environmental condition of property for real estate disposition or land use planning,
- Environmental compliance requirements,
- NEPA implementation requirements,
- Natural resource trustee coordination requirements, and
- Cultural resource consideration requirements.

For additional information, refer to section 4.2.3.

For more information, consult the following references.

Air Combat Command, 1995, *Environmental Data Management and Decision Support (EDMDS) Report* (installation-specific).

Haecker, M., Edwards, S., Moore, B. and Zaruba, B., 1995, "Exploiting Desk-Top GIS for Effective Environmental Information Presentation and Communication at U.S. Air Force Bases," *Proceedings, Air and Waste Management Association Annual Meeting,* San Antonio, TX.

Edwards, S., Yonkers, T., Moore, B., Briesmaster, B., Dappen, P., Haecker, M., and Cuttino, S., 11 March 1994, "Meeting the Environmental Information Management Challenge at US Air Force Bases," *Proceedings of the 20th Environmental Symposium & Exhibition: "Department of Defense Environmental Security -- Strategies for the 21st Century,"* March 14-17, San Antonio, TX.

5.2 DETERMINE REQUIREMENTS AND DEVELOP PROGRAM DOCUMENTS

One of the most important RPM duties is programming IRP requirements. The RPM must determine and budget the requirements and resources necessary to execute the program. These requirements and resources include not only the studies and cleanups, but manpower, TDY, training and computer needs.

The IRP is a large program, with many projects competing for funding. RPMs must develop detailed and well-justified program documents to support funding of their requirements, because

these documents are the only means of presenting projects to ACC CES/ESV for validation. Program documents must "tell the story" of the project and "sell" the requirement as a cost-effective means of achieving cleanup and reducing site risk.

The following sections provide guidelines for developing the different types of program documents, and examples of each. After completing the program documents, use the checklist in Appendix C to ensure each document meets the validation criteria.

5.2.1 Investigation, Design and Construction Projects

5.2.1.1 Overview

RPMs should use the MAP review and update sessions to plan IRP investigation, design and construction projects for the next and future fiscal years. After generating the line-item project requirement lists, the RPM should develop program documents for next-fiscal-year projects. Use the tools and information provided by the MAP, WIMS-ES, RACER, Remediation Technologies Screening Matrix, and corresponding IRP reports to develop program documents.

Two formats are used for program documents, depending on the type of requirement. The following lists the two types of formats and the corresponding requirements:

Narrative

- PA/SI
- RI/FS
- EE/CA
- RD
- LTM and LTO
- Manpower
- TDY/Training/Administration

DD Form 1391

- RD/RA
- RA
- IRA
- Removal Action

The following attachments should accompany each program document:

- Base map showing site location (8 1/2" x 11")
- Site map showing
  - ⇒ Contaminant outline or profile
  - ⇒ Pertinent existing and proposed monitoring wells, soil borings, etc.
- Gantt chart
- RACER cost estimate (entire data package) or comparable cost estimate (FS report, service center government estimate, etc.) that breaks out specific costs of work elements (do not use "lump sum").

Use the following site identifier codes to designate site types:

Site Identifier	Site Type
ST	Underground Tanks, Tanks, POL Lines
SS	Spills, Storage Areas
LF	Landfills
DP	Disposal Pits
WP	Waste Pits, Sumps, Lagoons, Waste Treatment, Evaporation Pits
RW	Radioactive Waste Sites
FT	Fire Training Areas
SD	Surface Runoffs, Wash Racks, Ditches, Oil/Water Separators

The following section provides general guidance on developing investigation, design and construction program documents for each format (Narrative and DD Form 1391).

5.2.1.2 General Guidance for Narrative Program Documents

The following section shows the narrative program document format and explains the information required for each part. Refer to Figure 5.1 for an example of the narrative format.

{ A } Heading	**Line 1** Specify the fiscal year for which the requirement is programmed. **Line 2** Specify the installation-assigned project number (Four-digit installation code, fiscal year and four-digit number in the 7000 series (MFP07) [*ABCD97003*]). The goal in assigning project numbers, is to be able to track a project through the phases of investigation and cleanup. To do this, RPMs should assign project numbers as follows: Project ABCD967003, rolled over to next fiscal year, • with no funds obligated: ABCD*96*7003 • with partial funds obligated (due to lack of funding): ABCD967003-*1* RI/FS project ABCD967004 requiring RD in FY97, ABCD*97*7004 and requiring RA in FY98, ABCD*98*7004 **Line 3** Specify a concise project title: the type of requirement followed by the site code-site number or site name.
	Line 1 Specify completion date of the document. **Line 2** Specify date and number of revision.
1. INSTALLATION	Installation name (spell out official installation name), state (two-letter abbreviation) and Major Command (ACC).

2. TYPE OF STUDY	• Preliminary Assessment/Site Inspection (PA/SI), • Remedial Investigation/Feasibility Study (RI/FS), • Engineering Evaluation/Cost Analysis (EE/CA), • Remedial Design (RD), • Long Term Operation (LTO) or • Long Term Monitoring (LTM). Note: IRP narratives must use CERCLA names for "TYPE OF STUDY."
Purpose	• Provide site-specific statement of purpose for the requirement. • Give details of proposed activities.
Items	Mark the applicable IRP activities.
3. BACKGROUND	Detailed background of the requirement: • What led to the decision to program the requirement? • How and when was the site identified? • Why is the requirement considered DERA-eligible? • Conceptual site model: ⇒ Source, nature and extent of contamination. ⇒ Potential pathways and receptors. • Detailed results of previous studies and/or cleanup actions (include references and dates). • Cleanup level goals. • Current site status, including: ⇒ **Relative risk.** • High, • Medium, or • Low ⇒ **Legal driver.** Choose applicable code from the following: • <u>A</u> FFA at proposed and final NPL installations • <u>B</u> IAG (2 & 3 party) at non-NPL installations • <u>C</u> RCRA permit with Corrective Action requirements • <u>D</u> RCRA Corrective Action Order (EPA or state) • <u>E</u> Consent Order under state law • <u>F</u> Memorandum of Understanding commitment • <u>G</u> Memorandum of Agreement commitment (e.g., DSMOA) • <u>H</u> Notice of Violation requirement • <u>I</u> ATSDR requirement (e.g., response to health advisory) • <u>J</u> Natural Resource Trustee related requirements claim (e.g., damage claims) • <u>K</u> Court-ordered requirement (in cases of litigation) • <u>L</u> Imminent threats • <u>M</u> Consent Decrees (e.g., third-party sites) • <u>N</u> Unilateral Orders (e.g., third-party sites) • <u>O</u> Preliminary Assessments for installations listed on the docket

3. BACKGROUND *(continued)*	⇒ **Legal Driver** ***(continued)*** • P LTM/LTO for in-place systems for installations without agreements • Q State laws and regulations requiring a response within a specific period • Z No agreement ⇒ **Milestone.** What specific document or action milestone is the requirement expected to reach? Choose applicable code from the following: • 1 Statement of Work • 2 RI/FS Work Plan/Sampling and Analysis • 3 Community Relations Plan • 4 Engineering Evaluation/Cost Analysis • 5 Action Memorandum for a Removal Action • 6 RI or RFI Report • 7 FS or CMS Report • 8 Proposed Plan • 9 Record of Decision/Corrective Action Decision Document • 10 60% Remedial Design • 11 Final Remedial Design • 12 Remedial Action Plan (including O&M Plans and Remedial Action Schedules)(also includes LTM and LTO) • 13 Treatability Studies • 14 PA/SI ⇒ **Milestone date** (YYYYMM) When is the above milestone required or expected to be complete? Note: milestone date is not the same as estimated award date. • *For proposed or final NPL sites. list:* ⇒ HR Score ⇒ FFA status, related deliverable schedule ⇒ ATSDR hazard ranking classification
EXAMPLES OF HAZARDOUS MATERIALS AT THESE SITES	List materials that have been detected or are suspected to exist at the sites included in the narrative.
Regulatory Basis	• State and federal laws and regulations that apply to the project. • Enforcement basis, if applicable (i.e., FFA, Corrective Action Order, etc.)
Description of Current Status	• Status of current IRP work at the site and expected completion dates. • Status of the situation at the site (threat to human health and the environment, control measures, contaminant migration potential, etc.)

Cleanup Action Levels, If Known	List site contaminants and proposed cleanup levels (with source, i.e., ARARs, PRGs, RNSI, etc.)
Impacts if Not Approved	Check the appropriate box (Enforcement, Mission, Health Risk or Other) and provide details of the impact(s). • Primary (actual work planned) • Secondary (deliverables) • Tertiary (schedule delays)
Relative Risk, Legal Driver, Milestone Code, and Milestone Date	List the codes, as described in **3. BACKGROUND**
DPM Score	List, if available.
Decision Document Signed	DD or ROD signature date (actual or anticipated)
Estimated Award Date or Ready to Award Date	Anticipated contract award date by DD MMM YY for priority 1A projects. Ready to award date by DD MMM YY for all other projects.
4. SITE INFORMATION	
Site ID	Site code(s)-Site number(s)
Site Description	Site name as listed in WIMS-ES
Site Priority	Site priority as defined in current *HQ USAF DERA Eligibility and Programming or Management Guidance*
Site Cost	Requirement costs attributed to each site
5. ESTIMATED COST	Total cost of the requirement (Sum of SITE COSTS should equal Current Working Estimate). Include a break out of costs associated with each work element. Add 12% for Supervision and Review (S&R).
6. MULTI YEAR FUNDING PROFILE	For past, present and future project requirements, related to all project sites, list: **Fiscal Year** **Project Title** **Project Number** **Project Cost**
7. WORK SCHEDULE	For the project, list: **Milestones** and **Dates** Contract Award Deliverables Project Finish For Priority 1A projects, list actual dates. For all other projects, list time periods to reach milestones.
8. CONTRACTING AGENT	Mark the anticipated contracting agent for the requirement.
9. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. Include this statement for ACC CES/ESV signature.	

Figure 5.1 Narrative Program Document Format

FYXX IRP NARRATIVE
Project Number: _____
Project Title: _____

Date: _____ ORIGINAL
_____ REVISION ( )

1. INSTALLATION: _____AFB, __ (ACC)

2. TYPE OF STUDY: ____ PA ____ PA/SI ____ SI ____ RI/FS ____ FS ____ EE/CA
____ RD ____ RA ____ LTM ____ LTO ____ MPR ____ MGT ____ TD

PURPOSE: _____

ITEMS:

___ Literature Search	___ Work Plan Development	___ Report Development
___ Soil Sampling	___ Ground Water Sampling	___ Surface Water Sampling
___ Soil Gas Survey	___ Geophysical Survey	___ Aquifer Testing
___ Treatability/Pilot Study	___ Risk Assessment	___ Evaluation of Remedial Alternatives
___ Engineering Design	___ Bid Specifications	___ Community Relations Support
___ Administrative Record Support	___ Periodic Ground Water Monitoring	___ Operations and Maintenance
___ Supervision & Administration	___ Manpower	___ Management
___ Technology Development	___ Other_____	

3. BACKGROUND: _____

Site _____: Relative Risk_____, Legal Driver_____, Milestone_____, Milestone Date_____

EXAMPLES OF HAZARDOUS MATERIALS AT THIS SITE
(List Hazardous Materials Relative to this Narrative)

Acetic Acid	Cyanide	Methyl Ethyl Ketone (MEK)
Stripper/Residue	DDT	Diesel Fuel
Mineral Oils	Sulfuric Acid	Algae/Slime
Dimethyl foramide	Monomethyl hydrazine	Synthetic Turbine Oil
Aliphatic naphtha	Dry cleaning solvent	Motor Oil
Tank Cleaning Sludge	Anoline	Engine Oil
Naphthalene	Toluene	AVGAS
Ethylene glycol	Paint Thinner	Transformer Oil
Battery acid	Gasoline	Parts Cleaner
Transmission fluid	Bearings grease	Heating oil
PD-680	Trichloroethane (TCA)	Bluing Salts
Hydraulic oil	Perchloroethylene	Trichloroethylene (TCE)
Boiler feedwater	Hydrochloric acid	Pesticides/Containers
Turbine oil treatment	Incinerator ash	Photographic chemicals
Used batteries	Brake fluid	Hydroxide
Varsol	Cadmium solution	Kerosene
PS-661 solvent	Waste paint/containers	JP-4 jet fuel
Carbon cleaner	Lacquer	Refrigeration oil
Xylene	Casing and propellant	Lubrication oil
Rifle bore cleaning solvent	Zyglo Emulsion	Chromic acid solution
Mercury	Sodium hydroxide	7808 oil
Cleaning solutions	Methanol	Spray booth wastewater
Cooling water/tower treatment	Methyl isobutyl ketone	Stack scrubbing waste

Figure 5.1 (cont.) Narrative Program Document Format

FYXX IRP NARRATIVE *(cont.)*
Project Number: _____
Project Title: _____

Regulatory Basis: State Law/Regulation:_____
Federal Law/Regulation: _____
Enforcement Basis: ____ FFA ____ Other: _____

Description of Current Status: _____

Cleanup Action Levels, if Known: _____
Impacts if Not Approved: ____ Enforcement ____ Mission ____ Health Risk
____ Other _____

Relative Risk:_____ Legal Driver: _____
Milestone: _____ Milestone Date:_____
DPM Score:_____
Decision Document Signed: _____
Estimated Award Date: _____

4. SITE INFORMATION

Site ID	Site Description	Site Priority	Site Cost
(Breakout of Work Planned)			(Cost)

5. Current Working Estimate (CWE):
Supervision and Review (S&R)(12%):
Programmed Amount:

6. MULTI YEAR FUNDING PROFILE

7. WORK SCHEDULE:

8. CONTRACTING AGENT: __ COE, __ AFCEE, __ HAZWRAP, __ USGS, __ NAVY, __BASE

9. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. _____

5.2.1.3 General Guidance for DD Form 1391 and 1391c Program Documents

The following section shows the DD Form 1391 program document format and explains the information required for each part. Refer to Figure 5.2 for an example of the DD Form 1391 format.

FY 19__ MILITARY CONSTRUCTION PROJECT DATA *(Fill in program fiscal year)*	
Note: Capitalize entries in Blocks 1 - 8 of DD Form 1391.	
1 COMPONENT	AF (ACC)
FY 19*XX* MILITARY CONSTRUCTION ...	For *XX*, list project fiscal year.
2 DATE	Date document prepared.
3 INSTALLATION AND LOCATION	Installation name (spell out official name) and state (two-letter abbreviation).
4 PROJECT TITLE	Requirement type (RD/RA, RA, etc.) followed by site code - site number.
5 PROGRAM	DERA
6 CATEGORY CODE	N/A
7 PROJECT NUMBER	Specify the installation-assigned project number (Four-digit installation code, fiscal year and four-digit number in the 7000 series (MFP07) [*ABCD967003*]). The goal in assigning project numbers, is to be able to track a project through the phases of investigation and cleanup. To do this, RPMs should assign project numbers as follows: Project ABCD967003, rolled over to next fiscal year, • with no funds obligated: ABCD*96*7003 • with partial funds obligated (due to lack of funding): ABCD967003-*1* RI/FS project ABCD967004 requiring RD in FY97, ABCD*97*7004 and requiring RA in FY98, ABCD*98*7004
8 PROJECT COST ($000)	Total fiscal year project cost.
9 COST ESTIMATES	
ITEM	• The first entry under **ITEM** must be the same as block 4 **(PROJECT TITLE)**. • Specify the work to be conducted, by subcategory (i.e., Excavation of Contaminated Soil, Disposal of Contaminated Soil, Installation of Recovery Wells, etc.). • Indent major subcategories three spaces. • Include, if applicable: SUPPORTING FACILITIES • Subtotal Current Working Estimate (CWE) • Add Supervision and Administration (S&A) (8%)

ITEM ***(continued)***	• Add Supervision and Review (S&R) (3.5%) • Add Engineering Design During Construction (EDC) (0.5%) • Add CWE, S&A, S&R and EDC to derive programmed amount.
U/M	Specify unit of measure for each **ITEM** (i.e., EA - each, LF - linear feet, CY - cubic yards, or GAL - gallon)
QUANTITY	Specify quantity per unit of measure.
UNIT COST	Specify cost per unit of measure.
COST ($000)	**QUANTITY * UNIT COST**
10 DESCRIPTION OF PROPOSED CONSTRUCTION	• Include site code(s)-site number(s). • Describe: ⇒ Type and scope of requirement (RD/RA, RA, IRA, Removal Action). ⇒ Major work elements.
PROJECT:	• Describe the purpose of the project (treatment, containment, removal and disposal, etc.) • Identify site source, pathways and receptors. • Describe decision-making process that supports this requirement.
REQUIREMENT:	• Cite state and federal laws and regulations governing this requirement. • Cite applicable regulatory enforcement orders or agreements. • Cite NPL status. • Cite **Relative Risk**. ⇒ High, ⇒ Medium, or ⇒ Low • Cite **Legal Driver**. Choose applicable code from the following: ⇒ **A** FFA at proposed and final NPL installations ⇒ **B** IAG (2 & 3 party) at non-NPL installations ⇒ **C** RCRA permit with Corrective Action requirements ⇒ **D** RCRA Corrective Action Order (EPA or state) ⇒ **E** Consent Order under state law ⇒ **F** Memorandum of Understanding commitment ⇒ **G** Memorandum of Agreement commitment (e.g., DSMOA) ⇒ **H** Notice of Violation requirement ⇒ **I** ATSDR requirement (e.g., response to health advisory) ⇒ **J** Natural Resource Trustee related requirements claim (e.g., damage claims)

REQUIREMENT: ***(continued)***	• **Legal Driver** ***(continued)*** ⇒ **K** Court-ordered requirement (in cases of litigation) ⇒ **L** Imminent threats ⇒ **M** Consent Decrees (e.g., third-party sites) ⇒ **N** Unilateral Orders (e.g., third-party sites) ⇒ **O** Preliminary Assessments for installations listed on the Docket ⇒ **P** LTM/LTO for in-place systems for installations without agreements ⇒ **Q** State laws and regulations requiring a response within a specific period ⇒ **Z** No agreement • Cite **Milestone**. What specific document or action milestone is the requirement expected to reach? Choose applicable code from the following: ⇒ **1** Statement of Work ⇒ **2** RI/FS Work Plan/Sampling and Analysis ⇒ **3** Community Relations Plan ⇒ **4** Engineering Evaluation/Cost Analysis ⇒ **5** Action Memorandum for a Removal Action ⇒ **6** RI or RFI Report ⇒ **7** FS or CMS Report ⇒ **8** Proposed Plan ⇒ **9** Record of Decision/Corrective Action Decision Document ⇒ **10** 60% Remedial Design ⇒ **11** Final Remedial Design ⇒ **12** Remedial Action Plan (including O&M Plans and Remedial Action Schedules) (also includes LTM and LTO) ⇒ **13** Treatability Studies ⇒ **14** PA/SI • Cite **Milestone Date** (YYYYMM) When is the above milestone required or expected to be complete? Note: milestone date is not the same as estimated award date.

CURRENT SITUATION:	Provide a detailed site background: • How and when the site was identified. • Source of contamination. • Nature and extent of contamination. • Results of previous studies. • Summarize risk assessment to indicate threat to human health and the environment and potential for contaminant migration. • Cleanup action levels (compare to existing contaminant levels) • Summarize results of ATSDR health assessment, if available.
IMPACT IF NOT PROVIDED:	List the impacts of not funding or a delay in funding this requirement. Be specific and realistic. Address the following: • Regulatory deadlines or schedules. • Risk assessment findings. • Mission-related impacts. • Site closeout or risk-reduction goals.
ADDITIONAL:	
Project Priority:	Specify project priority code in accordance with latest HQ USAF DERA Eligibility and Programming Guidance.
Relative Risk, Legal Driver, Milestone Code, Milestone Date:	Specify relative risk category of site(s) (High, Medium or Low), legal driver (A-Q, Z), milestone code (1-14), and milestone date (YYYYMM) as described in **REQUIREMENT.**
DPM Score	Provide DPM score, if available.
Decision Document:	Specify actual or anticipated DD or ROD signature date.
Contracting Agent:	Specify service center or contracting organization.
Estimated Award Date: **or** **Ready to Award Date:**	Specify estimated contract award date by DD MMMM YYYY for priority 1A projects. Specify ready to award date by DD MMMM YYYY for all other projects.
6. MULTI YEAR FUNDING PROFILE	For past, present and future project requirements, related to all project sites, list: **Fiscal Year** **Project Title** **Project Number** **Project Cost**
I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. Include this statement for ACC CES/ESV signature.	

Figure 5.2 DD Form 1391 Program Document Format

1 COMPONENT	FY 1997 MILITARY CONSTRUCTION PROJECT DATA	2 DATE

3 INSTALLATION AND LOCATION	4 PROJECT TITLE

5 PROGRAM ELEMENT	6 CATEGORY CODE	7 PROJECT NUMBER	8 PROJECT COST ($000)

9 COST ESTIMATES

ITEM	UM	QUANTITY	UNIT COST	COST ($000)

10 DESCRIPTION OF PROPOSED CONSTRUCTION:

PROJECT:

REQUIREMENT:

Site _____: Relative Risk _____, Legal Driver __, Milestone__, Milestone Date_____

CURRENT SITUATION:

DD FORM 1391

Figure 5.2 DD Form 1391 Program Document Format

1 COMPONENT	FY 19XX MILITARY CONSTRUCTION PROJECT DATA	2 DATE
3 INSTALLATION AND LOCATION		
4 PROJECT TITLE		5 PROJECT NUMBER

CURRENT SITUATION (*cont.*)

IMPACT IF NOT PROVIDED:

ADDITIONAL:

Project Priority:
Relative Risk: **Legal Driver:**
Milestone Code: **Milestone Date:**
DPM Score:
Decision Document:
Contracting Agent:
Estimated Award Date:

MULTI YEAR FUNDING PROFILE:

I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds.

_____

DD FORM 1391c

5.2.1.4 Guidance for Developing PA/SI Narrative Program Documents

PA/SI program documents use the narrative format (Figure 5.1). Figure 5.3 is a good example of a narrative document for a PA/SI. Section 5.2.1.2 provides general guidance for preparing narrative program documents and Appendix C provides a detailed review checklist. The following provides specific hints for preparation of the PA/SI program document.

Purpose	Provide an overview of the anticipated study activities (literature and records search, limited sampling, completion of EPA PA forms).
BACKGROUND	Provide the information gathered during site identification: • Time period that the release/disposal occurred. • Process that caused the contamination. • Type and quantity of contamination. • Area of Concern (AOC) or site location and extent of contamination. Document any actions taken to date (fencing, sampling, etc.)
Description of Current Status	Provide an overview of the current situation at the AOC or site (contaminants are contained or migrating).
MULTI YEAR FUNDING PROFILE	List the anticipated funding requirements, by fiscal year, through AOC or site closeout.
WORK SCHEDULE	At the very least, provide the anticipated start and finish dates for the requirement and the dates of major project milestones (work plan, field work, PA/SI report).

Figure 5.3 Example PA/SI Narrative Program Document

FY97 IRP NARRATIVE
Project Number: ABCD977008
Project Title: PA/SI AOC 5

Date: 3 April 1996 **ORIGINAL**
_____ **REVISION ( )**

1. INSTALLATION: Example **AFB,** AR **(ACC)**

2. TYPE OF STUDY: ____ **PA** __X__ **PA/SI** ____ **SI** ____ **RI/FS** ____ **FS** ____ **EE/CA**
____ **RD** ____ **RA** ____ **LTM** ____ **LTO** ____ **MPR** ____ **MGT** ____ **TD**

PURPOSE: The Preliminary Assessment/Site Inspection (PA/SI) will assess the location and extent of an abandoned landfill believed to have received pesticides and other hazardous materials during the 1960's. The tasks to be performed include: a geophysical survey to locate the landfill boundaries, trench excavations to confirm landfill boundaries, installation of five ground water monitoring wells to determine ground water flow direction and ground water quality (15 samples analyzed for VOCs, BNAs and metals), surface water sampling (20 samples analyzed for pesticides, BNAs and metals), additional literature search to estimate types and quantities of wastes disposed, completion of EPA PA form, relative risk evaluation, PREE/CA screening, and RI/FS scoping.

ITEMS:

__X__ **Literature Search**	__X__ **Work Plan Development**	__X__ **Report Development**
___ **Soil Sampling**	__X__ **Ground Water Sampling**	___ **Surface Water Sampling**
___ **Soil Gas Survey**	__X__ **Geophysical Survey**	___ **Aquifer Testing**
___ **Treatability/Pilot Study**	___ **Risk Assessment**	___ **Evaluation of Remedial Alternatives**
___ **Engineering Design**	___ **Bid Specifications**	___ **Community Relations Support**
__X__ **Administrative Record Support**	___ **Periodic Ground Water Monitoring**	___ **Operations and Maintenance**
___ **Supervision & Administration**	___ **Manpower**	___ **Management**
___ **Technology Development**	___ **Other**_____	

3. BACKGROUND: A records and aerial photo search in 1995 showed evidence that waste pesticides and painting materials were disposed of between 1960 and 1967 in a small landfill near the perimeter road west of Building 542. The aquifer underlying the landfill provides the base flow for a small stream just beyond the boundaries of the base. It is not known at this time if any waste containers are leaking or if any contaminants have migrated to the aquifer. This requirement is a CERCLA response activity eligible for DERA funds.
AOC 5: Relative Risk __N/A__, **Legal Driver** __O__, **Milestone** __14__, **Milestone Date** __199704__

EXAMPLES OF HAZARDOUS MATERIALS AT THIS SITE

DDT	**Paint Thinner**	**Pesticides/Containers**
Waste paint/containers	**Lacquer**	

Figure 5.3 (cont.) Example PA/SI Narrative Program Document

FY97 IRP NARRATIVE (*cont.*)
Project Number: ABCD977008
Project Title: PA/SI AOC 5

Regulatory Basis: State Law/Regulation: Arkansas Environmental Protection Act
Federal Law/Regulation: CERCLA, CWA
Enforcement Basis: ____ **FFA** ____ **Other:** _____

Description of Current Status: This site is currently a potential source of contamination to a shallow aquifer that provides the base flow for a small stream just outside the base boundaries. It is not known if contaminants have migrated to the aquifer.

Cleanup Action Levels, if Known: N/A
Impacts if Not Approved: ____ **Enforcement** ____ **Mission** ____ **Health Risk**
__X__ **Other:** Cannot determine site relative risk. Cannot determine whether site poses potential risk to human health and the environment.
Primary: Will not be able to collect surface and ground water samples.
Secondary: Will not be able to complete PA/SI report and evaluate relative site risk.
Tertiary: Will delay RI/FS or presumptive remedy and ultimately site closeout.

Relative Risk: N/A, **Legal Driver:** O
Milestone Code : 14, **Milestone Date:** 199704
DPM Score: N/A **Decision Document Signed:** N/A
Estimated Award Date: 15 OCT 96

4. SITE INFORMATION

Site ID	Site Description	Site Priority	Site Cost
AOC-5	Pesticide/Paint Landfill	1B	$178,500
Work Plan Development			($20,000)
Record Search and Field Reconnaissance			($38,000)
Sampling and Analysis			($75,500)
Report and Risk Evaluation			($45,000)

5. Current Working Estimate (CWE): $178,500
Supervision and Review (S&R) (12%): $ 21,500
Programmed Amount: $200,000

6. MULTI YEAR FUNDING PROFILE

FY 97	PA/SI AOC-5	ABCD977008	200K
FY98	RI/FS AOC-5	ABCD987008	500K
FY99	RD/RA AOC-5	ABCD997008	1000K
FY2000	LTM AOC-5	ABCD007008	100K

7. WORK SCHEDULE:

Award Contract	15 OCT 96
PA/SI Work Plan	15 NOV 96
PA/SI Field Work	15 JAN 97
PA/SI Report	15 APR 97
Project Finish	15 JUN 97

8. CONTRACTING AGENT: __X__ **COE,** __ **AFCEE,** __ **HAZWRAP,** __ **USGS,** __ **NAVY,** __**BASE**

9. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. _____

5.2.1.5 Guidance for Developing Removal Action or IRA Program Documents

Removal Action or IRA program documents typically use the DD Form 1391 (Figure 5.2). However, if the EE/CA (Removal Action Study) is conducted separately, use the narrative document format to program the EE/CA requirement. Figure 5.4 is a good example of the DD Form 1391 document for a Removal Action. Section 5.2.1.3 provides general guidance for preparing program documents, and Appendix C provides a detailed review checklist. The following provides specific hints for preparation of the Removal Action or IRA program document.

COST ESTIMATE	List in detail, the construction, engineering and design, and support requirements.
PROJECT	Describe how the Removal Action or IRA relates to overall cleanup of the site.
REQUIREMENT	Provide the background of the decision-making process (EE/CA development, Action Memorandum, or RI/FS, Interim Proposed Plan and Interim DD/ROD) that led to the requirement to program this project.
CURRENT SITUATION	Provide the project background and the status of current and past work at the site (PA/SI or RI/FS), indicate cleanup standards and guidelines and the justification for taking a Removal Action or IRA (short-term threat to human health and the environment, contaminant migration, PREE/CA screening, etc.).
ADDITIONAL	Must include: • Relative Risk classification • DD/ROD status (Action Memorandum, Interim ROD, etc.)
MULTI YEAR FUNDING PROFILE	List: • Fiscal year • Project title • Project Number • Project Cost for all past, present and future project requirements for the site.

Figure 5.4 Example Removal Action Program Document

1 COMPONENT	FY 1997 MILITARY CONSTRUCTION PROJECT DATA	2 DATE
AF (ACC)		6 APR 1996

3 INSTALLATION AND LOCATION	4 PROJECT TITLE
EXAMPLE AIR FORCE BASE, AR	REMOVAL ACTION RW-14

5 PROGRAM ELEMENT	6 CATEGORY CODE	7 PROJECT NUMBER	8 PROJECT COST ($000)
DERA	N/A	ABCD977002	162.4

9 COST ESTIMATES

ITEM	UM	QUANTITY	UNIT COST	COST ($000)
REMOVAL ACTION RW-14	LS			135.0
EXCAVATION AND DISPOSAL				
• 55 GALLON DRUM	EA	1	20,000	(20.0)
• SEALED PIPE	EA	1	20,000	(20.0)
EXCAVATION AND DISPOSAL OF CONTAMINATED SOIL	CY	2	47,500	(95.0)
SUPPORTING FACILITIES				10.0
CLEARING	LS			(5.0)
GRADING AND SEEDING	LS			(5.0)
CURRENT WORKING ESTIMATE (CWE)				145.0
SUPERVISION AND ADMINISTRATION (S&A) (8%)				11.6
SUPERVISION AND REVIEW (S&R) (3.5%)				5.1
ENGINEERING DESIGN DURING CONSTRUCTION (EDC) (0.5%)				0.7
PROGRAMMED AMOUNT				162.4

10 DESCRIPTION OF PROPOSED CONSTRUCTION: This requirement includes all labor, material, equipment, transportation and support for the Removal Action at Site RW-14, a low-level radioactive waste burial site (which includes radium-coated aircraft instrument faces, radioactive metabolic tracer material, and cathode anode components from hospital X-ray equipment). The wastes will be exhumed, transported and disposed of in an approved low-level radioactive waste disposal facility in accordance with AFI 40-201, U.S. Air Force Radioactive Isotope Committee, and Nuclear Regulatory Commission guidelines.

PROJECT: The purpose of this Removal Action is to exhume and dispose of a 55-gallon drum and pipe containing low-level radioactive waste and the surrounding contaminated soil.

REQUIREMENT: Example AFB was placed on the NPL 15 Dec 1990. This Removal Action is a condition of the Federal Facility Agreement (FFA), signed 20 Aug 1991, between Example AFB, EPA and Arkansas Department of Environmental Protection (ADEP). The EE/CA analyzed the options for this site: removal and disposal vs. long term maintenance. Removal and disposal was the chosen alternative. The EE/CA has been reviewed by the regulatory agencies and the community. Anticipated signature date for the Action Memorandum is 1 Jun 96.

Site RW-14: Relative Risk Medium, **Legal Driver** A, **Milestone** 12, **Milestone Date** 199704

CURRENT SITUATION: Low-level radioactive wastes were buried at the site in the mid-1950's by an approved Atomic Energy Commission Contractor. This site is inspected each year for radiation releases by the Bioenvironmental Engineer.

DD FORM 1391

Figure 5.4 (cont.) Example Removal Action Program Document

1 COMPONENT AF (ACC)	FY 1997 MILITARY CONSTRUCTION PROJECT DATA	2 DATE 6 APR 96
3 INSTALLATION AND LOCATION EXAMPLE AIR FORCE BASE, AR		
4 PROJECT TITLE REMOVAL ACTION RW-14	5 PROJECT NUMBER ABCD977002	

CURRENT SITUATION *(cont.)* Site integrity is maintained by Civil Engineering in accordance with AFI 40-20. No surface releases of radioactivity have been detected. Potential for migration of radioactive compounds to the soil or ground water is unknown.

IMPACT IF NOT PROVIDED: Failure to approve this project will result in the requirement for an RI/FS to determine the potential for migration of radioactive compounds to soil and ground water and the requirement for long-term inspection and maintenance (in accordance with AFI 40-201) for 75 years (based on the half-life of the radioactive materials at the site) (estimated total cost: 250K). It is more economical to exhume and dispose of the waste properly in an engineered and approved disposal facility. Failure to approve this project this fiscal year will result in non-compliance with the conditions of the FFA.

Primary: Will not be able to exhume and dispose of low-level radioactive waste.

Secondary: Will need to initiate RI/FS and continue to monitor site.

Tertiary: Will miss compliance deadline in FFA by eight months.

ADDITIONAL:

Project Priority: 2A

Relative Risk: Medium, **Legal Driver:** A

Milestone Code: 12 **Milestone Date:** 199704

DPM Score: 39

Decision Document: Anticipated Action Memorandum signature date: 1 Jun 96

Contracting Agent: COE

Estimated Award Date: 15 Oct 96

MULTI YEAR FUNDING PROFILE:

FY96	REMOVAL ACTION RW-14 (EE/CA)	ABCD967002	100 K
FY97	REMOVAL ACTION RW-14	ABCD977002	162.4K

I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds.

_____

DD FORM 1391c

5.2.1.6 Guidance for Developing RI/FS Narrative Program Documents

RI/FS program documents use the narrative format (Figure 5.1). Figure 5.5 is a good example of the narrative document for an RI/FS. Section 5.2.1.2 provides general guidance for preparing program documents, and Appendix C provides a detailed review checklist. The following provides specific hints for preparation of the RI/FS program document.

Purpose	• Provide a site-specific description of the anticipated study activities and how these activities contribute to overall completion of the RI/FS (especially if the requirement is for only an RI, only an FS or focused "additional" investigation). • Provide an estimate of the numbers of soil borings, monitoring wells, samples, etc.
BACKGROUND	• Provide a complete history of the site, listing the information gathered during site identification and the findings of the PA/SI, Removal Actions, and previous RI/FS activities. • Describe the existing levels of contamination and list the expected cleanup level goals and the source of these goals (e.g., ARARs, risk assessment).
Description of Current Status	• Give the status of ongoing site activities or studies (e.g., the PA/SI is 85% complete and estimated completion date is 1 Aug 97). • Provide an overview of site contaminant status (source, pathways and receptors).
MULTI YEAR FUNDING PROFILE	Provide past funding history and future anticipated funding requirements through site closeout for all sites covered by the requirement.
WORK SCHEDULE	List the anticipated dates of project milestones (e.g., work plans, field work, RI/FS report, Proposed Plan, DD or ROD).

Note: Consider requirements for Administrative Record and Community Relations support.

Figure 5.5 Example RI/FS Narrative Program Document

FY97 IRP NARRATIVE
Project Number: ABCD977002
Project Title: RI/FS SS-16

Date: 3 April 1996 **ORIGINAL**
_____ **REVISION ( )**

1. INSTALLATION: Example **AFB,** AR **(ACC)**

2. TYPE OF STUDY: ____ **PA** ____ **PA/SI** ____ **SI** __X__ **RI/FS** ____ **FS** ____ **EE/CA**
____ **RD** ____ **RA** ____ **LTM** ____ **LTO** ____ **MPR** ____ **MGT** ____ **TD**

PURPOSE: The Remedial Investigation/Feasibility Study (RI/FS) will determine the nature and extent of trichloroethylene (TCE) contamination in ground water both on and off-base, assess the threat of the TCE contamination to human health and the environment, determine cleanup goals and evaluate Remedial Action alternatives for the treatment of TCE contamination in ground water at site SS-16, Chevron Area. The Proposed Plan will outline the preferred remedial alternative for public review. Following public and regulatory review and comment, a Record of Decision will be developed to document the chosen remedial alternative. Field work will consist of the installation of 25 monitoring wells (both on and off base) and the collection of three samples from each to be analyzed for TCE. A mobile laboratory will be used to screen samples, to determine the optimal location for monitoring wells without demobilizing. Aquifer tests will also be performed to determine hydraulic conductivity of the aquifer. The site will also be screened using presumptive remedy protocols.

ITEMS:

___ **Literature Search**	_X_ **Work Plan Development**	_X_ **Report Development**
___ **Soil Sampling**	_X_ **Ground Water Sampling**	___ **Surface Water Sampling**
___ **Soil Gas Survey**	___ **Geophysical Survey**	_X_ **Aquifer Testing**
___ **Treatability/Pilot Study**	_X_ **Risk Assessment**	_X_ **Evaluation of Remedial Alternatives**
___ **Engineering Design**	___ **Bid Specifications**	___ **Community Relations Support**
_X_ **Administrative Record Support**	___ **Periodic Ground Water Monitoring**	___ **Operations and Maintenance**
___ **Supervision & Administration**	___ **Manpower**	___ **Management**
___ **Technology Development**	_X_ **Other**: Monitoring well installation	

3. BACKGROUND: Example AFB was place on the National Priority List (NPL) 15 Dec 1993. The Hazard Ranking System (HRS) score was 41 and the contaminants of concern were TCE and PCBs. The FFA was signed 20 Aug 1994. Site SS-16 is the source of TCE ground water contamination that has migrated off-base and impacted private water wells. In 1994, The Arkansas Department of Health discovered TCE in private wells adjacent to the base. The private wells were taken out of service and an alternate water source was provided to the off-base homes. The PA SI began in Dec 1994 and the Records Search showed that TCE was disposed in a dry well behind Building 675 from 1956 to 1965. Three ground water monitoring wells, installed during the PA SI, confirmed the presence of TCE contamination on-base at an average concentration of 200 ug/l and verified that the ground water flow direction was toward the private well field, 1000 feet from the dry well. This requirement is a CERCLA response activity eligible for DERA funds.
Site SS-16: Relative Risk High, **Legal Driver** A, **Milestone** 6, **Milestone Date** 199711

EXAMPLES OF HAZARDOUS MATERIALS AT THIS SITE

PD-680	**Trichloroethane (TCA)**	**Trichloroethylene (TCE)**

Figure 5.5 (cont.) Example RI/FS Program Document

FY97 IRP NARRATIVE (*cont.*)
Project Number: ABCD977002
Project Title: RI/FS SS-16

Regulatory Basis: State Law/Regulation: Arkansas Environmental Protection Act
Federal Law/Regulation: CERCLA, NCP
Enforcement Basis: _X_ **FFA** ____ **Other:** _____

Description of Current Status: This site is currently a source of TCE contamination to private off-base drinking water wells. The residents have been provided with an alternate water source. Estimated completion date of the PA/SI is Aug 1996.

Cleanup Action Levels, if Known: SDWA MCL of 5 ug/l TCE in ground water
Impacts if Not Approved: _X_ **Enforcement** ____ **Mission** _X*_ **Health Risk**
____ **Other:** _____
* Arkansas Department of Health detected TCE above MCLs in off-base drinking water wells.

Primary: Will not be able to drill and sample 25 monitoring wells.
Secondary: Will not be able to prepare RI/FS as planned.
Tertiary: Will delay meeting FFA RI/FS submittal deadline by 10 months.

Relative Risk: High, **Legal Driver:** A,
Milestone: 6, **Milestone Date:** 199711
DPM Score: 41 **Decision Document Signed:** Anticipated ROD signature: 20 FEB 98
Estimated Award Date: 5 DEC 96

4. SITE INFORMATION

Site ID	Site Description	Site Priority	Site Cost
SS-16	Building 675 TCE Dry Well	1A	$446,000
Work Plan Development			(65,000)
Sampling and Analysis			(300,000)
Report			(81,000)

5. Current Working Estimate: $446,000
Supervision and Review (S&R) (12%) $ 54,000
Programmed Amount $500,000

6. MULTI YEAR FUNDING PROFILE

FY 96	PA/SI SS-16	ABCD967002	200K
FY 96	REMOVAL SS-16	ABCD967013	200K
FY 97	RI/FS SS-16	ABCD977002	500K
FY98	RD SS-16	ABCD987002	500K
FY99	RA SS-16	ABCD997002	1500K
FY2000	LTO SS-16	ABCD007002	100K

7. WORK SCHEDULE:

Award Contract	5 DEC 96
RI FS Work Plan	1 FEB 97
RI FS Field Work	15 APR 97
RI Report	15 NOV 97
FS Report	10 JAN 98
ROD	20 FEB 98
Project Finish	1 MAR 98

8. CONTRACTING AGENT: _X_ **COE,** __ **AFCEE,** __ **HAZWRAP,** __ **USGS,** __ **NAVY,** __**BASE**

9. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. _____

5.2.1.7 Guidance for Developing RD Narrative Program Documents

RD program documents use the narrative format (Figure 5.1). Figure 5.6 is a good example of a narrative document for an RD. Section 5.2.1.2 provides general guidance for preparing program documents, and Appendix C provides a detailed review checklist. The following provides specific hints for preparation of the RD program document.

Purpose	• Identify whether the RD is for a final RA or an interim action leading to the final RA for the site (i.e., operable unit). • Provide an overview of the anticipated design activities (engineering design, development of bid specifications, pre-design pilot study). • Describe the design technology (in-situ vapor extraction, pump and treat, etc.) • Document the decision-making process (in accordance with the preferred cleanup alternative as documented in the ROD or DD).
BACKGROUND	• Provide a complete history of the site, listing the information gathered during site identification and the findings of the PA/SI, Removal Actions, and RI/FS activities. • Describe the existing levels of contamination and list the cleanup level goals in the DD or ROD.
Description of Current Status	• Give the status of ongoing site activities or studies (i.e., Proposed Plan is currently under review and expected ROD signature date is 1 Nov 97). • Provide an overview of site contaminant status (source, pathways and receptors).
Cleanup Action Levels, If Known	Document the cleanup level goals for the site(s) as listed in the DD or ROD.
Relative Risk and Decision Document Signed	• Provide DUSD(ES) relative risk evaluation classification. • Dates required for all RD requirements.
MULTI YEAR FUNDING PROFILE	Provide past funding history and future anticipated requirements through site closeout, including any LTO requirements.
WORK SCHEDULE	List the anticipated dates of project milestones (i.e., 35%, 65%, 95% and 100% Design Documents; Peer Review).

Figure 5.6 Example RD Narrative Program Document

FY97 IRP NARRATIVE
Project Number: ABCD977005
Project Title: RD FT-19

Date: 3 April 1996 **ORIGINAL**
_____ **REVISION ( )**

1. INSTALLATION: Example **AFB,** AR **(ACC)**

2. TYPE OF STUDY: ____ **PA** ____ **PA/SI** ____ **SI** ____ **RI/FS** ____ **FS** ____ **EE/CA**
__X__ **RD** ____ **RA** ____ **LTM** ____ **LTO** ____ **MPR** ____ **MGT** ____ **TD**

PURPOSE: The Remedial Design (RD) will develop a site-specific engineering design and bid specification for a soil vapor extraction (SVE) system at site FT-19. The SVE system will extract contaminants from the soil surface by vacuum, then treat them thermally. SVE was screened as a Presumptive Remedy for the Fire Training Area (Site FT-19) and selected as the preferred alternative in the EE/CA. Following regulatory and public review and comment, the Action Memorandum decision document is expected to be signed in June, 1996. The Base Comprehensive Plan (BCP) designates current and future land use as Open Space. Cleanup level goals, as determined by the risk assessment, using open - space land use parameters, are 500 mg/kg TPH in soil.

ITEMS:

___ **Literature Search**	___ **Work Plan Development**	___ **Report Development**
___ **Soil Sampling**	___ **Ground Water Sampling**	___ **Surface Water Sampling**
___ **Soil Gas Survey**	___ **Geophysical Survey**	___ **Aquifer Testing**
___ **Treatability/Pilot Study**	___ **Risk Assessment**	___ **Evaluation of Remedial Alternatives**
_X_ **Engineering Design**	_X_ **Bid Specifications**	_X_ **Community Relations Support**
___ **Administrative Record Support**	___ **Periodic Ground Water Monitoring**	___ **Operations and Maintenance**
___ **Supervision & Administration**	___ **Manpower**	___ **Management**
___ **Technology Development**	___ **Other:** _____	

3. BACKGROUND: Site FT-19 is a former fire training area. The PA SI, conducted in 1989, showed that the fire training area was used for fire training (saturating mock-up aircraft with waste fuel, burning and extinguishing with foam) from 1960 to 1975. The RI/FS was initiated in 1994 and the site was screened for the SVE Presumptive Remedy in 1995. The EE/CA was initiated in 1995, using Presumptive Remedy protocols. Sample results from 20 soil borings showed levels of 5000 - 25,000 mg/kg TPH in soil. Ground water sampling results showed that the contaminants had not yet reached ground water. A pilot study was also conducted to determine the site engineering design parameters. The risk assessment, based on current and future land use of Open Space (as designated in the BCP), estimated contaminants would reach ground water within five years and reach down-gradient receptors (drinking water wells) within ten years. Based on this scenario, the cleanup level goal was calculated to be 500 mg/kg TPH in soil. An ARAR waiver has been requested for the Arkansas Environmental Protection Act soil cleanup level of 100 mg/kg TPH in soil. This cleanup level is based on direct contact with soil. This Removal Action, as documented in the Action Memorandum (anticipated signature date: June 1996) is expected to be the final action for this site since contaminants have not reached ground water. This requirement is a CERCLA response activity eligible for DERA funds.
Site FT-19: Relative Risk Medium, **Legal Driver** Z, **Milestone** 11, **Milestone Date** 199709

EXAMPLES OF HAZARDOUS MATERIALS AT THIS SITE

Gasoline	**Diesel Fuel**	**Motor Oil**
Engine Oil	**JP-4 jet fuel**	

Figure 5.6 (cont.) Example RD Program Document

FY97 IRP NARRATIVE (*cont.*)
Project Number: ABCD957005
Project Title: RD FT-19

Regulatory Basis: State Law/Regulation: Arkansas Environmental Protection Act
Federal Law/Regulation: CERCLA, NCP
Enforcement Basis: ____ **FFA** __X__ **Other:** N/A

Description of Current Status: The EE/CA is complete and the Action Memorandum Decision Document is expected to be signed in June, 1996. The site is currently uncontrolled. Contaminants (at levels above MCLs) are expected to reach the ground water in five years and ground water receptors within ten years if soil contamination is not treated.

Cleanup Action Levels, if Known: 500 mg/kg TPH in soil
Impacts if Not Approved: ____ **Enforcement** ____ **Mission** __X*__ **Health Risk**
____ **Other:** _____
* Contaminants are expected to reach ground water receptors at levels above MCLs within ten years if the soil is not treated.

Primary: Will not be able to design SVE system.
Secondary: Will not be able to construct SVE system as planned.
Tertiary: Will cause a delay of one year in constructing SVE system.

Relative Risk: Medium, **Legal Driver :** Z,
Milestone Code: 11, **Milestone Date :** 199709
DPM Score: 35, **Decision Document Signed:** Anticipated Action Memorandum signature: JUN 96
Estimated Award Date: 5 OCT 96

4. SITE INFORMATION

Site ID	Site Description	Site Priority	Site Cost
FT-19	Fire Training Area	2B	$223,000
Engineering Design			($150,000)
Bid Specification Package			($ 73,000)

5. Current Working Estimate: $223,000
Supervision and Review (S&R) (12%): $ 27,000
Programmed Amount: $250,000

6. MULTI YEAR FUNDING PROFILE

FY 89	PA/SI FT-19	ABCD897004	200K
FY 94	RI/FS FT-19	ABCD947013	200K
FY 95	EE/CA FT-19	ABCD957005	200K
FY 97	RD FT-19	ABCD977005	250K
FY98	REMOVAL FT-19	ABCD987005	1000K
FY99	LTO FT-19	ABCD997005	150K
FY2000	LTM FT-19	ABCD007005	100K

7. WORK SCHEDULE:

Award Contract	5 OCT 96
35% Design	1 FEB 97
95% Design	15 MAY 97
Peer Review	15 JUL 97
100% Design	15 SEP 97
Project Finish	1 OCT 97

8. CONTRACTING AGENT: __X__ **COE,** __ **AFCEE,** __ **HAZWRAP,** __ **USGS,** __ **NAVY,** __**BASE**

5.2.1.8 Guidance for Developing RD/RA Program Documents

RD/RA or RA program documents use the DD Form 1391 (Figure 5.2). If the RA is conducted as a two-step design-build project, use the DD Form 1391 for the RD/RA. Figure 5.7 is a good example of the DD Form 1391 document for a RD/RA. Section 5.2.1.2 provides general guidance for preparing program documents, and Appendix C provides a detailed review checklist. The following provides specific hints for preparation of the RD/RA or RA program document.

COST ESTIMATE	Provide details of the construction, engineering and design (for RD/RA), and support requirements.
PROJECT	Describe how the RA will contribute to complete site cleanup.
REQUIREMENT	Provide the background of the decision-making process (DD or ROD).
CURRENT SITUATION	• Provide the complete project background (including the information gathered during site identification and the findings of the PA/SI, Removal Actions, and RI/FS and a synopsis of RD activities) • Provide the status of other work (including projected work) at the site (RD or RI/FS). • Indicate the current contaminant levels and the cleanup level goals of the preferred cleanup alternative (documented in the DD or ROD). • Describe the potential for migration and threat to human health and the environment (derived from the risk assessment). • Note whether this is the final RA or interim action leading to the final RA (i.e., operable unit) for the site.
ADDITIONAL	Must include: • Relative risk category. • DD or ROD signature date.
Pump and Treat Systems	Must include the following information: • The objectives of the system. Example objectives include restoration to ARARs or intermediate cleanup levels, prevention of contaminant migration, bioremediation, etc. • The volume of contaminant in the aquifer in gallons. • A map of the contaminant plume showing types and concentrations of contaminants, using iso-concentration contours. • The acquisition strategy used to accomplish RI/FS through LTO. • The expected reduction in contaminant concentrations, by year, for the first ten years of operation. Generate a graph of expected concentration vs. time as a visual aid. • The total system cost (RA) and operation and maintenance costs (LTO) for the first 10 years of system operation. • Documentation of evaluation of other technologies. • Justification for not using another technology.

Figure 5.7 Example RD/RA DD Form 1391

1 COMPONENT	FY 1997 MILITARY CONSTRUCTION PROJECT DATA	2 DATE
AF (ACC)		6 APR 1996

3 INSTALLATION AND LOCATION	4 PROJECT TITLE
EXAMPLE AIR FORCE BASE, AR	RD/RA SD-19

5 PROGRAM ELEMENT	6 CATEGORY CODE	7 PROJECT NUMBER	8 PROJECT COST ($000)
DERA	N/A	ABCD977004	2034.0

9 COST ESTIMATES

ITEM	UM	QUANTITY	UNIT COST	COST ($000)
RD/RA SD-19	LS			1816.0
EXTRACTION WELLS, DRILL AND INSTALL	LF	3000	200	(600.0)
AIR STRIPPING UNITS AND SCRUBBERS	EA	6	40,000	(240.0)
PUMPS	EA	24	3,300	(78.0)
PIPING	LF	8250	10	(83.0)
WASTE WATER HOLDING TANKS	EA	2	30,000	(60.0)
ELECTRICAL WIRING	EA	1	125,000	(125.0)
HAZARDOUS WASTE HANDLING	EA	10	22,500	(225.0)
SAMPLING	EA	365	350	(125.0)
ENGINEERING DESIGN				(100.0)
O & M FOR FIRST YEAR				(180.0)
CURRENT WORKING ESTIMATE				1816.0
SUPERVISION AND ADMINISTRATION (S&A) (8%)				145.3
SUPERVISION AND REVIEW (S&R) (3.5%)				63.6
ENGINEERING DESIGN DURING CONSTRUCTION (EDC) (0.5%)				9.1
PROGRAMMED AMOUNT				2034.0

10 DESCRIPTION OF PROPOSED CONSTRUCTION: This requirement includes all labor, material, equipment, and support to design and construct the Remedial Action at Site SD-19, a former leaking oil-water separator system which caused TCE contamination of ground water. Construction will include installation of extraction wells, pumping systems, piping systems, air strippers and scrubbers, waste water holding tanks and sampling points.

PROJECT: The purpose of this Remedial Action is to pump and treat ground water contaminated by TCE. The treated water will be returned to the aquifer to create a hydraulic head, helping move contaminated water toward the extraction wells. The extraction wells will also create a contamination barrier, preventing contaminant migration to drinking water wells.

REQUIREMENT: Example AFB was placed on the NPL 15 Dec 1990. This Remedial Action at SD-19 is a condition of the FFA, signed 20 Aug 1991, between Example AFB, EPA and Arkansas Department of Environmental Protection (ADEP). This action falls under the provisions of CERCLA, the SDWA and the Arkansas Environmental Protection Act. This is the preferred remedial alternative in the Proposed Plan reviewed by regulatory agencies and the community. The decision will be documented in the Record of Decision with an anticipated signature date of 15 Aug 96.

Site SD-19: Relative Risk High, **Legal Driver** A, **Milestone** 11, **Milestone Date** 199704

CURRENT SITUATION: Site SD-19 was discovered in 1983 during maintenance activities. Improperly installed, the engine shop vat oil-water separator drain allowed solvents to infiltrate the soil.

DD FORM 1391

Figure 5.7 (cont.) Example RD/RA DD Form 1391

1 COMPONENT	FY 1997 MILITARY CONSTRUCTION PROJECT DATA	2 DATE
AF (ACC)		6 APR 96

3 INSTALLATION AND LOCATION

EXAMPLE AIR FORCE BASE, AR

4 PROJECT TITLE	5 PROJECT NUMBER
RD/RA SD-19	ABCD977004

CURRENT SITUATION *(cont.)* The PA/SI, completed in 1991(site cost: 2K), determined that TCE leaked into the soils and subsequently to ground water from the time that the oil-water separator became operational (1965) to the time that TCE use was discontinued (1982). The RI/FS, completed in 1994 (site cost (500K), concluded that the ground water contamination covers 17 acres and is confined to a depth of 32 feet by a continuous clay layer. This clay layer is currently protecting the lower aquifer and the base production well from contamination. However, risk assessment modeling estimated that production well pumping could cause the TCE to migrate through the clay layer and reach the lower aquifer within five years. TCE contaminant levels range from 5 ug/l to 5000 ug/l. Cleanup level goals established by the RI/FS as Alternate Concentration Levels (ACLs) are 50 ug/l. No other RA is underway at this site, although 20 cubic yards of TCE-contaminated soil were removed in a FY93 removal action. This project is expected to be the final RA.

IMPACT IF NOT PROVIDED: Failure to approve this project will result in potential contamination of the lower aquifer and the base production wells, significantly increasing the costs of remediation (due to the increased volume of contaminated water, depth of wells, and requirement for alternate water supply). Failure to approve this project will also result in non-compliance with the FFA conditions.

Primary: Will not be able to design and construct cleanup system.

Secondary: Will cause a delay in RA, allowing contaminants to migrate toward lower aquifer.

Tertiary: Will cause a delay of nine months in meeting FFA schedule.

ADDITIONAL:

Project Priority: 1A

Relative Risk: High. **Legal Driver:** A

Milestone Code:. 11 **Milestone Date:** 199704

DPM Score: 36 **Decision Document:** Anticipated ROD: 15 Aug 96

Contracting Agent: COE

Estimated Award Date: 15 Oct 96

MULTI YEAR FUNDING PROFILE:

FY91	PA SI MULTI SITES	ABCD917013	2K	(SD-19 cost)
FY93	REMOVAL ACTION SD-19	ABCD937015	500K	(SD-19 cost)
FY94	RI FS MULTI SITES	ABCD947010	500K	
FY97	RD RA SD-19	ABCD977004	2034K	

I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds.

_____

DD FORM 1391c

5.2.1.9 Guidance for Developing LTM Narrative Program Documents

LTM program documents use the narrative format (Figure 5.1). Figure 5.8 is a good example of a narrative document for LTM. Section 5.2.1.2 provides general guidance for preparing program documents, and Appendix C provides a detailed checklist. The following provides specific hints for preparation of the LTM program document.

Purpose	• Provide an overview of the anticipated monitoring activities (number of wells, sampling frequency, sampling duration, and contaminants of concern). • Provide an overview of the decision-making process (in accordance with the preferred alternative as documented in the ROD or DD) including the next decision-making point (following the monitoring period).
BACKGROUND	Provide a complete history of the site, including the information gathered during site identification and the findings of the PA/SI, Removal Actions, and RI/FS and a synopsis of RD/RA activities.
Description of Current Status	• Give the status of ongoing site activities or studies (i.e., Proposed Plan is currently under review and expected ROD signature date is 1 Nov 97). • Provide an overview of site contaminant status (source, pathways and receptors).
Cleanup Action Levels if Known	Document the cleanup level goals determined by the RI/FS and documented in the DD or ROD
Relative Risk and Decision Document Signed	Required for all LTM requirements.
MULTI YEAR FUNDING PROFILE	Provide past funding history and future anticipated funding requirements through site closeout, including any multi-fiscal year LTM requirements.
WORK SCHEDULE	List the frequency and duration of monitoring events.

Figure 5.8 Example LTM Narrative Program Document

FY97 IRP NARRATIVE
Project number: ABCD977012
Project Title: LTM FT-47 and SS-17

Date: 3 April 1996 **ORIGINAL**
_____ **REVISION ( )**

1. INSTALLATION: Example **AFB,** AR **(ACC)**

2. TYPE OF STUDY: ____ **PA** ____ **PA/SI** ____ **SI** ____ **RI/FS** ____ **FS** ____ **EE/CA**
____ **RD** ____ **RA** ____ **LTM** __X__ **LTO** ____ **MPR** ____ **MGT** ____ **TD**

PURPOSE: Natural attenuation of ground water at two sites (FT-47 and SS-17) is the preferred remedial alternative in the Decision Document (DD) (anticipated signature date: 15 Jun 96). To ensure that natural attenuation performance criteria are met, the long-term monitoring (LTM) requirement will involve monthly sampling of five monitoring wells at each site, selectively, for benzene, ethylbenzene, toluene, xylene and trichloroethane for a two-year period. Following the two year sampling program the data will be evaluated against the levels predicted in the risk assessment model. If the trend is as predicted and contaminant levels decline below cleanup standards, the sites will be closed out. If contaminant levels do not decline, the remedial alternatives will be reevaluated.

ITEMS:

___ **Literature Search**	__X__ **Work Plan Development**	__X__ **Report Development**
___ **Soil Sampling**	__X__ **Ground Water Sampling**	___ **Surface Water Sampling**
___ **Soil Gas Survey**	___ **Geophysical Survey**	___ **Aquifer Testing**
___ **Treatability/Pilot Study**	___ **Risk Assessment**	___ **Evaluation of Remedial Alternatives**
___ **Engineering Design**	___ **Bid Specifications**	___ **Community Relations Support**
___ **Administrative Record Support**	__X__ **Periodic Ground Water Monitoring**	___ **Operations and Maintenance**
___ **Supervision & Administration**	___ **Manpower**	___ **Management**
___ **Technology Development**	___ **Other**	

3. BACKGROUND: Site FT-47 is a former SE fire training area. The PA SI, conducted in 1988, showed that the fire training area was used for fire training (saturating mock-up aircraft with waste fuel, burning and extinguishing with foam) from 1950 to 1960. During the 1994 RI/FS, no significant levels of contaminants were detected in the 20 soil borings. However, the five monitoring wells showed TPH and low levels of benzene and ethylbenzene (12 - 31 ug/l) in the ground water. The risk assessment showed that there is no current risk to human health and the environment and modeling predicted that the contaminant levels in ground water would drop bellow MCLs within 1.5 years with no treatment. Site SS-17 is a former drum storage area. The PA SI, conducted in 1990, showed that waste oils, solvents and paints were stored directly on the ground between 1970 and 1975. During the 1994 RI/FS, soil samples from 25 soil borings showed elevated levels of metals and organic compounds in isolated hot spots and ground water samples from 5 monitoring wells showed elevated levels of benzene, toluene, xylene and trichloroethane (75 - 250 ug/l). To preclude further migration of contaminants to ground water, the contaminated soil was excavated and treated during a Removal Action in 1995. Ground water samples collected following the Removal Action still showed elevated levels of contaminants. However, modeling predicted that there is no current risk to human health and the environment, and with no existing source of contamination (soil, hot spots were excavated and treated) and no additional treatment, the contaminant levels in ground water would drop below MCLs within 3 years. The DD (anticipated signature date: 15 Jun 96) lists natural attenuation as the preferred remedial alternative.
Sites FT-47 and SS-17, Relative Risk: **Low**, **Legal Driver:** **P**, **Milestone:** **12**, **Milestone Date:** **199709**

EXAMPLES OF HAZARDOUS MATERIALS AT THIS SITE

Gasoline	**Trichloroethane (TCA)**	**Diesel Fuel**
Motor Oil	**Engine Oil**	

Figure 5.8 (cont.) Example LTM Program Document

FY97 IRP NARRATIVE (*cont.*)
Project number: ABCD977012
Project Title: LTM FT-47 and SS-17

Regulatory Basis: State Law/Regulation: Arkansas Environmental Protection Act
Federal Law/Regulation: CERCLA, NCP
Enforcement Basis: ____ **FFA** __X__ **Other:** N/A

Description of Current Status: The Proposed Plan is currently under review by the public and regulatory agencies. Soil hot spots at SS-17 have been removed and treated. The sites pose no current or potential future risk to human health and the environment.

Cleanup Action Levels, if Known: SDWA MCLs
Impacts if Not Approved: ____ **Enforcement** ____ **Mission** _____ **Health Risk**
__X__ **Other:** Delay in site closeout.

Primary: Will not be able to sample five monitoring wells.
Secondary: Will not be able to evaluate natural attenuation as a remedial alternative.
Tertiary: Will cause a delay of one year in closing out the site.

Relative Risk: Low, **Legal Driver:** P, **Milestone Code:** 12, **Milestone Date:** 199709
DPM Score: 28 **Decision Document Signed:** Anticipated DD signature: 15 JUN 96
Estimated Award Date: 1 OCT 96

4. SITE INFORMATION

Site ID	Site Description	Site Priority	Site Cost
FT-47	SE Fire Training Area	3B	$65,000
SS-17	Former Drum Storage Area	3B	$60,000
Sampling and Analysis			(100,000)
Reports			(25,000)

5. Current Working Estimate (CWE)): $125,000
Supervision and Review (S&R) (12%): $ 15,000
Programmed Amount: $140,000

6. MULTI YEAR FUNDING PROFILE

FY 90	PA/SI Basewide	ABCD927004	200K
FY 94	RI/FS FT-47, SS-17	ABCD947010	800K
FY 95	Removal Action SS-17	ABCD957012	300K
FY 97	LTM FT-47, SS-17	ABCD977012	140K
FY 98	LTM FT-47, SS-17	ABCD987012	140K

7. WORK SCHEDULE:

Award Contract 1 OCT 96
Monthly collection and analysis of ground water samples.
Project Finish 30 SEP 97

8. CONTRACTING AGENT: __X__ **COE,** __ **AFCEE,** __ **HAZWRAP,** __ **USGS,** __ **NAVY,** __**BASE**

9. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. _____

5.2.1.10 Guidance for Developing LTO Narrative Program Documents

LTO program documents use the narrative format (Figure 5.1). Figure 5.9 is a good example of a narrative document for LTO. Section 5.2.1.2 provides general guidance for preparing program documents, and Appendix C provides a detailed review checklist. The following provides specific hints for preparation of the LTO program document. Note: LTO that follows a Rapid Response project must be programmed and awarded separately.

Purpose	• Provide an overview of the cleanup system and the anticipated operation and maintenance activities (monthly maintenance of pumps and air stripping towers, repair and replacement of parts as necessary, monthly sampling of influent and effluent, monthly performance reports, etc.). • Note whether or not any additional RA activities are in progress or planned for the site
BACKGROUND	Provide a complete history of the site, including the information gathered during site identification and the findings of the PA/SI, Removal Actions, and RI/FS and a synopsis of RD/RA activities.
Description of Current Status	• Give the status of ongoing site activities (i.e., The cleanup system has been constructed and the performance period is underway). • Provide an overview of site contaminant status (source, pathways and receptors).
Cleanup Action Levels if Known	List the cleanup standards and guidelines presented in the DD or ROD
Relative Risk and Decision Document Signed	Required for all LTO requirements.
MULTI YEAR FUNDING PROFILE	Provide past funding history and future anticipated funding requirements through site closeout, including any multiple fiscal year LTO requirements.
WORK SCHEDULE	List the frequency and duration of operation and maintenance activities.
CHART	Include a chart showing: • **Actual** type and volume of **contamination removed** in previous fiscal years and the • **Estimated** type and volume of **contamination expected to be removed** in the coming fiscal year.

For more information, consult the following references.

HQ ACC/CEVR 21 Dec 1993 Letter, Subject: FY 95 - 2000 Defense Environmental Restoration Program (DERP) Guidance No. 1 Non-Closure Bases.

Figure 5.9 Example LTO Narrative Program Document

FY97 IRP NARRATIVE
Project number: ABCD957010
Project Title: LTO ST-38

Date: 3 April 1996 **ORIGINAL**
_____ **REVISION ( )**

1. INSTALLATION: Example **AFB,** AR **(ACC)**

2. TYPE OF STUDY: ____ **PA** ____ **PA/SI** ____ **SI** ____ **RI/FS** ____ **FS** ____ **EE/CA**
____ **RD** ____ **RA** ____ **LTM** __X__ **LTO**____ **MPR** ____ **MGT** ____ **TD**

PURPOSE: Long-term operation and maintenance (LTO) of the final Remedial Action (fuel recovery and ground water recovery and air stripper treatment system) at site ST-38 will consist of weekly system checkout, adjustment, cleaning and recycling of recovered fuel. Influent and effluent air samples will be collected monthly and effluent air samples will be collected weekly to monitor system performance Repairs and media replacements will be conducted as required. Adjacent monitoring wells will be monitored monthly and sampled quarterly to determine cleanup performance. Progress reports, documenting maintenance and system performance, will be generated monthly. It is anticipated that LTO will be required for 10 years to meet cleanup level goals specified in the Decision Document (DD).

ITEMS:

___ **Literature Search**	___ **Work Plan Development**	__X__ **Report Development**
___ **Soil Sampling**	__X__ **Ground Water Sampling**	___ **Surface Water Sampling**
___ **Soil Gas Survey**	___ **Geophysical Survey**	___ **Aquifer Testing**
___ **Treatability/Pilot Study**	___ **Risk Assessment**	___ **Evaluation of Remedial Alternatives**
___ **Engineering Design**	___ **Bid Specifications**	___ **Community Relations Support**
___ **Administrative Record Support**	___ **Periodic Ground Water Monitoring**	__X__ **Operations and Maintenance**
___ **Supervision & Administration**	___ **Manpower**	___ **Management**
___ **Technology Development**	__X__ **Other**: Air and water sampling	

3. BACKGROUND: Site ST-38, discovered during the PA in 1990, was the location of eight 25,000 gallon fuel USTs that were taken out of service in the mid-1950's. The tanks and associated contaminated soil were removed in 1991. Twenty-five monitoring wells drilled during the 1995 RI FS, showed a plume of fuel floating on the ground water (An estimated 10,000 gallons). A removal action was also initiated in 1993 to remove floating fuel from the ground water to prevent further fuel migration during the completion of the RI FS. Ground water monitoring well samples showed contamination by dissolved fuel constituents (lead, benzene, toluene, xylene and ethylbenzene). The contaminants exceed MCLs by three orders of magnitude. Cleanup level goals, derived from the risk assessment and ARAR evaluation are Alternate Concentration Levels (ACLs) that are protective of the downgradient drinking water source. The preferred cleanup alternative, developed in the FS and selected in the DD (signed 5 May 1995) is recovery and recycling of floating fuel via phase separation and simultaneous recovery and treatment of ground water via air stripping. Pump and treat was the remedy selected for this site to preclude migration of contaminants to downgradient drinking water wells. According to the risk assessment, there is currently no threat to human health and the environment However, if left untreated, or uncontained, contaminants are expected fot reach downgradient drinking water wells within seven years Construction of the system and initial performance period is expected to be complete in May 1996 The ongoing removal action at this site will be incorporated into the final remedial action.
Site ST-38, Relative Risk: Medium, Legal Driver: P, Milestone: 12, Milestone Date: 199709

EXAMPLES OF HAZARDOUS MATERIALS AT THIS SITE

Gasoline **Diesel Fuel**

Figure 5.9 (cont.) Example LTO Program Document

FY97 IRP NARRATIVE (*cont.*)
Project number: ABCD957010
Project Title: LTO ST-38

Regulatory Basis: State Law/Regulation: Arkansas Environmental Protection Act
Federal Law/Regulation: CERCLA, NCP
Enforcement Basis: ____ **FFA** __X__ **Other:** N/A

Description of Current Status: The treatment system construction was completed 5 Feb 1995. The performance period is currently underway and will continue until the end of the fiscal year, when a new LTO contract will continue system operation. The site poses no current risk to human health and the environment, however, the RI/FS risk assessment predicts a potential future risk to the well field , which provides the community of Podunk with drinking water, within seven years if the ground water is not treated. A system efficiency and cost-effectiveness evaluation has been prepared. Cleanup level goals are ACLs.

Cleanup Action Levels, if Known: ACLs based on meeting SDWA MCLs at the Podunk well field point of exposure

Impacts if Not Approved: ____ **Enforcement** ____ **Mission** __X*__ **Health Risk**
____ **Other:** _____

* Contaminants are expected to reach drinking water source at levels above MCLs within seven years if the ground water is not treated.

Primary: Will not be able to operated pump and treat system to protect downgradient drinking water source.
Secondary: Will not be able to close out the site on schedule.
Tertiary: Will cause a delay of one year in operating the SVE sysstem.

Relative Risk: Medium, **Legal Driver:** P, **Milestone:** 12, **Milestone Date:** 199709
Decision Document Signed: DD signature: 5 MAY 95
Estimated Award Date: 1 OCT 96

4. SITE INFORMATION

Site ID	Site Description	Site Priority	Site Cost
ST-38	Former Fuel Storage Area	2B	$134,000
Equipment Replacement			(17,000)
Inspection and Repairs			(25,000)
Sampling			(75,000)
Reports			(17,000)

5. Current Working Estimate (CWE): $134,000
Supervision and Review (S&R) (12%): $ 16,000
Programmed Amount: $150,000

6. MULTI YEAR FUNDING PROFILE

FY 90	PA SI Basewide	ABCD927004	200K
FY 91	Removal ST-38 (tanks and soil)	ABCD917013	200K
FY 93	Removal ST-38 (floating fuel)	ABCD937001	750K
FY 94	RI FS ST-38	ABCD947010	800K
FY 94	LTO ST-38 (Removal Action)	ABCD947002	75K
FY 95	RD ST-38	ABCD957010	200K
FY 95	LTO ST-38 (Removal Action)	ABCD957002	75K
FY 96	RA ST-38	ABCD967010	1500K
FY 97	LTO ST-38	ABCD977010	150K
FY 98	LTO ST-38	ABCD987010	150K
FY99	LTO ST-38	ABCD997010	150K
FY2000	LTO ST-38	ABCD007010	150K

7. WORK SCHEDULE:
Award Contract 1 OCT 96
Weekly to monthly operation and maintenance.
Project Finish 30 SEP 97

8. CONTRACTING AGENT: __X__ **COE,** __ **AFCEE,** __ **HAZWRAP,** __ **USGS,** __ **NAVY,** __**BASE**

9. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds. _____

5.2.2 TDY, Training, Manpower and Computers

In addition to IRP project requirements, RPMs must also budget and program for management support requirements (TDY, training, manpower and computers). The following sections discuss requirements for each management support component.

5.2.2.1 TDY and Training

TDY. RPMs must project TDY and training requirements for the next fiscal year and include with their annual program submission. TDY requirements may include:

- Meetings with regulatory agencies
- Quality control meetings with service centers or A-Es
- Peer Review Meetings
- AFIRM Conference
- ACC Environmental Symposium

RPMs should use the MAP schedule to anticipate TDY requirements.

Training. RPMs require adequate and appropriate training in order to perform their duties proficiently and efficiently. Because of the diverse nature of these duties, RPMs should seek training that covers the technical, management, contractual, and legal aspects of the IRP. The ACC CES/ESV 13 Jan 1995 Memorandum, Subject: Environmental Restoration Training Guidance provides specific training guidelines and course information. ACC CES/ESV recommends RPMs participate in two weeks of training per year, and provides funding, accordingly. Training may take the form of AFIT Environmental Education Center (EEC) courses, environmental short-courses, pertinent conferences, EPA courses, college courses, etc. AFIT EEC distributes yearly educational quotas to Major Commands. RPMs interested in AFIT training should contact the ACC training point of contact to obtain a quota. If a quota is not available, RPMs may request ACC DERA funds to pay for the training. Appendix C of the *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Dec. 1993 provides additional information on AFIT EEC-funded courses.

Requirements Submission. The TDY and training requirements submission must include the following information:

- Number of trips,
- Number of persons attending,
- Purpose/destination and
- Total estimated cost (travel, lodging, per diem, rental car, registration or course fee, other).

Figure 5.10 provides the format for the TDY/Training requirement submission.

Figure 5.10. TDY/Training Requirement Format

FYXX DERA TDY JUSTIFICATION			
Installation, State			
No. of trips	*Purpose/Destination*	*No. of Persons*	*Total Cost*

Funds Distribution and Reporting. RPMs must program funds for TDY and training for the entire next fiscal year. However, RPMs must request the actual TDY/training funds on a quarterly basis during the current fiscal year. TDY/training requests are due 15 Aug, 15 Dec, 15 Mar and 15 Jun (or next business day). Submit TDY/training requests to the ACC program manager for review and approval.

Provide the following information in your request:

- Traveler's name(s)
- TDY or training location
- Purpose
- Dates
- Estimated costs (travel, per diem, lodging, rental car, registration or course fees, other)

At the beginning of each quarter, ACC CES/ESVR will distribute funds to the installation for approved TDY/training requests. For out-of-cycle TDY/training requests, submit a request and justification to your ACC program manager for approval. ACC CES/ESVR will distribute funds for out-of-cycle requests separately.

Report completed TDYs and training to ACC CES/ESVR on a quarterly basis. TDY/training completion reports are due 10 Jan, 10 Apr, 10 Jul and 10 Oct (or next business day). Figure 5.11 shows the format for quarterly TDY/training completion reports.

Figure 5.11. TDY/Training Completion Report Format

INSTALLATION, STATE			
TRAVELER'S NAME	COURSE NAME/ TDY LOCATION	DATES AND PURPOSE OF TDY	ITEMIZED ACTUAL COSTS
			Travel
			Lodging
			Per Diem
			Other
			TOTAL

For more information, consult the following references.

ACC CES/ESV 13 Jan 1995 Memorandum, Subject: Environmental Restoration Training Guidance.

ACC CES/ESV 13 Oct 1994 Memorandum, Subject: FY95 Defense Environmental Restoration Account (DERA) Travel/TDY Policy.

HQ ACC/CEVR 8 Mar 1994 Memorandum, Subject: FY95 Defense Environmental Restoration Account (DERA) Manpower, TDY and Computer Equipment Requirements Call.

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Appendices C and D.

5.2.2.2 Manpower

RPMs must project manpower requirements for the next fiscal year and include with their annual program submittal. DERA-funded employees must spend 90 percent or more of their time performing DERA-related duties.

FY Request for Funding: Validated and Filled DERA Positions. Figure 5.12 provides the format of the program narrative for manpower support.

Figure 5.12. Manpower Program Document Format

FYXX INSTALLATION RESTORATION PROGRAM NARRATIVE
AIR FORCE MANPOWER SUPPORT

1. INSTALLATION: *Installation, State*

2. REQUIREMENT: Air Force Environmental Manpower

3. BACKGROUND: *Installation* requires technical manpower assistance to manage the Installation Restoration Program (IRP). Manpower duties include providing oversight for IRP contractors and managing IRP planning, execution, documentation, regulatory compliance and community involvement.

4. ESTIMATED COST:

Position (Grade and Title)	Salary	Benefits Overtime (33%)	Total
TOTAL			

5. CONTRACTING AGENT: Civilian Personnel

6. I have reviewed this requirement certifying and validating that it meets the eligibility criteria for use of DERA funds.

_____

Validating, Filling and Funding DERA Positions. Installations finding that they need additional out-of-cycle DERA manpower support must submit the following to their ACC program manager for validation:

- Manpower calculations (See HQ ACC/CEVR 8 Mar 1994 memorandum) to justify requirements.
- Position description
- Request for fill action

Installations finding that they need to fill a vacant but validated DERA position must submit a request for fill action to their ACC program manager.

ACC CES/ESV will notify the installation by letter of the position validation status and the request for fill action approval status. If the position is validated and approved, the letter will certify DERA funds availability. Once the installation selects an individual for the position, the RPM must submit a request for funds to their ACC program manager and ACC CES/ESVR will provide additional civilian pay funding.

Quarterly Reporting. Each installation must provide quarterly manpower reports to ACC CES/ESVR. Figure 5.13 shows the format of this report.

Figure 5.13. Quarterly Manpower Report

Installation, State

EMPLOYEE NAME	AUTHORIZED GRADE	ASSIGNED GRADE/STEP	POSITION TITLE

These quarterly manpower reports are due 10 Jan, 10 Apr, 10 Jul and 10 Oct (or next business day).

For more information, consult the following references.

ACC CES/ESV 13 Oct 1994 Memorandum, Subject: FY95 Defense Environmental Restoration Account (DERA) Manpower Policy.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, Section 11.4.

HQ ACC/CEVR 8 Mar 1994 Memorandum, Subject FY95 Defense Environmental Restoration Account (DERA) Manpower, TDY and Computer Equipment Requirements Call.

5.2.2.3 Computer Requirements

In order to program funds toward computer system requirements, RPMs must submit the following:

- A Technical Information System (TIS) Management Plan (See HQ ACC/CEVR 13 Jul 1993 Letter, Subject: Guidance on Technical Information System Management Plans for an example) and
- A Computer Systems Requirement Document (AF Form 3215) (See Figure 5.14 for completed AF Form 3215).

The TIS Management Plan proposes and justifies DERA expenditures for computer systems. The format of the plan is standardized, with much of the data in tables to allow for comparison between installations. The TIS Management Plan must provide the following information:

- An overview of the installation IRP (history, site and sampling status, how the IRP is managed, and how and by whom the data will be used),
- Current computer status:
  - ⇒ Total number of computers available at the installation.
  - ⇒ Total number and type of DERA-funded computers at the installation.
  - ⇒ Why redistribution of existing computers is not feasible.
- Current personnel status:
  - ⇒ Number of persons performing DERA work at the installation.
  - ⇒ Number of DERA-funded positions at the installation.
- Activities requiring use of computers (RACER, Database management, etc.).
- Names of persons trained to operate software,
- System configuration and concept of operation,
- Purchases, maintenance and staffing requirements to support the system.

TIS Management Plans proposing and justifying DERA expenditures for geotechnical computer systems (to be used for Geographic Information Systems (GIS) or site characterization modeling) must also include the following:

- An indication of the complexity of sites on the installation,
- The reason the installation must have geotechnical computing capabilities, vice the A-E, and
- The software to be used and the person who will use it.

Figure 5.14 Completed AF Form 3215

C4 SYSTEMS REQUIREMENTS DOCUMENT	DATE: 3 May 95	CSO CONTROL NUMBER: 95-3147

REQUIREMENT TITLE:

GIS Hardware and Software for CEVR

REQUESTING AGENCY POINT OF CONTACT *(Organization, Office, Name, Grade, Telephone Number)*

123 CES/CEVR
Mr. Doe, 555-1234

DATE REQUIRED:	MISSION OR SYSTEM SUPPORTED:
1 Jun 95	GIS CAD Station

REQUIREMENT *(Generic Terms)*:
Total system package to support Geographical Information System (GIS)/CAD requirements for environmental restoration program. Specific required for each item are listed below.

1. Purchase one (1) 100 Mhz Pentium Microprocessor System with 64 MB DRAM, 21" monitor, internal fax modem, 1 GB internal hard drive, 3.5" floppy drive, dual CD ROM drives (500 KB/ sec transfer rate), Ethernet card, 16 bit sound card, and graphics accelerator card with video memory)
2. Purchase one (1) HP Laser Jet Printer C3100A
3. Purchase one (1) 8 1/2" by 14" Scanner (Epson ES 1200C Pro with interface drivers, Photoshop)
4. Purchase one (1) Digitizer Tablet (Calcomp Drawing Board III)
5. Purchase one (1) AutoCAD for Windows, Release 12 or higher
6. Purchase one (1) ArcCAD GIS software with ArcVIEW version 2.0 for Windows or higher
7. Purchase one (1) each Q & E and Surfer software packages
8. Purchase one (1) High-speed IGB backup system (Exobyte FSIG 2GB)

JUSTIFICATION:
The Restoration Element (CEVR) of the Environmental Flight requires computer hardware and software for a Geographic Information System (GIS) Computer-Aided Design (CAD) work station to process and display large quantities of environmental data. The work station is required to support three command-wide initiatives: Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA), Rational National Standards Initiative (RNSI), and Photo Interpretation Geographical Information System (PIGIS). The work station will meet mission needs by allowing Restoration Element personnel to utilize contractor-generated environmental data in presentations (spacial graphical displays, contaminant plume maps, and land usage maps) to regulatory agencies, the public (Restoration Advisory Board), and the major command; analyze the data to determine future restoration requirements; and analyze the data to determine effectiveness of restoration systems. Funding will be provided by HQ ACC DERA.

INITIAL TECHNICAL SOLUTION AND COSTING

CSO'S PROPOSED SOLUTION/ALTERNATIVES

BRIEF DESCRIPTION	QTY	UNIT COST	TOTAL COST
• 100 Mhz Pentium microprocessor with 64 MB DRAM, 1GB HD, dual CD ROM, Ethernet card, 21" monitor, MS Office, 14.4 KB FAX Modem, 16 bit sound card w/ supporting hardware.	1	$7400	$7400
• Digitizer tablet with cordless puck, Calcomp Drawing Board III, 34120/16c	1	$ 225	$ 225
• Color Scanner, Epson ES 1200C Pro, with interface, drivers, Photoshop	1	$1209	$1209
• Backup, Exabyte FSIG 2.0 GB tape backup with 5-pack of tapes	1	$ 949	$ 949
• AutoCAD for Windows R13 on CD with AutoCAD Data (ADE) R12	1	$2558	$2558
• ArcCAD GIS Software with ArcView 2.0 for Windows	1	$1895	$1895
• Q & E for Windows Software version 2.1	1	$ 345	$ 345
• Surfer for Windows Software version 3.0	1	$ 825	$ 825
• HP Color Laserjet Printer, C3100A with network card, 8MB memory upgrade, and 11 x 17 paper tray	1	$6300	$6300
		TOTAL:	$21,706

TECHNICAL SOLUTION AUTHORITY

THIS SOLUTION MEETS ARCHITECTURAL AND INTEROPERABILITY REQUIREMENTS *(Name, Organization, Telephone Number)*:	TECHNICAL REFERENCES USED:

APPROVAL AUTHORITY

USERS APPROVAL AUTHORITY *(Name, Title, Organization)*:	FUNDS AVAILABLE
	UNFUNDED
	APPROVED
	DISAPPROVED
HOST BASE APPROVAL AUTHORITY *(Name, Title, Organization)*:	FUNDED
	APPROVED
	DISAPPROVED
RECORDS MANAGEMENT APPROVAL AUTHORITY *(Name, Title, Organization)*:	DISPOSITION
	APPROVED
	DISAPPROVED

AF FORM 3215, AUG 94 (*EF-V2*) *(PerFORM PRO)* PREVIOUS EDITIONS ARE OBSOLETE

For more information, consult the following references.

HQ ACC/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, Section 11.4.2.

HQ ACC/CEVR 13 Jul 1993 Letter, Subject: Guidance on Technical Information System Management Plans.

5.3 PRIORITIZING REQUIREMENTS

Prioritizing project requirements is important because the number of project requirements almost always exceeds the level of funding available. Prioritization provides an equitable means of distributing funds to cover requirements on a "worst first" basis, directing funding toward sites that pose the greatest risk to human health and the environment.

RPMs must assign a priority code (based on relative risk and existence of a regulatory agreement/order) to each requirement. Then RPMs must rank the installation's requirements in order of priority, based on risk management priority setting factors. Prioritization coding and factors are described below.

DUSD(ES) Priority Coding. DUSD(ES), in the 14 Apr 1994 guidance divides IRP requirements into four groups:

- Group A Program Management and Support
- Group B Hazardous and Petroleum Waste Projects
- Group C Ordnance and Explosive Waste
- Group D Demonstration and Validation

RPM project requirements will fall chiefly into Groups A and B. Group A requirements include manpower, TDY, training, LTO and LTM. Group B requirements include PA/SI (Note: Congress deleted funding for PA/SIs), RI/FS, RD/RA, IRA and Removal Action projects. Priorities are based on site relative risk and the existence of a regulatory agreement or order. Table 5.2 shows the prioritization coding in Group B -- Hazardous and Petroleum Waste Projects.

Table 5.2. DUSD(ES) Priority Coding

PRIORITY	RELATIVE RISK	REGULATORY AGREEMENT/ORDER?
1A*	HIGH	YES
1B	HIGH	NO
2A*	MEDIUM	YES
2B	MEDIUM	NO
3A	LOW	YES
3B	LOW	NO

* Priorities 1A and 2A may also include sites without legal agreements if contaminant migration pathway is complete.

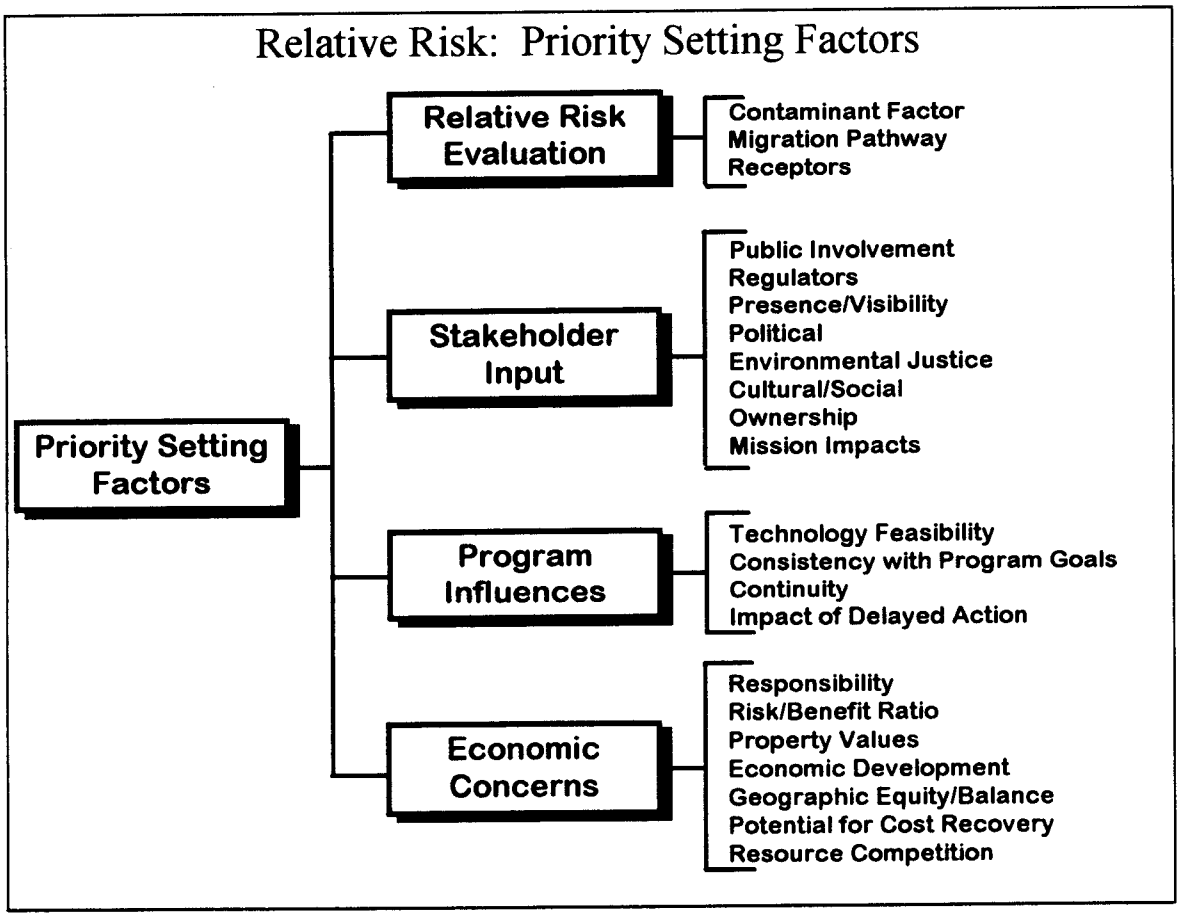
Program documents submitted for validation should include the DoD priority (i.e., 1A, 2B, etc.). Refer to DUSD(ES) 14 Apr 1994 Memorandum for more information on DUSD(ES) prioritization and priority codes.

Prioritization of Requirements. Each installation must submit a rank-ordered list of project requirements for each fiscal year through the year 2000. The RPM should prioritize the installation's list of requirements according to the priority setting factors in Figure 5.15, and present the list to:

- The Restoration Advisory Board for their input,
- The EPC for concurrence, and
- ACC CES/ESV for validation.

ACC CES/ESV must integrate all installation project requirements and generate a prioritized, rank-ordered command-wide list. ACC CES/ESV also considers the risk management priority setting factors in Figure 5.15 when generating the prioritized list. After presenting the prioritized list to the ELC for concurrence, ACC CES/ESV submits the integrated program to HQ USAF/CEVR for inclusion in the Air Force IRP.

Figure 5.15 Relative Risk: Priority Setting Factors



For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance, Section 8.6.

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program, Section IX.

5.4 FUNDING LEVEL ADJUSTMENTS AND OUT-OF-CYCLE REQUIREMENTS

Funding level increases and out-of-cycle requirements are inevitable in the IRP due to the uncertainty associated with the program. The **Funding Line Adjustment Request** Form is the mechanism for seeking validation of increased funding levels and out-of-cycle requirements. Figure 5.16 provides the format and explanation of this form.

Figure 5.16 Funding Line Adjustment Request

FUNDING LINE ADJUSTMENT REQUEST

FY*XX* DATE:_____

(FUNDING IN $000)

ACTION	CURRENT VALIDATION	REQUESTED VALIDATION	REQUESTED CHANGE	REMARKS
Installation, State *Project Title, Phase* *Site Code(s)* *Project Number*			*(+/-)*	** CO,CI or NP*

JUSTIFICATION: *For out-of- cycle requirements (new projects) include the following:*

- *Description of the situation that necessitates out-of-cycle validation:*
  - ⇒ *Regulatory implications*
  - ⇒ *Threats to human health and the environment*
- *Any cost savings factors*
- *Reason why the requirement wasn't anticipated during regular program submittal*

For cost increases include the following:

- *Identify and explain the reason for the cost increase*
  - ⇒ *Change in scope*
  - ⇒ *Unanticipated conditions*
- *Give a brief funding history of the site(s)*
- *Statement of RPM concurrence with the increase*

IMPACT: *Identify the impacts of not funding the requirement*

- *Human health and the environment*
- *Regulatory penalties*
- *Mission*
- *Program cost savings*

( ) Validated
( ) Disapproved
( ) Other

ACC PM	ACC CES/ESVE or W	ACC CES/ESV	ACC CES/ESVR

* CO: Continuation of prior FY project
CI: Cost increase to a current FY project
NP: New project

Funding Line Adjustment Requests for new out-of-cycle requirements or requirements that have changed significantly in scope or cost must be accompanied by new or revised narratives or DD Form 1391's in order to be considered for validation. Submit justification documents to the appropriate ACC program manager for validation and funding.

Handle **emergency response** requirements as follows:

- Notify the appropriate ACC program manager by telephone to request funding validation.
- Follow up within three days with the appropriate program documentation.

For more information, consult the following reference.

HQ ACC/CEVR 21 Dec 1993 Letter, Subject: FY95-2000 Defense Environmental Restoration Program (DERP) Guidance No. 1 Non-Closure Bases.

6. *EXECUTION*

6.1 AREAS OF CONCERN AND REOPENED SITES

How Areas of Concern are Identified. The Air Force identified many of the existing IRP sites during the early 1980s when the Phase I Base-wide Records Search was conducted at each installation. Any newly identified areas of potential or suspected contamination are called "Areas of Concern" (AOCs). RPMs may identify new IRP AOCs through:

- Incidental or supplemental records search and aerial photo interpretation,
- Information on past practices provided by employees or former employees,
- Construction activities,
- Discovery of upgradient contamination during investigation at existing IRP site,
- Environmental Condition of Property Survey,
- Environmental inspections (i.e., EPA multi-media, Environmental Compliance Assessment and Management Program (ECAMP), RCRA Facility Assessment (RFA)), and
- Drinking water sampling.

Since contamination has not been verified, AOCs have a "pre-regulatory" status and should not be entered into WIMS-ES or included in a regulatory agreement (and subject to stipulated penalties). To distinguish AOCs, however, they should be given a letter or number for identification (e.g., AOC-15 or AOC-G). AOCs may be investigated to determine the appropriate course of action:

- NFRAP,
- Removal Action,
- Deferral to another regulatory program (state UST program, Clean Water Act, etc.), or
- Further investigation (RI, RFI).

Potential areas of contamination are designated as AOCs until further investigation is required (RI or RFI). Once an RI or RFI is required, the AOC is coded as a site and entered into the WIMS-ES.

If EPA suspects contamination, they can issue a CERCLA 104(e) order requesting a disclosure of all information about an AOC. If citizens suspect contamination, they can submit a CERCLA

105(d) petition, requesting that a Preliminary Assessment (PA) be performed. To avoid these regulatory orders, the installation should:

- Acknowledge and research any informal allegations of contamination,
- Keep the community informed of and involved in IRP issues via the RAB and the community relations program.
- Keep an up-to-date Information Repository, announcing the availability of documents for review at the same time they are provided to the IRP team.

How AOCs are Tracked. AOCs are not currently formally tracked by HQ USAF/CEVR, but in the future, they may be formally tracked for the purpose of planning and programming funding support. AOCs are tracked informally by the installation and ACC CES/ESV. Include AOC information (description, status, and estimated funding requirements) in the MAP and discuss the status of each AOC at program review meetings. ACC CES/ESV program managers track AOCs in the WIMS-ES by including AOC information in the "Remarks" section of the project entry. Like IRP sites, AOCs must also be closed out with a "No Further Remedial Action Planned" (NFRAP) decision document, which may take the form of or be incorporated into a technical report (include a summary in the NFRAP appendix of the MAP).

Reopened Sites. RPMs should review the justification and documentation for selecting "no further response action" in previous decision documents using the evaluation guidance and scoring aid in Section 3 of the U.S. Air Force, Summer 1994, *NFRAP Guide*. Sites may be reopened if they meet any of the following criteria:

- New information about the site is discovered,
- New regulatory requirements are enacted, or
- Available data is insufficient to justify the "No Further Response Action Planned" (NFRAP) decision in accordance with NFRAP guidance.

It is in the installation's best interest to be thorough in identifying AOCs and reopening IRP sites if necessary. Early consideration of these AOCs or sites will allow the installation to meet site restoration and cleanup goals.

What to Do When an AOC is Identified or a Site is Reopened. The following is a list of steps the RPM should take when an AOC is identified or an old IRP site is reopened (based on the criteria above).

- ***Compile and record the facts.*** RPMs should gather as much information as possible about the AOC or reopened site and maintain good records. RPMs may gather information by conducting interviews with persons having knowledge of the site (citizens, current or former government personnel, etc.). Conduct interviews in consultation with JA to ensure witnesses are apprised of their legal rights and confidentiality privileges. RPMs may also gather information by conducting a records search or aerial photo interpretation.

When researching an AOC or reopened site, the RPM should attempt to answer the following list of questions:

1) When did the release/disposal occur and over what period of time?
2) What was the process that caused the contamination?
3) What type and quantity of contamination was released/disposed?
4) Where is the site and what is the expected extent of contamination?
5) (For reopened site) What is the justification for reopening the site?

- ***Notify the Appropriate Agencies.*** CERCLA 103 requires that a release of a hazardous substance equal to or greater than the Reportable Quantities established under CERCLA 102 and listed in 40 CFR Part 302 **(EPA Designation, Reportable Quantities and Notification Requirements for Hazardous Substances Under CERCLA)** be reported to the National Response Center (NRC). The NRC will report this information to EPA for inclusion in the EPA Federal Agency Hazardous Waste Compliance Docket (updated every 6 months). Listing of a facility on the docket triggers the requirement for a Preliminary Assessment/Site Inspection (PA/SI) within 18 months. Most installations with an active IRP have already been listed on the docket and have fulfilled the initial PA/SI requirements. Nevertheless, the RPM needs to address the AOC via the IRP process.

- ***Determine DERA eligibility.*** Refer to the most recent HQ USAF **Defense Environmental Restoration Program Management Guidance** to ensure that the AOC or reopened site meet DERA-eligibility criteria.

- ***Elevate the AOC or reopened site for approval or validation.*** Forward a letter to ACC CES/ESV requesting approval of an AOC or validation of a reopened site. Include all pertinent information about the AOC or reopened site. After validation, the ACC program manager will update WIMS-ES with the reopened site information. The AOC or reopened site should be discussed by the parties (RPM, ACC program manager, service center project manager, and regulatory agencies) at the quarterly program review meeting. The RPM should also present AOC or reopened site information to the RAB.

- ***Update the MAP.*** After approval or validation of the AOC or reopened site, the RPM should update the MAP to include:

  ⇒ Background and information about the AOC or reopened site,
  ⇒ The strategy, schedule and costs required to address the AOC or reopened site through site closeout, and
  ⇒ The regulatory basis for the site.

  Section 7.4.1 provides guidance on updating the MAP.

- ***Program Project Requirements.*** During the MAP update process, the RPM should determine the optimum measures for addressing the site or AOC. For instance, a Removal Action or Presumptive Remedy (excavation and disposal/treatment, capping, soil venting, fencing, etc.) may be appropriate to address an immediate threat or to clean up a common type of site or AOC. A PA/SI may be appropriate when little is known about either the background of the site or the potential for significant contamination. If the potential for significant contamination is high, it may be appropriate to skip the PA/SI and initiate an RI/FS or include the site in an ongoing RI/FS (while ensuring that PA and relative risk data requirements are considered).

  RPMs should develop program documentation for the initial project requirement. Section 5.2 provides guidance on developing program documents. The RPM should then determine how soon the project is needed and prioritize accordingly (based on factors such as threat to human health and the environment, community interest, regulatory pressure, or construction schedules). The RPM should then decide, based on site priority, whether to request consideration for current fiscal year funding as an out-of-cycle requirement (See Section 5.4 for information on programming and prioritizing out-of-cycle requirements) or for the next fiscal year cycle of requirements.

  Additionally, the RPM should develop a list of outyear requirements (via the MAP update process) and forward to the ACC program manager for inclusion in WIMS-ES (for reopened sites). The requirements' list should include the estimated cost and schedule of requirements through site or AOC closeout. A PC-based software package, the Remedial Action Cost Engineering and Requirements System (RACER) can assist RPMs with developing cost estimates.

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

U.S. Air Force, Summer 1994, *United States Air Force Environmental Restoration Program NFRAP Guide.*

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Section 5.3.1.

Defense Environmental Restoration Account (DERA), A Module of the Work Information Management System, Environmental Subsystem (WIMS-ES).

EPA Designation, Reportable Quantities and Notification Requirements for Hazardous Substances Under CERCLA, 40 CFR Part 302 (BNA Page 101:1251).

CERCLA Sections 102 and 103.

6.2 SITE INVESTIGATION AND CLEANUP

Overview. After ACC CES/ESV validates a site or confirms DERA eligibility of an AOC, the RPM can update the MAP and begin the investigation and cleanup phases of the program. The traditional IRP process involves conducting an investigation -- a Preliminary Assessment/Site Inspection (PA/SI) followed by a Remedial Investigation/Feasibility Study (RI/FS), choosing a cleanup technology, then initiating the cleanup -- performing a Remedial Design/Remedial Action (RD/RA) or performing Long Term Monitoring (LTM) of contaminant levels to ensure they remain at or attenuate to safe concentrations. If necessary, Long Term Operation (LTO) follows the Remedial Action to operate and maintain the cleanup system until restoration is complete. However, RPMs are encouraged to streamline the process by skipping the PA/SI (if sufficient information is known about the site or AOC) or implementing early cleanups whenever possible via the Removal Action, Interim Remedial Action (IRA) or Presumptive Remedy process.

Execution. The following section lists and describes program execution steps required for each phase of the IRP. Sections 6.2.1 - 6.2.5 provide details pertaining to each phase of the IRP, as follows:

- 6.2.1 PA/SI
- 6.2.2 Removal Action, Interim Remedial Action or Presumptive Remedy
- 6.2.3 RI/FS
- 6.2.4 RD/RA
- 6.2.5 LTM/LTO

- *Programming the Requirements.* PA/SI, RI/FS, RD, LTM and LTO program documents use the narrative format (Figure 5.1). Removal Action, IRA, RD/RA and RA program documents use the DD Form 1391 format (Figure 5.2).. Section 5.2.1 provides guidelines and examples for preparing program documents for each IRP phase, and Appendix C provides a detailed checklist for reviewing program documents. Sections 6.2.1 - 6.2.5 provide data requirements for program documents for each IRP phase.

- *Acquisition Strategy Considerations.* The RPM, ACC program manager, and the service center project manager (with input from the contract manager) discuss and decide the acquisition strategy for each project requirement. Chapter 6 of the ***U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook***, 1993

provides a description of the various contracting strategies and types. The parameters that drive the selection of contract type include:

- Level of uncertainty (in quantifying the scope of the project requirement),
- Time and schedule,
- Cost, and
- Continuity with other site and base project requirements.

Sections 6.2.1 - 6.2.3 list guidelines for selecting a particular service center Indefinite Delivery/Indefinite Quantity (ID/IQ) contract for a particular IRP phase.

- ***Scope of Work.*** The service center should develop a scope of work or scope of services and a detailed government cost estimate for each project requirement, as directed and based on program information and input from the RPM and ACC program manager. The service center should forward the scope and cost estimate to the RPM and ACC program manager for review. The RPM may also wish to request inputs on the scope from regulatory agencies or the RAB prior to finalizing it. Sections 6.2.1 - 6.2.5 provide guidelines for reviewing scopes for each IRP phase. All scopes of work should list the requested government-provided materials and services. The RPM should review this list carefully to ensure that the installation can provide the necessary support to the A-E or construction contractor, then plan for these services accordingly. The service center will finalize scopes, and negotiate contracts for all priority 1A projects. The service center may finalize scopes for all other projects, but must receive notification of funding before negotiating contracts.

- ***Updating the MAP and Project File.*** The RPM should include information on the new project/contract in the biannual MAP update. The RPM should update the project file with the following information:

  - A list of all personnel associated with the project and their specific duties (at the installation, ACC, service center, A-E and regulatory agencies),
  - A copy of the narrative or DD Form 1391,
  - A detailed cost and schedule breakdown,
  - Pertinent history of the project,

  - Specific issues to be resolved (Sections 6.2.1 - 6.2.5 provide examples) and
  - Details on the selected acquisition strategy and rationale for selection.

In addition, RPMs should update the following MAP tables on a monthly basis, including new information as it becomes available:

  - Table 3-1, IRP Site Summary

- Table A1-1, Estimated Annual Cost Summary (By Site --from site identification through site completion)
- Table A1-2, Estimated Annual Cost Summary (By PA/SI, RI/FS, etc.)

- ***Document Deliverables.*** Each phase of the IRP has specific document deliverables (work plans, reports, designs, etc.). Sections 6.2.1 - 6.2.5 list and describe deliverables for each phase of the IRP.

- ***Document Review.*** IRP documents are often the culmination of significant efforts in field work, sampling, analysis, research, interpretation and modeling. The IRP team must review each document thoroughly. When the installation utilizes a service center, the service center is responsible for performing a complete technical review of the documents. The RPM is responsible for performing and coordinating the functional review of the documents. Sections 6.2.1 - 6.2.5 provide detailed guidelines for reviewers.

  To streamline the review process, the RPM should coordinate concurrent reviews of documents with Air Force IRP representatives. The RPM should compile all Air Force comments and forward them to the service center within the scheduled review period. The RPM and the service center project manager should work to quickly resolve comments by telephone calls and meetings as necessary. Finally, the document should not be approved for final publication without the concurrence of the RPM, the ACC program manager and the service center.

  RPMs should provide IRP documents to the regulatory agencies for review (regardless of NPL status), including EPA CERCLA section, EPA RCRA section (if subject to permit conditions or Corrective Action Orders) and the appropriate state and local regulatory agencies.

  When submitting documents to regulatory agencies for review, RPMs should include a cover letter with the following information:

  - Background of the IRP and the site or sites.
  - Purpose of the document
  - Request for review
  - Reasonable review time frame (30 - 60 days)
  - Point of contact

  If the RPM has not received the review within the allotted time frame, it may be necessary to follow up by letter and by phone, requesting a response within a reasonable time frame (1-2 weeks). If no response is forthcoming, the RPM should draft a letter to the next higher management level in the regulatory agency, citing the request for input, the lack of response and the intent to move on with the cleanup project. Once all of the regulatory reviews and approvals required by law or regulation are complete, the RPM should move on with the project.

States participating in the DSMOA program (see Section 4.3.2 for additional information) should have the resources to devote to the review of documents. However, the EPA CERCLA section may not have the resources to review non-NPL submittals, requiring RPMs to repeat requests for reviews.

As part of the community involvement program, the installation should announce the availability of draft IRP documents for review. The draft documents should be placed in the information repository at the same time that the documents are provided to the other members of the IRP team for review.

- ***Coordination with IRP Team.*** Table 6.1 provides an overview of RPM coordination with the IRP team throughout an IRP project.

- ***Contract and Project Monitoring.*** After the service center awards a contract for a project requirement, the RPM and ACC program manager monitor the contract and project status. By staying involved, RPMs and ACC program managers can identify potential problems early on and take steps to correct these problems. To adequately monitor the contract and project, RPMs and ACC program managers should carry out the following actions:

  - Hold weekly teleconferences with service center project manager to review project status.
  - Review monthly project progress reports, which include the following information:
    - ⇒ Project number and site number(s),
    - ⇒ Percent complete,
    - ⇒ History and background of the project and site(s),
    - ⇒ Current status,
    - ⇒ Future requirements,
    - ⇒ Funds status
    - ⇒ Schedule, and
      - Award and notice to proceed dates,
      - Expected delivery date and actual completion date
    - ⇒ If applicable, quantity of contamination removed.
  - Review document deliverables.
  - Promptly address problems with project progress or contractor performance by notifying service center project manager of concerns.
  - Notify regulatory agencies of potential problems that may impact schedules.
  - Formally and promptly request extensions to FFA deadlines, if necessary.

Table 6.1. Coordination With the IRP Team.

Person/Organization Contacted	Frequency	Issues
Service Center project manager ACC program manager	weekly	• Project requirements • Project status
A-E or construction contractor	as required	• Provide information • Assist with access to records • Support field work
Civil Engineering and other organizations on base	as required	• Site information • Field work and construction support
JA	as required	• Applicable laws and regulations
PA	as required	• Community involvement activities
BEE	as required	• Health implications of site contamination • ATSDR health assessments
RAB	quarterly	• Opportunity for community inputs to the IRP process • Update on IRP status
Regulatory agencies	as required	• Document reviews • Inputs to the IRP process
Community	as required	• Opportunity to review the Administrative Record. • Opportunity to review draft documents. • Opportunity for a public meeting after an RI/FS or IRA.

- ***Community Involvement.*** Community involvement requirements are specific to each phase of the IRP. Sections 6.2.1 - 6.2.5 describe these requirements for each phase of the IRP. The RAB is a common element for all IRP phases. It provides a forum for presentation and discussion of IRP plans and results. Note that all IRP documents should be released for public review at the draft stage. Refer to section 4.1.1 for additional information on community involvement issues.

6.2.1 Preliminary Assessment/Site Inspection (PA/SI)

Definition and Purpose. The Preliminary Assessment/Site Inspection (PA/SI) is usually the first step in the investigation process after identifying an AOC or reopening a site. The PA/SI consists of a records search and limited field work (sampling and analysis) to confirm or deny the existence of contamination and the potential for threat to human health and the environment due to contaminant migration. The purpose of the PA/SI is to gather sufficient information to allow EPA to calculate the HRS score, to make an NFRAP decision (determine that the site or AOC poses no threat to human health and the environment), to determine that a Removal Action is warranted, or to determine that an RI/FS is warranted.

Programming the PA/SI Requirement. The PA/SI narrative program document should include all of the data gathered during AOC identification or reopened site review (see Section 6.1 for list). Section 5.2.1.4 provides guidance on developing the PA/SI program document.

Acquisition Strategy Considerations. If the RPM, ACC program manager and service center project manager choose an existing service center Indefinite Delivery/Indefinite Quantity (ID/IQ) contract mechanism, they should consider the following factors when choosing a particular ID/IQ contract:

- A-E continuity,
- A-E past performance/responsiveness, and
- The capability of modifying an existing contract.

If the site is likely to require an RI/FS, then the potential for future continuity and past performance/ responsiveness are important factors for selection. If the amount of work required appears to be limited, then the ability to modify an existing contract to complete the work quickly and efficiently should be a consideration for selection.

Scope of Work. When reviewing the scope of work for a PA/SI, the RPM should ensure that it includes the following tasks:

- Completing EPA PA form,

- Collecting sufficient information to support NFRAP, Removal Action, or continuing with an RI/FS (compare scope of work with the Category I and II NFRAP decision checklists in the NFRAP Guide),
- Compiling and formatting sampling data for IRPIMS and
- Developing adequate copies of necessary documents.
- Providing monthly progress reports to the ACC program manager, the RPM and the service center.

Updating the MAP and Project File. Address the following issues, specific to the PA/SI, in the biannual MAP update and the project file:

- Conceptual site model,
- Data usability,
- Data management,
- Data gaps,
- Regulatory compliance,
- Community involvement activities,
- Strategies for achieving site restoration, and
- Schedules for conducting site restoration activities.

Documentation -- Description and Guidelines for Review. The following provides a description of the document requirements and guidelines for document review.

- ***PA/SI Work Plans*** -- If field work is planned, work plans are required to document sampling and analysis procedures, QA/QC procedures, and health and safety requirements.

  Review the PA/SI work plans for completeness, ensuring that all the necessary tasks and procedures are included and are specific to and consistent with the project data requirements. The RPM should coordinate the review of the sampling and analysis procedures, QA/QC procedures and the health and safety requirements with the BEE. Provide the PA/SI work plans to the regulatory agencies for review.

- ***EPA PA Form*** -- This is a standardized fill-in-the-blank form that EPA requires in order to apply the HRS II score. The RPM should request the most recent version of this form from the regional EPA office.

  Review the *EPA PA Form* for completeness, ensuring that all of the questions are answered correctly and that the correct version of the form is being used.

- ***PA/SI Report*** -- This report records and interprets the data collected during the PA/SI investigation. Place the final PA/SI report in the Administrative Record and Information Repository.

Review the PA/SI report to ensure that:

- The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided.
- The executive summary is concise and non-technical.
- The conclusions and recommendations are logical, definitive and well supported by information in the text.
- The information describing the base, the IRP, the site or AOC location and history is accurate.

Coordinate the review of the PA/SI report with JA, PA, the BEE, Civil Engineering and other organizations on base as appropriate. Provide the PA/SI report to the regulatory agencies and the RAB for review.

Coordination with IRP Team. Section 6.2 and Table 6.1 list standard coordination procedures. During the PA/SI, the RPM should provide the PA Form and the PA/SI report to EPA for HRS II scoring purposes.

Community Involvement. Community involvement activities are limited during the PA/SI, depending on public interest in the site. At the very least, the installation should:

- Request inputs on and brief the status of PA/SI activities at the RAB meeting.
- Issue a public notice to announce the availability of the PA/SI report and the Administrative Record for review.

Planning the Next Step. Depending on the results of the PA/SI, the next step in the IRP process may be:

- A removal action or presumptive remedy,
- An RI/FS or
- NFRAP

It is not necessary to complete the PA/SI before planning the next step in the IRP process. RPMs should develop the program document and update the site or AOC strategy and schedule in the MAP when the next course of action becomes evident.

Designating an IRP Site. An AOC may be designated as an IRP site if the SI shows documented evidence of DERA-eligible contamination. The site must be validated, coded, numbered and entered into WIMS-ES. ACC CES/ESV must validate the site and enter the information in WIMS-ES. The RPM must code and number the site in accordance with HQ USAF/CEVR site identifiers, as follows:

- Number consecutively, independent of the site identifier. Each site on base must have a different number.

- Use the following site identifier codes to designate site types:

Site Identifier	Site Type
ST	Underground Tanks, Tanks, POL Lines
SS	Spills, Storage Areas
LF	Landfills
DP	Disposal Pits
WP	Waste Pits, Sumps, Lagoons, Waste Treatment, Evaporation Pits
RW	Radioactive Waste Sites
FT	Fire Training Areas
SD	Surface Runoffs, Wash Racks, Ditches, Oil/Water Separators

NFRAP After PA/SI. The NFRAP decision after a PA/SI may either be:

- **Category I:** No hazardous substances or petroleum products stored, released or disposed of at the location for greater than one year, or
- **Category II:** Contaminants are detected but concentrations are below action levels (regulatory-approved risk screening levels or ARARs)

The RPM must ensure that the data gathered during the investigation can support the NFRAP decision (see NFRAP Category I and II decision checklists). Document the NFRAP decision in a Decision Document (DD) or technical report. The classification of sites for Category I and II NFRAP decisions are:

- Response complete – Air Force certification of and signature on the NFRAP decision.
- Site closeout – Regulatory concurrence with the NFRAP decision.

For more information, consult the following references.

U.S. Air Force, Summer 1994, *NFRAP Guide.*

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Section 5.3.2.

U.S. EPA, 1992, *Guidance for Performing Site Inspections under CERCLA*, EPA/9345.1-02A.

U.S. EPA, September 1991, *Guidance for Performing Preliminary Assessments (PA) Under CERCLA*, EPA/9345.0-01A.

CERCLA Section 120 and SARA Section 211.

NCP, Subpart E, 40 CFR 300.420 and Appendix A.

6.2.2 Removal Action, Interim Remedial Action (IRA), or Presumptive Remedy

Definition and Purpose. A Removal Action or Interim Remedial Action (IRA) is any early action taken to mitigate contamination (such as a fence or cap, replacement of a drinking water source, a ground water pump and treat system to prevent contaminant migration off-site, excavation and disposal of contaminated soil, or in-situ treatment). of contaminated soil. The installation may take a Removal Action at any time during the investigation process, and it may or may not be the final action. The installation may take an IRA during the RI/FS; it is usually not the final action. The purpose of the Removal Action or IRA is to address a current or near-future threat to human health and the environment or inhibit migration of contaminants and reduce life-cycle costs of cleanup.

Presumptive remedies are proven technologies, presumed to be most appropriate for remediating certain common types of AOCs or sites. EPA developed these remedies by reviewing and comparing selection criteria and performance data for previously selected technologies. Presumptive remedies streamline the remedy selection process by focusing site characterization on data needed to support the remedy and eliminating the duplication of effort in the identification and screening of remedial alternatives. Presumptive remedy protocols may be used when conducting a Removal Action, IRA or Remedial Action (RA). As an initiative, ACC is currently screening sites to identify candidates for Presumptive Remedies and developing "plug in" generic EE/CA documentation to serve as the basis for selection a removal action (PREE/CA). Current EPA-approved presumptive remedies include:

- For Volatile Organic Compounds (VOCs) in soil:
  - ⇒ Soil vapor extraction (SVE)
  - ⇒ Thermal desorption
  - ⇒ Incineration
- For municipal landfills: containment by
  - ⇒ Capping
  - ⇒ Source area ground water control
  - ⇒ Leachate collection and treatment
  - ⇒ Landfill gas collection and treatment
  - ⇒ Institutional controls (fencing, limiting access)

- For ground water contamination: pump and treat

ACC recommends using Removal Actions or IRAs (including presumptive remedies) whenever possible. Removal Actions and IRAs differ in the documentation and the approval authority required prior to taking the action. The supporting documents for a Removal Action include the Engineering Evaluation/Cost Analysis (EE/CA) and the Action Memorandum. The supporting documents for an IRA include the Interim Proposed Plan (based on existing RI/FS information) and the Interim Decision Document (DD) or Interim Record of Decision (ROD). For installations on the NPL, EPA retains the final approval authority for Remedial Actions (interim or final), however, for Removal Actions, the Air Force retains the final approval authority. Since each action has the same goals and produces the same end results, choose the most streamlined approach to cleanup.

Programming the Removal Action or IRA Requirement. Include the following data on the DD Form 1391 program document for a Removal Action or IRA:

- A history of the AOC or site, encompassing all of the available information about the AOC or site from previous IRP activities (PA/SI, RI/FS),
- Cleanup level goals,
- Relative risk category,
- Action Memorandum, DD or ROD signature date,
- A detailed description of the Removal Action or IRA technology and the requirements for conducting the cleanup,
- The reason for conducting the Removal Action or IRA,
- How the Removal Action or IRA relates to overall AOC or site cleanup and closeout (i.e., whether it is the only site cleanup action or part of multiple planned cleanup actions).

Section 5.2.1.5 provides guidance on developing the Removal Action/IRA program document. If the action is an out-of-cycle and time-critical requirement, follow the guidelines in Section 5.4 for programming and funding the out-of-cycle project requirement.

Acquisition Strategy Considerations.

USACE Rapid Response Capabilities. The ID/IQ A-E contracts, typically used by traditional service centers, cannot be used for construction projects. However, the USACE has several expedited contracting mechanisms available for qualifying projects. To qualify, a project must be under time constraints due to regulatory requirements or threats to human health and the environment. After ACC CES/ESV validates and approves funding for a project requirement, the RPM should submit a standard project request form (with all of the pertinent information about the site) to the local USACE district. After USACE acceptance and ACC CES/ESV approval to award, project execution can begin. To provide a quick response, these projects are usually handled by a two-step design-build process, using a type of cost-reimbursement contract that is generally costlier than

traditional contracts. The RPM must program and procure any follow-on requirements (LTO or LTM) under a separate project number and contract. Rapid Response is intended for short-suspense, short-term solutions.

Scope of Work. The RPM should ensure the scope of work for the Removal Action or IRA includes the following tasks:

- Completing permit applications as required,
- Developing adequate copies of necessary documents,
- Measuring and documenting the type and quantity of contamination removed or treated by the project.
- Gathering sufficient information to determine the next step: LTO, LTM, RI/FS or NFRAP.
- Providing monthly progress reports to the ACC program manager, the RPM and the service center.

Updating the MAP and Project File. Address the following issues, specific to the Removal Action or IRA, in the biannual MAP update and the project file:

- How the Removal Action or IRA fits into the overall site and installation cleanup scheme,
- Site conceptual model,
- Data management,
- Data gaps,
- Regulatory compliance,
- Community involvement activities and schedules, and
- LTO requirements.

Documentation -- Description and Guidelines for Review. The following provides a description of the document requirements and guidelines for document review.

Removal Action Documentation. A Removal Action may require the following documents, depending on whether it is time critical (less than six month preparation time available) or non-time critical.

- **Engineering Evaluation/Cost Analysis (EE/CA)** -- Non-time critical Removal Actions require an EE/CA. It is essentially a very abbreviated RI/FS. In addition to the standard information required by EPA guidance, the EE/CA should also include an estimate of the type and quantity of contamination to be removed or treated.

Review the EE/CA to ensure:

- The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided.
- The executive summary is concise and non-technical.
- The recommendations derived from the EE/CA are logical and well supported by information in the text.
- The information describing the base, the IRP, the site location and history is accurate.

- An estimate of the type and quantity of contamination to be removed or treated is included.

Coordinate the review of the EE/CA with JA (discussion of ARARs) and Civil Engineering. Provide the document to the regulatory agencies for review.

- **Action Memorandum** -- The Action Memorandum is required for time critical and non-time critical Removal Actions. This document is essentially a decision document for a Removal Action.

  Review the Action Memorandum to ensure that the document is defensible and meets the requirements of Air Force policy and guidance and regulatory policy and guidance. Coordinate the review of this document with the entire IRP team. The Installation Commander is the Action Memorandum signatory.

- **Design and Specifications** -- The level of design depends on the complexity of the site and the complexity of the removal action. Use generic design specifications when available (landfill cap, PREE/CA), but consider site-specific conditions.

- **Progress Reports** -- The A-E or construction contractor should submit progress reports on a regular basis (at least monthly) for the duration of the Removal Action. The progress reports should include the following:

  - A summary of the work completed (including percentage completed),
  - Problems and corrective actions,
  - Schedule and
  - Quantity and type of contamination removed or treated.

  Review progress reports closely to:

  - Track the status of the project,
  - Review the type and quantity of contamination removed or treated compared to estimates in the EE/CA and
  - Detect potential problems.

Discuss anomalies immediately with the service center or Contracting Officer (if base contracting handled procurement) to avert future problems.

IRA Documentation.

- **Interim Proposed Plan** -- This document is developed primarily for the public review process. The Interim Proposed Plan summarizes the RI/FS (to the point that the investigation is complete) and describes the preferred cleanup alternative in language that the general public can understand. The Interim Proposed Plan should also include an estimate of the type and quantity of contamination to be removed or treated. The installation must notify the public of the availability of the Interim Proposed Plan and Administrative Record, give the public a 30 day review and comment period, and provide an opportunity for a public meeting.

  Review the Interim Proposed Plan to ensure:

  - The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided (the IRA requirements are not as stringent as RA requirements).
  - The document is written in language that the general public can understand.
  - The preferred alternative is logical, definitive and supported by information from the RI/FS.
  - The document summarizes and references the ongoing RI/FS and provides justification for the early action.
  - The document estimates the type and quantity of contamination to be removed or treated.
  - The information describing the base, the IRP, the site location and history is accurate.

Coordinate the review of this document with JA, PA, the BEE, EMB and EPC, ACC CES/ESV, the RAB and regulatory agencies.

- **Interim Decision Document (DD)(non-NPL) or Interim Record of Decision (ROD) (NPL)** -- These documents provide a signed formal record of the cleanup decision-making process. The Interim DD should, at the very least include a summary of the RI/FS (to the point that the investigation is complete) and description of and justification for the preferred IRA alternative. A better option is to follow the Interim ROD format described in EPA guidance. An Interim ROD contains the information in the Interim Proposed Plan, a Responsiveness Summary (summary of public comments and associated responses) and a Declaration (declares consistency of the decision with CERCLA, SARA and the NCP, cost effectiveness, and protection of human health and the environment).

Review the Interim DD or ROD to ensure:

- The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided (the IRA requirements are not as stringent as RA requirements).
- The document provides a comprehensive summary of the decision-making process (the justification for taking an early action), summarizing relevant documents (such as the most up-to-date information in the RI/FS).
- The document notes any uncertainties and contingencies and plans to continue the RI/FS to determine the final Remedial Action.
- The information describing the base, the IRP, the site location and history is accurate.

Coordinate the review of this document with JA, PA, the BEE, EMB and EPC, ACC CES/ESV, the RAB and regulatory agencies. Signatories for this document are:

⇒ For NPL: ACC Vice Commander (HQ ACC/CV) (See Section 8.6)
⇒ For non-NPL: Installation Commander

- **Design and Specifications** -- The level of design depends on the complexity of the site and the complexity of the removal action. Use generic design specifications when available (landfill cap, PREE/CA), but consider site-specific conditions.

- **Progress Reports** -- The A-E or construction contract should submit progress reports on a regular basis (at least monthly) for the duration of the IRA. The progress reports should include:

  - A summary of the work completed (including percentage completed),
  - Problems and corrective actions,
  - Schedule, and
  - Quantity and type of contamination removed or treated.

  Review progress reports closely to track the status of the project, review the type and quantity of contamination removed or treated compared to the estimates in the Interim Proposed Plan and detect potential problems. Discuss anomalies immediately with the service center or Contracting Officer (if base contracting handled procurement) to avert future problems.

Coordination with the IRP Team. Section 6.2 and Table 6.1 list the standard coordination procedures.

Community Involvement. Community involvement activities during a Removal Action depend on whether the action is time critical or non-time critical. For time-critical actions, the installation may start the Removal Action but must publish a notice of the availability of the Administrative Record for review within 60 days after the start of the Removal Action. If the action lasts longer

than 120 days or is non-time-critical, the base must develop a new CRP or amend the existing CRP to include Removal Action considerations. The base must also offer the public an opportunity to review the EE/CA for 30 days. The installation may release fact sheets, depending on public interest. If applicable, include Removal action status as an agenda item at the RAB meeting.

Community involvement activities during an IRA are the same activities required prior to a Remedial Action. If the CRP does not address the IRA, amend the CRP to include the IRA community involvement activities. The installation must notify the public of the availability of the Interim Proposed Plan and Administrative Record, provide a 30 day review and comment period and provide the opportunity for a public meeting. The installation must record a formal transcript of the public meeting. The Air Force, as lead agency, must develop a Responsiveness Summary (a summary of comments and associated responses) to include in the Interim ROD or DD. Finally, the installation must notify the public of the availability of the signed ROD or DD. If applicable, include IRA status as an agenda item at the RAB meeting.

Peer Reviews. Peer reviews are required for complex IRAs or Removal Actions (Refer to section 4.1.10 for additional information). Plan for the peer review to occur at the draft Interim Proposed Plan or draft EE/CA phase.

Planning the Next Step. Depending on the purpose and results of the removal action or IRA, the next step in the IRP process may be:

- RD
- Initiating or continuing the RI/FS or
- NFRAP.

It is not necessary to complete the removal action or IRA before planning the next step in the IRP process. RPMs should develop the program document and update the site strategy and schedule in the MAP when the next course of action is evident.

NFRAP After Removal Action or IRA. The NFRAP decision after a Removal Action or IRA is **Category IV:** a determination that all actions necessary to protect human health and the environment have been taken. The classification of sites for the Category IV NFRAP decision are:

- Remedial Action in Place -- Removal Action or IRA construction complete and system is functional and operational; LTO or LTM may still be necessary to meet cleanup levels.
- Response complete -- Removal Action or IRA construction complete; necessary LTO and LTM complete. Site residuals are protective of human health and the environment.
- Site closeout -- Regulatory concurrence with the Response Complete NFRAP decision.

For more information, consult the following references.

U.S. Air Force, Summer 1994, *NFRAP Guide*

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook.*

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program Management Action Plan (MAP) Guidance*, Sections 1.4.2 and 1.4.3.

HQ USAF/LEEV 12 Oct 1989 Letter, Subject: Removal Assessments at Installation Restoration Program (IRP) Sites.

U.S. EPA, 1990, *Superfund Removal Procedures: Action Memorandum Guidance*, EPA/9360.3-01, Sep 1990. This is Volume I of a ten-volume series of guidance documents entitled ***Superfund Removal Procedures*.**

U.S. EPA, 1989, *Use of Removal Approaches to Speed Up Remedial Action Projects*, OSWER Directive 9355.0-25A, 7 Jul 89.

U.S. EPA, 1989, *Guidance on Preparing Superfund Decision Documents: The Proposed Plan, the Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment*, EPA/540/G-89/007, Jul 1989.

U.S. EPA, 1987, *Draft EE/CA Guidance for Non-Time Critical Removal Action*, 21 Jun 1987.

CERCLA Section 120 and SARA Section 211.

NCP, Subpart E, 40 CFR Part 300.415.

6.2.3 Remedial Investigation/Feasibility Study (RI/FS)

Definition and Purpose. The Remedial Investigation (RI) includes:

- A field investigation (with sampling and analyses),
- Data evaluation to determine nature and extent of contamination,
- ARAR evaluation (potential cleanup standards and guidelines) and
- Risk assessment to evaluate the risk of the site to human health and the environment (and determine cleanup levels that are protective of human health and the environment based on criteria mandated by the NCP).

The Feasibility Study (FS) includes:

- Evaluating cleanup alternatives using the NCP-mandated nine criteria (protection of human health and the environment, compliance with ARARs, long-term effectiveness, reduction of toxicity, mobility and volume, short-term effectiveness, implementability, cost, and state and community acceptance) and
- Recommending a preferred cleanup alternative.

The overall purpose of the RI/FS is to characterize the site, determine cleanup standards, evaluate cleanup technologies, and recommend a cleanup alternative.

Programming the RI/FS Requirement. The RI/FS is probably the most complex project requirement to program due to the large data requirements and uncertainty. The RI can be done separately or concurrent with the FS. However, ACC recommends that the RI and FS be programmed and procured together. The RI/FS can encompass one site, or more likely, multiple sites with varying levels of contamination. The RI/FS may also extend through several fiscal funding years, requiring several iterations of the program document, depending on the complexity of the site or sites. The RI/FS may also include treatability studies to determine the viability of particular technologies to clean up the site.

Although the RPM may not initially know the full extent of requirements, the RI/FS programming process should begin as early as possible using the best available information. Available tools to assist RPMs in determining the required level of effort include:

- RACER (See section 5.1.6),
- EDMDS (See section 4.2.3), or
- *The U.S. Air Force Handbook to Support the Installation Restoration Program (IRP) Statements of Work, Volume I – Remedial Investigation/Feasibility Studies (RI/FS).* May 1991.

Remember to consider contract requirements for administrative record support, community involvement support, and MAP update support. The intent is to prevent lengthy delays or work stoppage for the development and validation of new (vs. revised) program documents. The RPM can revise a validated program document with updated information in less time and with less impact on the ACC IRP budget than it takes to develop a new program document for an unprogrammed project requirement. In addition, RI/FS requirements with program costs exceeding $1 million require a Peer Review.

The narrative program document for an RI/FS should include the following data:

- A history of the site, encompassing all of the available information about the site from previous IRP activities (PA/SI, Removal Actions, etc.),

- A description of the RI/FS activities and the reason that the RI/FS activities are required.
- Multi-year requirements (past and future), funding history and funding projections

Section 5.2.1.6 provides guidance on developing the RI/FS program documents.

Acquisition Strategy Considerations. If the RPM, ACC program manager and service center project manager select an existing service center ID/IQ contract mechanism, they should consider the following factors when choosing a particular ID/IQ contract:

- A-E continuity (including future availability) and
- A-E past performance, responsiveness and cost.

Scope of Work. When reviewing the scope of work for the RI/FS, the RPM should ensure that it includes the following tasks:

- Developing all required work plans,
- Support for community relations activities and Administrative Record updates (ACC-approved services such as document reproduction and technical support),
- Compiling and formatting the analytical data for IRPIMs,
- Collection of sufficient information to support site closeout or FS,
- Collection of information to evaluate relative site risk and
- Developing adequate copies of necessary documents.
- Providing monthly progress reports to the ACC program manager, the RPM and the service center.

Use the following tools when reviewing the RI/FS scope of work:

- RACER (See section 5.1.6) and
- *The U.S. Air Force Handbook to Support the Installation Restoration Program (IRP) Statements of Work, Volume I – Remedial Investigation Feasibility Studies (RI/FS)*, May 1991.

Updating the MAP and Project File. Address the following issues, specific to the RI/FS, in the MAP update and project file:

- Data usability,
- Data management,
- Data gaps,
- Regulatory compliance,
- Community involvement activities and
- Strategies and schedules for achieving site restoration.

Documentation. The following provides a description of the document requirements and guidelines for document review.

- **RI/FS Plans** -- The RI/FS plans establish sampling and analysis strategies and techniques, QA/QC procedures, health and safety procedures and community involvement plans and techniques.

  Review the RI/FS plans and attachments to ensure:

  - The documents are complete and include all of the necessary tasks and procedures.
  - The RI/FS approach is logical.
  - The documents are consistent with relevant Air Force and regulatory guidance in format and type of information provided.

  Coordinate the review of the sampling and analysis strategies and techniques, QA/QC procedures and health and safety requirements with the BEE, and the review of the Community Relations Plan with PA. Provide the RI/FS plans to the regulatory agencies for review.

- **Analytical Results Report** -- This is an interim report that presents the sampling results for QA/QC purposes and to flag areas of concern.

  The service center reviews the Analytical Results Report for QA/QC purposes. However, the RPM should review the data in coordination with the BEE to identify any areas of concern that may require expedited action.

- **RI/FS Report** -- The **RI Report** compiles and interprets all of the sampling data to characterize the site, analyzes the risk to human health and the environment (risk assessment) and evaluates ARARs. The **FS Report** identifies remedial action objectives (cleanup standards and guidelines based on the risk assessment and ARAR evaluation), identifies and screens remedial action alternatives and evaluates viable alternatives in accordance with the nine criteria mandated by the NCP -- protection of human health and the environment, compliance with ARARs, long-term effectiveness, reduction of toxicity, mobility and volume, short-term effectiveness, implementability, cost, state and community acceptance.

  Review the RI/FS Report to ensure:

  - The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided.
  - The executive summary is concise and non-technical.
  - The conclusions and recommendations are logical, definitive and well supported by information in the text.

- The information describing the base, the IRP, the site location and history is accurate.

Coordinate the review of the RI/FS with JA (ARAR determination), PA (general information), BEE (analytical results, risk assessment) and Civil Engineering (FS). Provide the RI/FS report to the regulatory agencies and the RAB for review. RI/FS reports recommending Remedial Action require Peer Reviews.

- **Proposed Plan** -- This document is developed primarily for the public review process. The Proposed Plan summarizes the RI/FS and describes the preferred cleanup alternative in language that the general public can understand.

Review the Proposed Plan to ensure the following:

- The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided.
- The document is written in language that the general public can understand.
- The preferred alternative is logical, definitive and supported by the RI/FS.
- The information describing the base, the IRP, the site location and history is accurate.

The draft Proposed Plan must be widely disseminated for review and coordination. Coordinate the review of the document at the installation by distributing a draft for comments to:

- JA,
- PA,
- EPC or ELC,
- the regulatory agencies,
- the RAB, and
- the ACC CES/ESV program manager who will in turn distribute the document to:
    - HQ ACC/JAV and
    - HQ ACC/PA.

After finalizing the Proposed Plan, the installation must notify the public of the availability of the Proposed Plan and Administrative Record, provide a 30 day review and comment period and provide an opportunity for a public meeting.

The installation must record a transcript of the public meeting and compile all comments, written and oral, collected during the comment period and the public meeting. Following the close of the comment period, the installation must generate a Responsiveness Summary to address and respond to the public comments. The Responsiveness Summary is published with the Record of Decision (ROD).

- **Decision Document (DD)(non-NPL) or Record of Decision (ROD) (NPL)** -- These documents provide a signed formal record of the cleanup decision-making process. In general, a DD includes a summary of the RI/FS and a description of and justification for the preferred alternative. A better option is to follow the ROD format described in EPA guidance. A ROD contains the information in the Proposed Plan, a Responsiveness Summary (summary of comments and associated responses) and a Declaration (declares consistency of the decision with CERCLA, SARA and the NCP, cost effectiveness, and protection of human health and the environment). The ACC Vice Commander (HQ ACC/CV) is the NPL ROD signatory and the Installation Commander is the non-NPL DD or ROD signatory.

  Review the DD or ROD to ensure:

  - The document is consistent with relevant Air Force and regulatory guidance in format and type of information provided.
  - The document contains a comprehensive summary of the decision-making process, summarizing and referring to relevant documents rather than providing unnecessary details.
  - The document notes any uncertainties and contingencies.
  - The information describing the base, the IRP, the location and history is accurate.
  - Peer review has been conducted.

  The ROD or DD must be widely disseminated for review and coordination prior to signature by the ACC Vice Commander or Installation Commander. Review and coordination procedures for NPL installations are provided in section 8.6. Review and coordination procedures for non-NPL installations are as follows:

  - Coordinate review of draft ROD or DD with the following organizations:
    - ⇒ Installation JA,
    - ⇒ Installation PA
    - ⇒ Installation EPC,
    - ⇒ The RAB, and
    - ⇒ The regulatory agencies.
  - Forward draft ROD or DD to ACC program manager for review. ACC program manager will coordinate review of draft ROD or DD with:
    - ⇒ JAV
    - ⇒ PA
    - ⇒ ELC
    - ⇒ ACC CES/ESV
  - Finalize ROD or DD and staff the document to the Installation Commander for signature.
  - Announce availability of signed ROD or DD to the public, in accordance with standard community involvement procedures, as listed below and in Section 4.1.1.

Coordination with the IRP Team. Section 6.2 and Table 6.1 provide the standard coordination procedures.

Community Involvement. Community involvement activities increase during the RI/FS. The base must develop a Community Relations Plan (CRP) to provide a formal guide to community involvement activities during investigation and cleanup. For program cohesiveness and efficiency, it is best to develop the CRP for the entire installation IRP. An A-E working closely with the RPM and PA, usually drafts the CRP. Community interviews, conducted by the A-E and an Air Force representative, are the first step in CRP development. These interviews determine the level of interest of the community and the best methods of disseminating information to the public. Using the information gathered during these interviews, the A-E drafts the CRP, which includes a summary of the installation IRP, a summary of information gathered during interviews and an implementation guide for required and recommended community involvement activities. In addition, include RI/FS issues as an agenda item at RAB meetings.

One of the activities designed to provide information to the community during the RI/FS and other phases of the IRP is the publication of Fact Sheets. These are brief, non-technical summaries of site information. Publication and distribution of periodic newsletters is another method of providing the community with updates on the status of IRP activities.

After completion of the RI/FS report and Proposed Plan, the installation must notify the public of the availability of the Proposed Plan and Administrative Record, provide a 30 day review and comment period and an opportunity for a public meeting. The installation must record a formal transcript of the public meeting. The Air Force, as lead agency, must develop a Responsiveness Summary (a summary of comments and associated responses) to include in the Record of Decision or Decision Document. Finally, the installation must notify the public of the availability of the signed ROD or DD.

Peer Reviews. Peer reviews are required for RI/FS projects with program costs exceeding $1 million (See section 4.1.10). Plan a peer review to occur at the draft PA/SI or SI phase. Reviewers should analyze the RI/FS scope of work.

Planning the Next Step. Depending on the results of the RI/FS, the next step in the IRP process may be:

- RD/RA
- IRA
- LTM or
- NFRAP.

It is not necessary to complete the RI/FS before planning the next step in the IRP process. RPMs should develop the program document and update the site strategy and schedule in the MAP when the next course of action becomes evident.

NFRAP After RI/FS. A Category III NFRAP decision may be made after the RI if concentrations of contaminants at the site are below risk-based levels (baseline risk assessment) or ARARs and the site does not require removal or remedial action. A Category III NFRAP decision may also be made if the RI/FS preferred alternative is the "No Action" alternative. The classification of sites for a Category III NFRAP decisions are:

- Response complete -- Air Force certification of and signature on the NFRAP decision.
- Site closeout -- Regulatory concurrence with the NFRAP decision.

For more information, consult the following references.

U.S. Air Force, Summer 1994, *NFRAP Guide.*

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Sections 5.3.3 and 5.3.4.

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program Management Action Plan (MAP) Guidance*, Section 1.4.

U.S. Air Force, May 1991, *U.S. Air Force Handbook to Support the Installation Restoration Program (IRP) Statements of Work, Volume I -- Remedial Investigation /Feasibility Studies (RI/FS).*

U.S. EPA, 1992, *Community Relations in Superfund, A Handbook*, Jan 1992.

U.S. EPA, *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A)*(EPA/540/1-89/002, Dec 1989) and *Volume II: Environmental Evaluation Manual* (EPA/540/1-89/001, Mar 1989).

U. S. EPA, *CERCLA Compliance with Other Laws Manual, Part I* (EPA/540/G-89/006, Aug 1988) and *Part II* (EPA/540/G-89/009, Aug 1989).

U.S. EPA, 1989, *Guidance on Preparing Superfund Decision Documents: The Proposed Plan, the Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment*, EPA/540/G-89/007, Jul 1989.

U. S. EPA, 1988, *Conducting Remedial Investigations/Feasibility Studies (RI/FS) Under CERCLA, Guidance*, EPA/540/G-89/004, Oct 1988.

CERCLA Section 120 and SARA Section 211.

NCP, Subpart E, 40 CFR 300.430.

6.2.4 Remedial Design/Remedial Action (RD/RA)

Definition and Purpose. Remedial Design/Remedial Action (RD/RA) involves the development of the engineering design and bid specifications and construction of the cleanup system. The purpose of RD/RA is to design and construct the selected cleanup alternative.

Programming the RD/RA Requirement. The RPM can program the RD/RA as either a single project requirement or two individual project requirements, depending on the complexity of the action. For instance, if pre-design pilot studies are required, or if the extent of contamination requires further definition, then program the RD separately. If the remedial action is not complex or if the two-step (design-build) acquisition strategy is planned, then program the RD/RA as a single project requirement.

The narrative program document for an RD or DD Form 1391 for RA or RD/RA should include the following data:

- A history of the site, encompassing all of the available information about the site from previous IRP activities (PA/SI, Removal Actions, RI/FS),
- Cleanup level goals,
- Relative risk classification,
- DD or ROD signature date,
- A detailed description of the selected cleanup technology and the requirements for constructing the cleanup system.
- Multi-year funding requirements (past and future) -- funding history and funding projections (including LTO)

Sections 5.2.1.7 and 5.2.1.8 provide guidance on developing the RD and RD/RA program documents, respectively.

Program documents for ground water **pump and treat** RAs must include the following information in the justification:

1) The objectives of the system. Example objectives include restoration to ARARs or intermediate cleanup levels (ACLs), prevention of contaminant migration, bioremediation, etc.

2) The volume of contaminant in the aquifer in gallons.

3) A map of the contaminant plume showing types and concentrations of contaminants, using iso-concentration contours.

4) The acquisition strategy used to accomplish RI/FS through LTO.

5) The expected reduction of contaminant concentrations by year for the first ten years of operation. Generate a graph of expected concentration vs. time as a visual aid.

6) The total system cost (RA) and operation and maintenance costs (LTO) for the first 10 years of system operation.

7) Documentation of evaluation of other technologies.

8) Justification for not using another technology.

Acquisition Strategy Considerations. Acquisition strategy is especially important during RD/RA to ensure a quality job at a reasonable cost. The RPM, ACC program manager, and service center project manager should evaluate the requirement and the various contracting mechanisms to determine whether to award a single contract (two-step or RFP) for RD/RA or separate contracts for each phase. A single contract mechanism will most likely save time over contracting the RD and RA separately. However, if the cleanup alternative is complex or the site information limited, the single contract mechanism may result in prohibitive costs due to the inherent contracting risk associated with this type of project. Innovative technologies can be promoted either by using the single contract mechanism or including a value engineering clause in the separate RD and RA contracts.

If the RPM, ACC program manager and the service center project manager select an existing service center ID/IQ contract mechanism for the RD, they should consider the following factors when choosing a particular ID/IQ contract:

- A-E continuity (familiarity with results of RI/FS),
- A-E familiarity with state-of-the-science technology and
- A-E past performance, responsiveness and cost.

Scope of Work. When reviewing the scope of work or bid specifications for RD/RA, the RPM should ensure it is consistent with the DD or ROD and includes the following tasks:

- Development of all required work plans and permit applications,
- Support for community relations activities and Administrative Record updates (ACC approved services such as document reproduction and technical support,
- Compiling and formatting any analytical data for IRPIMs,
- Development of an operations and maintenance manual,
- A performance period,
- Development of adequate copies of necessary documents, and
- Measurement of the type and quantity of contamination removed or treated by the action.
- Providing monthly progress reports to the ACC program manager, the RPM and the service center.

Updating the MAP and Project File. Include the following issues, specific to the RD/RA, in the biannual MAP update and project file:

- Design and construction obstacles,
- Expected contaminant removal rate,
- LTO requirements,
- Data management,
- Regulatory compliance,
- Community involvement activities and
- Strategies and schedules for achieving site restoration.

Documentation. The following provides a description of the document requirements and guidelines for document review.

- RD/RA Work Plans -- The RD/RA Work Plans establish planning, scheduling and reporting requirements, sampling and analysis strategies and techniques (if necessary), QA/QC procedures, health and safety procedures and community relations plans and techniques (as an amendment to the CRP developed during the RI/FS).

  Review the RD/RA work plans, including attachments, to ensure:

  - All necessary tasks and procedures are included.
  - The approach to the RD/RA is logical and in accordance with the recommendations in the RI/FS, as documented in the DD or ROD.

  Coordinate the review of any sampling and analysis strategies and techniques, QA/QC procedures and health and safety procedures with the BEE. Coordinate the review of CRP updates with PA. Additionally, coordinate the review of the planning, scheduling and

reporting requirements with other Civil Engineering branches. Provide the RD/RA work plans to the regulatory agencies and RAB for review.

- **35%, 65%, 95% and 100% Design Submittals** -- The 35% design submittal is usually a conceptual design. The 65% and 95% design submittals are draft design documents for review and the 100% design submittal is the final design complete with bid specifications and construction drawings. Prior to initiating the design, the IRP team should determine whether or not all four stages of design are required for the project, as skipping unnecessary reviews will expedite the cleanup process.

  Review the design documents to ensure the documents are consistent with the RI/FS and DD/ROD. Coordinate reviews of design documents with the other Civil Engineering branches to take advantage of their expertise. Provide the design documents to the regulatory agencies and the RAB for review.

- **Progress Reports** -- The construction contractor usually submits progress reports on a regular basis (at least monthly) during the RA. Progress reports should summarize the work completed (including percentage completed), problems and corrective actions, schedule, quantity and type of contamination removed and efficiency of the installed system.

  Review the progress report to ensure it contains the following information:

  - The status of construction activities (scope, cost, schedule),
  - The type and quantity of contamination removed or treated compared to the estimates in the Proposed Plan, and
  - Potential problems and corrective actions.

  Discuss anomalies immediately with the service center or Contracting Officer (if Base Contracting handled procurement) to avert future problems.

- **Operations and Maintenance Manual** -- This manual provides the operation and maintenance requirements and instructions for operating the cleanup system.

  Review the Operations and Maintenance Manual for completeness and clarity. Coordinate the review of this manual with other Civil Engineering branches.

Coordination with the IRP Team. Section 6.2 and Table 6.1 provide the standard coordination procedures.

Community Involvement. Community involvement activities are limited during the RD/RA. Amend the CRP to incorporate RD/RA community involvement activities. EPA typically releases a fact sheet describing the Remedial Design. The installation may wish to follow suit. In addition,

the installation should release a public notice announcing the start of the Remedial Action. There are no other formal requirements for community involvement activities during RD/RA, however, the installation should release periodic fact sheets and newsletters to inform the public of the progress of ongoing Remedial Actions. Include RD/RA status as an agenda item at the RAB meeting. The need for additional community involvement activities will depend on the interests of the surrounding community.

Peer Reviews. Peer reviews are required for complex RDs (See section 4.1.10). Plan for the peer review to occur at the draft FS phase.

Planning the Next Step. Depending on the type and results of the RD/RA, the next step in the IRP process may be:

- LTO
- LTM or
- NFRAP.

It is not necessary to complete the RD/RA before planning the next step in the IRP process. RPMs should develop the program document and update the site strategy and schedule in the MAP when the next course of action becomes evident. In fact, RPMs must program LTO and LTM well in advance, to avoid lapses in system operation.

NFRAP After RD/RA. The NFRAP decision after a RD/RA is **Category IV:** a determination that all actions necessary to protect human health and the environment have been taken. The classification of sites for the Category IV NFRAP decision are:

- Remedial Action in Place -- RA construction complete and system is functional and operational; LTO or LTM may still be necessary to meet cleanup levels.
- Response complete -- RA construction complete; necessary LTO and LTM complete. Site residuals are protective of human health and the environment.
- Site closeout -- Regulatory concurrence with the Response Complete NFRAP decision.

For more information, consult the following references.

U.S. Air Force, Summer 1994, *NFRAP Guide.*

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Sections 5.5.1 and 5.5.2.

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program Management Action Plan (MAP) Guidance*, Section 1.4.

U.S. EPA, 1990, *Guidance on Expediting Remedial Design and Remedial Action*, EPA/540/6-90/006, Aug 1990.

U.S. EPA, 1986, *Remedial Design and Remedial Action (RD/RA) Guidance*; Superfund, OSWER Directive 9355.0-04A, Jun 1986.

CERCLA Section 120 and SARA Section 211.

NCP, Subpart E, 40 CFR Part 300.435.

6.2.5 Long Term Monitoring/Long Term Operation (LTM/LTO)

Definition and Purpose. The following provides the definition and purpose of Long Term Monitoring (LTM) and Long Term Operation (LTO).

- LTM. Long Term Monitoring refers to periodic ground water monitoring for a determined amount of time as a conditional remedial action (documented in a DD or ROD). LTM is usually chosen for an IRP site that shows levels of ground water contamination that are close to cleanup level goals for which there appears to be no active source of contamination (i.e., no soil contamination leaking into the ground water) and natural attenuation of contaminants (dispersion and diffusion) is expected to lower the contamination levels without treatment.

  To implement the LTM, existing or newly installed monitoring wells are sampled periodically (monthly, quarterly) and analyzed for target compounds. The installations must compile the results for a period of time and evaluate them to determine if natural attenuation is a valid cleanup option. If the contaminants show a significant downward trend in concentration and reach the cleanup level goals, the site can be evaluated and, most likely, closed out. If the contaminant levels show a significant increase, the site will, most likely, require reevaluation and cleanup.

- LTO. Long Term Operation refers to all of the required labor and materials for the operation and maintenance of a cleanup system (i.e., ground water pump and treat system). After the cleanup system construction, LTO goes on until cleanup standards are reached. LTO may involve operating, maintaining and repairing equipment as well as collecting, analyzing and evaluating samples to determine performance.

DERA Eligibility. DUSD (ES), in the 14 Apr 1994 memorandum, expanded DERA eligibility for LTO from the ten year limit to completion of cleanup.

Reporting Requirements for Pump and Treat Projects. In order for ACC to evaluate the cost effectiveness of pump and treat systems, submit the following information (to

ACC CES/ESV) for all operating pump and treat systems:

1) The objectives of the system. Example objectives include restoration to ARARs or intermediate cleanup levels, prevention of contaminant migration, bioremediation, etc.

2) The volume and types of contaminants in the aquifer in gallons.

3) A map of the contaminant plume showing types and concentrations of contaminants, using iso-concentration contours.

4) The acquisition strategy used to accomplish RI/FS through LTO.

5) The expected reduction of contaminant concentrations by year for the first ten years of operation. Generate a graph of expected concentration vs. time as a visual aid.

6) The total system cost (RA) and operation and maintenance costs (LTO) for the system through site closeout.

Programming the LTM and LTO Requirements. LTM and LTO program documents use the narrative format. In general, the data requirements for programming LTM and LTO include:

- A history of the site, encompassing all of the available information about the site from previous IRP activities (PA/SI, Removal Actions, RI/FS, RD/RA),
- Cleanup level goals,
- Relative risk classification,
- DD or ROD signature date,
- A justification for the decision to implement LTM or a detailed description of the selected RA,
- A description of the labor and material requirements for LTM or LTO.
- Multi-year funding requirements, including funding history and future funding projections for LTM or LTO.
- An estimate of the amount and type of contamination expected to be removed, by volume, by fiscal year.

Sections 5.2.1.9 and 5.2.1.10, respectively, provide guidance on developing the LTM and LTO program documents.

Acquisition Strategy Considerations. The RPM, ACC program manager and service center project manager should discuss and determine an acquisition strategy for the LTM and LTO. Because DERA is a single-year appropriation, LTM and LTO usually require single year service contracts. Since LTM and LTO require frequent site visits, contractor location is an important consideration in the acquisition process. As a final note, be sure to program and award projects to avoid lapses in service due to the break in fiscal years.

Updating the MAP and Project File. Address the following issues, specific to the LTM or LTO, in the MAP update and project file:

- Data management,
- Regulatory compliance,
- Actual and expected contaminant removal rate,
- Community involvement activities, and
- Strategies and schedules for achieving site restoration.
- For LTM, include a decision tree outlining the criteria for deciding the next course of action after evaluating monitoring results over the specified time period.

Documentation. During LTM and LTO, documentation is limited to regular progress reports. The monthly to quarterly progress reports should include the following:

- A record and evaluation of sampling results,
- A list of operation and maintenance activities,
- A description of system performance and
- Notification of any problems followed by the associated corrective actions.
- For LTO progress reports: the actual quantity and type of contaminants removed by volume compared to the expected removal efficiencies recorded in the program document and the "Commitment to Progress" submission.

Coordination With the IRP Team. Coordination with the IRP team is limited during LTM and LTO. The RPM may periodically coordinate with the following organizations:

- Civil Engineering and Base Contracting to review the status of the service contract and resolve any problems,
- The service contractor to provide site access and ensure availability of government-provided materials.
- The BEE to request assistance with health and safety issues or interpretation of sampling results,
- The regulatory agencies and the RAB to keep them apprised of cleanup progress.

Community Involvement. There are no formal community involvement activities required during LTM or LTO, however, the installation should release periodic fact sheets and newsletters to inform the public of the progress of monitoring or cleanup operations. Include LTO and LTM status as an agenda item at the RAB meeting. Any additional community involvement activities are at the discretion of the installation and should depend on community interest in the site.

NFRAP After LTM or LTO. The NFRAP decision after a LTM or LTO is **Category IV:** a determination that all actions necessary to protect human health and the environment have been taken. The classification of sites for the Category IV NFRAP decision are:

- Remedial Action in Place -- RA construction complete and system is functional and operational; LTO or LTM may still be necessary to meet cleanup levels.
- Response complete -- RA construction complete; necessary LTO and LTM complete. Site residuals are protective of human health and the environment.
- Site closeout -- Regulatory concurrence with the Response Complete NFRAP decision.

For more information, consult the following references.

U.S. Air Force, Summer 1994, *NFRAP Guide.*

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program.

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Section 5.5.3.

U.S. Air Force, May 1992, *United States Air Force Environmental Restoration Program Management Action Plan (MAP) Guidance*, Section 1.4.

NCP, Subpart E, 40 CFR 300.435.

6.3 SITE CLOSEOUT OR RESPONSE COMPLETE

Definition and Purpose. Site closeout is the process of completing all necessary actions to ensure that a site is protective (within acceptable risk levels, as mandated by the NCP) of human health and the environment, documenting the decision process and obtaining regulatory approval. If an NFRAP decision fulfills all the above criteria except for regulatory approval, the site is classified as "response complete." Site closeout or response complete may occur at any point in the IRP, as early as the PA/SI, if a thorough investigation confirms that the site poses no threat to

human health and the environment. On the other end of the spectrum, it may require years of operation of a cleanup system to render a site protective of human health and the environment and reach site closeout. Site closeout is the ultimate goal of the IRP. However, to measure progress toward cleanup (and not penalize sites that require LTO), HQ USAF tracks an additional site classification: "Remedial Action in Place" (RAIP). RAIP is defined as: cleanup system constructed, functional and operational and only LTO or LTM is required.

Goals. All levels of DERP management have established goals for IRP site closeout, response complete and RAIP. The "Commitment to Progress" scorecard lists Air Force and ACC goals for site closeout, response complete and RAIP.

Site Closeout Decision -- Documentation, Review and Signature. The following section describes the type of documentation and information required for NFRAP following each phase of the program. The following publications provide additional information on NFRAP documentation: ***Air Force Installation Restoration Program Management Guidance***, Section 5.5, page 97, EPA's guidance document, ***Procedures for Completion and Deletion of National Priority List Sites*** and the HQ USAF **DERA Eligibility and Programming Guidance**.

Disseminate NFRAP documents to CE and Civil Engineering branches, JA, PA, the BEE, EMB and EPC, ACC CES/ESV, RAB and regulatory agencies for review and coordination. When reviewing NFRAP documents, the IRP team should use the checklists and evaluation criteria in the *NFRAP Guide* to ensure that:

- The information is correct and consistent with previous documents.
- The document is defensible and meets the requirements of Air Force policy and guidance, and
- The document is consistent with regulatory policy and guidance.

The Installation Commander is the authorized signatory for a non-NPL NFRAP DD. Following Installation Commander signature, forward a copy of the NFRAP DD to ACC CES/ESV, HQ USAF/CEVR and the regulatory agencies. Although the regulatory agencies may not sign the document, as there is no regulatory basis for NFRAP DDs at non-NPL installations, the RPM should still request written concurrence with the decision.

NFRAP after PA/SI. There are two criteria for making an NFRAP decision after the PA/SI. The first is if no contaminants exist at the site. The second is if the site poses no threat to human health and the environment as defined by conservative risk screening criteria (i.e., no potential for direct contact with contaminants, no potential for contaminant migration). If either of these criteria are met, prepare a Category I or II NFRAP DD to certify "response complete" for the site. Refer to the *NFRAP Guide* for information on preparing the document.

NFRAP after Removal Action. An NFRAP decision can be made after a Removal Action if the contaminants at the site have been completely removed or treated or if residuals meet

ARARs and pose no threat to human health and the environment as defined by the NCP baseline risk assessment criteria (i.e., no potential for direct contact with contaminants, no potential for contaminant migration). If the site meets either of these criteria, prepare a Category IV NFRAP DD. Refer to the *NFRAP Guide* for information on preparing the document.

Site Closeout or "Finish" after RI/FS. An NFRAP decision can be made after the RI if the poses no threat to human health and the environment as defined by the NCP baseline risk assessment criteria (i.e., no potential for direct contact with contaminants, no potential for contaminant migration) and ARARs are not exceeded. An NFRAP decision can also be made after the RI/FS if "no action" is the selected remedial alternative (the site is protective of human health and the environment, i.e., poses an acceptable risk as defined by the NCP baseline risk assessment criteria). The Category III NFRAP DD or ROD (as described in Section 6.2.3) is required for documentation of the NFRAP decision. Refer to the *NFRAP Guide* for information on preparing the document.

NFRAP after RD/RA. An NFRAP decision can be made after the RD/RA, if the site meets the cleanup goals of the DD or ROD (cleanup system constructed; all LTM and LTO requirements completed). Verification sampling will probably be required to make this determination. The Category IV NFRAP DD is required for documentation of the NFRAP decision. Refer to the *NFRAP Guide* for information on preparing the document. For NPL sites, a Final Closeout Report formally closes out the site. Non-NPL sites may be classified as:

- Remedial Action in Place -- RA construction complete and system is functional and operational; LTO or LTM may still be necessary to meet cleanup levels.
- Response complete -- RA construction complete; necessary LTO and LTM complete. Site residuals are protective of human health and the environment.
- Site closeout -- Regulatory concurrence with the Response Complete NFRAP decision.

NFRAP after LTO. Although a site, by definition, is considered RAIP at the start of LTO, a NFRAP report is required at the completion of LTO to document "response complete": the site meets the cleanup goals of the ROD or DD and all cleanup actions are complete. A Category IV NFRAP DD is required for documentation of the NFRAP decision. Refer to the *NFRAP Guide* for information on preparing the document. NPL installations should follow EPA delisting procedures.

NFRAP after LTM. A Category IV NFRAP DD should follow the LTM period if no further monitoring or Remedial Action is necessary to meet the cleanup goals of the DD or ROD and ensure that the site is protective of human health and the environment. Refer to the *NFRAP Guide* for information on preparing the document.

Tracking Site Closeout, Response Complete and Remedial Action in Place. Since site cleanup goals are the most important milestone of the IRP; all levels of management track this parameter. When the NFRAP decision is made, the RPM should drive the process to completion by developing the NFRAP DD or ROD, staffing the NFRAP DD for review and signature, and requesting regulatory agency concurrence. With regulatory concurrence, the NFRAP site will be tracked as "closed." In the absence of regulatory concurrence, the NFRAP site will be tracked as "response complete." The RPM should also drive the completion of the Remedial Action construction, if necessary so that the site can be tracked as RAIP.

Following completion of this process, notify and provide ACC CES/ESV and HQ USAF/CEVR with a final signed NFRAP DD or ROD. Also forward final NFRAP documents to the parties listed in section 4.1.1.3). If additional measures are required to meet the criteria of site closeout (Final Closeout Report following LTO, regulatory approval, LTO or LTM), program and execute these requirements accordingly.

Community Involvement. For NPL bases, site closeout (referred to as "site delisting" in NCP terminology) requires specific notification requirements (i.e., publishing a notification in the Federal Register). For non-NPL sites, the installation should notify the public of the NFRAP decision. The RPM should work with PA and the regulatory agencies as necessary to determine the appropriate community involvement activities. Also discuss the site closeout decision with the RAB.

Five-Year Review. CERCLA 121(c) requires sites that have been closed out (with contaminants left in place) to be reviewed every five years. The purpose of the five-year review is to ensure that the cleanup remains protective of human health and the environment. For additional information, refer to EPA's guidance document: **Update to the "Procedures for Completion and Deletion of National Priorities List Sites" Guidance Document Regarding the Performance of Five-Year Reviews.**

Reopening Sites. Due to evolving environmental regulations, state-of-the-science, discovery of new information about a site, or determination that insufficient data or justification exists to support site closeout, it may be necessary to reopen a site that was closed out in the past (signed NFRAP DD). If a site is reopened, document the reason for reopening the site and follow the IRP process from site identification to site closeout (Sections 6.1 - 6.3).

For more information, consult the following references.

U.S. Air Force, December 1993, *U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, Section 5.6.

U.S. Air Force, Summer 1994, *NFRAP Guide.*

U.S. Air Force, May 1992, United States Air Force Environmental Restoration Program Management Action Plan (MAP) Guidance, Section 1.4.

Update to the "Procedures for Completion and Deletion of National Priorities List Sites" Guidance Document Regarding the Performance of Five-Year Reviews, EPA/9320.2-03B, Dec 1989.

U.S. EPA, 1989, *Guidance on Preparing Superfund Decision Documents: The Proposed Plan, the Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment*, EPA/540/G-89/007, Jul 1989.

U.S. EPA, 1989, *Procedures for Completion and Deletion of National Priority List Sites*, EPA/540/G-89/002, Apr 1989.

7. *DOCUMENTATION*

7.1 FILES

IRP files, Administrative Records and Information Repositories must be well organized, maintained and up-to-date for the following reasons:

- If there is a change in personnel within the IRP team, new team members will not have difficulty locating important documents.
- RPMs will be able to keep track of and locate important documents within the large volume of current and historic IRP information.
- The Administrative Record is the basis for defending any legal challenges to IRP efforts.
- The Administrative Record and Information Repository serve as vehicles of community involvement.

The following sections provide an overview of the installation, Administrative Record and Information Repository file plans and a list of RPM tasks for implementing these file plans.

7.1.1 File Plan

ACC developed an IRP maintenance and disposition file plan ("file plan") for each base in accordance with Air Force file standards and decision logic tables (See Appendix III of the Administrative Support Training Manual). The file plan covers all aspects of IRP management and provides quick access to necessary documents and forms. RPMs should locate all IRP files in a central file cabinet, except for IRP project and site files and applicable manuals. These files are working files and RPMs should keep them at their desk. Keep IRP project and site files in six part folders and organize as follows:

Project File	**Site File**
Program Documents	*Site Summary Status*
Statements of Work	*Relative Risk Evaluation*
Correspondence In	*Correspondence In*
Correspondence Out	*Correspondence Out*
Background Information	*Background Information*
Contract Documents	*Decision Documents*

To maintain a working file system, the RPM should conduct the following tasks:

- Develop a routing slip for IRP team member review and comment and instructions for return of document for filing.
- Code the document for filing.
  - ⇒ Write in pencil, in the upper right-hand corner of document.
  - ⇒ Include *"File:," file plan number,* and *RPM initials.*
- Ensure administrative personnel are properly trained in Air Force filing techniques and briefed on and provided with the IRP file plan.
- Instruct administrative personnel to prepare and file documents in a timely manner.
  - ⇒ Locate attachments forwarded with the document.
  - ⇒ Remove insignificant internal forms (routing and suspense slips, envelopes, etc.). Attach internal forms with significant remarks to the back of the document.
  - ⇒ Ensure document is dated; mark with receipt date if necessary.
- Update the file plan to incorporate new sites, projects, manuals, policies and directives.

For more information, consult the following references.

Warren, T., Wells, M., and Tungland, L., 1995, *Proceedings of the 1995 Air Combat Command Environmental Quality Symposium,* "Administrative Record for the Installation Restoration Program."

Air Combat Command, 1993-1994, *(Installation-specific) Administrative Support Training Manual.*

7.1.2 Administrative Record and Information Repository Files

CERCLA 113 requires that an Administrative Record be established to document the basis for response action selection. Subpart I of the NCP provides guidelines for establishing an Administrative Record and Information Repository. These files are important for the following reasons:

- The Administrative Record is the sole instrument for judicial review of a response action.
- Response actions take place over a long period of time. The Administrative Record serves as a road map to the decision-making process throughout changes in personnel, policy, laws and regulations.
- The Administrative Record and Information Repository serve to encourage community involvement by presenting an organized database of IRP activities.

The following sections provide an overview of Administrative Record and Information Repository File requirements.

7.1.2.1 The Administrative Record File

The Administrative Record file contains all of the documentation that contributes to the decision to choose a Remedial or Removal Action at a site or sites. The Administrative Record is very important because it is a legal record, the only record admissible in cases of judicial review. It is also a record for public review. The following provides examples of documents that may be placed in an Administrative Record:

- Final reports (PA/SI, RI/FS, EE/CA),
- Regulatory and public correspondence (letters, comments), and
- Documentation of community involvement activities (CRP, public notification, transcripts of public meetings, fact sheets).

Appendix I of the *Administrative Support Training Manual* provides guidelines for the selection of documents for Administrative Records.

USAF policy requires that installations keep an Administrative Record for all sites, indexed and available for public review at or near the installation in a location easily accessible to the community. Keep the official Administrative Record in a secure but accessible location on base (preferably with the installation JA) and an exact duplicate in an off-base location, for public review (included as part of the Installation Repository).

Because of the large volume of IRP-related documentation for all sites on an installation, ACC developed a database to organize the Administrative Record file. ACC extracted information from each document to create the database. The database allows the RPM to sort and search for documents by categories and key words. As new documents are added to the Administrative Record, the RPM should complete the following tasks:

- Coordinate careful review of documents by regulatory agencies, JA, PA and HQ ACC program managers.
- Update the Administrative Record file database quarterly.
- Update the Administrative Record file Index quarterly.
- Place duplicate copies of documents in the Information Repository.

7.1.2.2 The Information Repository File

The Information Repository is also a project file on the Remedial or Removal Action at a site or sites. However, the sole purpose of the Information Repository is to provide information to the community. The Information Repository should contain a copy of the Administrative Record, draft documents for review and appropriate background information. Since the Information Repository must be conveniently accessible to the community, it should be kept at an off-base location, at a

local, public facility (such as a public library or community center) where similar documents are kept for review (municipal budgets, zoning change proposals, etc.).

The Information Repository may contain draft documents and background information in addition to the indexed Administrative Record. RPMs should request JA and PA (concerning community relations activities) assistance with compiling, reviewing and indexing these documents.

For more information, consult the following references.

Warren, T., Wells, M., and Tungland, L., 1995, *Proceedings of the 1995 Air Combat Command Environmental Quality Symposium,* "Administrative Records for the Installation Restoration Program.

ACC, 1993-1994, *(Installation-specific) Administrative Support Training Manual* (The manuals are tailored to each individual installation).

U.S. Air Force, December 1993, *U. S. Air Force Installation Restoration Program Remedial Project Manager's Handbook.*

HQ TAC/DEV 5 Mar 1991 Letter, Subject: Administrative Records, Technical Review Committees and ATSDR Health Assessments for Bases with Federal Facilities Agreements.

HQ USAF/LEEV 12 Jan 1988 Letter, Subject: Administrative Records for the Installation Restoration Program (IRP).

U.S. EPA, 3 Dec 1990, *Final Guidance on Administrative Records for Selecting CERCLA Response Actions*, OSWER Directive 9833.3A-1, a Memorandum from Don R. Clay, EPA Assistant Administrator. *Section IVB contains specific information for Federal Facilities.*

CERCLA Section 113.

National Contingency Plan, Subpart I, 40 CFR 300.800.

7.2 REPORTS

The RPM must complete several reports throughout the fiscal year in order to track IRP progress. The following sections provide an overview of these reports.

7.2.1 Quarterly Reports to ACC

Travel/TDY Request. RPMs must submit a report to ACC CES/ESVR requesting approval for TDYs for the upcoming quarter. ESV program managers will review and approve the requests. ESVR will distribute funding quarterly for approved TDYs. The reports are due the 15th of the month (or first business day after) prior to the beginning of the quarter:

- First Quarter — August 15
- Second Quarter — December 15
- Third Quarter — March 15
- Fourth Quarter — June 15

TDY requests should include the following information:

- Traveler's name
- TDY location
- Purpose
- Dates
- Estimated total cost

ACC CES/ESV will fund out-of-cycle requests on a case-by-case basis after review and approval by the ACC program manager. RPMs should submit written out-of-cycle requests (with the same information as above) to the ACC program manager. To expedite review and approval of short-suspense TDYs, notify your ESV program manager of your pending out-of-cycle TDY requirements as soon as possible. ACC CES/ESVR will distribute funds for out-of-cycle requests separately.

TDY Completion Reports. RPMs must submit a report to ACC CES/ESVR each quarter, documenting TDYs taken during the quarter. Reports for the previous quarter are due on the tenth of the first month (or next business day after) of the current quarter:

- First Quarter — 10 January
- Second Quarter — 10 April
- Third Quarter — 10 July
- Fourth Quarter — 10 October

Provide the TDY completion report as shown in Figure 7.1:

Figure 7.1 TDY Completion Report Format

TRAVELER'S NAME	COURSE NAME/ TDY LOCATION	DATES AND PURPOSE OF TDY	ITEMIZED ACTUAL COSTS: TRAVEL, LODGING, PER DIEM, OTHER, TOTAL

For more information, consult the following references.

ACC CES/ESV 13 Oct 1994 Memorandum, Subject: FY95 Defense Environmental Restoration Account (DERA) Travel/TDY Policy.

HQ ACC/CEVR 8 Mar 1994 Memorandum, Subject: FY95 Defense Environmental Restoration Account (DERA) Manpower, TDY and Computer Equipment Requirements Call.

7.2.2 Commitment to Progress

"Commitment to Progress" submissions provide HQ USAF/CEVR with an indication of the major command's progress toward cleanup by measuring sites "finished" (no further response action planned, site restoration complete or construction of cleanup system complete and only LTO required) and decision document status. Major command submissions are due quarterly, on the 15th of January, April, June and October. RPMs must submit the following information by the last day of the quarter:

- Number of sites "finished," by installation.
  - ⇒ Total
  - ⇒ NPL
  - ⇒ non-NPL with regulatory agreement
  - ⇒ non-NPL without regulatory agreement
- Updated ROD/DD listing

With the implementation of DoD's risk management concept, expect the following reporting requirements:

- Number of sites in each phase of the program with:
  - ⇒ Studies underway
  - ⇒ Cleanup underway
  - ⇒ Cleanup complete
  - ⇒ Action pending
- Number of sites that progressed to the next phase, for each phase.
- Number of sites where relative risk was reduced:
  - ⇒ From High to Medium
  - ⇒ From Medium to Low
  - ⇒ From Low to No Further Action
- Percentage of budget spent in:
  - ⇒ Cleanup
  - ⇒ Study
  - ⇒ Management

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance (Section 8.2).

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program.

7.2.3 Annual Report to Congress

SARA Section 211 requires each federal facility on the NPL to submit an annual Report to Congress on the status of IRP activities. DoD develops the format, which is distributed to NPL RPMs via ACC CES/ESV. This report is a one-page narrative summary of the status of:

- IAGs or FFAs
- DERA funds expended
- Progress toward cleanup

7.2.4 A-106

The A-106 is an Office of Management and Budget form for reporting environmental-related (DERA and Environmental Compliance Program (ECP)) budget requirements. The A-106 module

is included in WIMS-ES. At the installation's discretion, RPMs may enter the DERA requirements in the module. ACC CES/ESV and HQ USAF/CEVR do not track this module.

For more information, consult the following reference.

Air Combat Command, 1995, *Proceedings of the 1995 Air Combat Command Environmental Quality Symposium.*

7.3 DATABASE SYSTEMS

7.3.1 WIMS-ES

The DERA module of the Work Information Management System, Environmental Subsystem (WIMS-ES) is a comprehensive project/program management tool and project status database system. The two component databases in the system are DREQ (Project requirements) and SITE (Site information and status). DREQ serves the following purpose:

- Identifies DERA project requirements.
- Serves as a vehicle for project validation.
- Records funds expensed and obligated.

SITE serves the following purpose:

- Lists site information.
- Defines site contaminants.
- Lists site schedule to closeout.
- Tracks community involvement milestones.
- Tracks Decision Documents and RODs.

RPMs do not need to input IRP information into WIMS-ES until further notice.

7.3.2 IRPIMS

The Installation Restoration Program Information Management System (IRPIMS) is an automated system, developed by AFCEE, to expedite data and contract management and execution of the IRP. Three component databases comprise IRPIMS: Technical Information Management System (TIMS), Contract Administration Management System (CAMS) and Project Time-Line Management System (IRP Track). IRPIMS can QA/QC analytical data, provide trend analyses, compare results to Maximum Contaminant Levels (under SDWA) and compile cost accounting information.

HQ USAF/CEVR identified a need for Air Force-wide implementation of IRPIMS (AFW-IRPIMS) to allow Air Force-wide access to IRP data. AFW-IRPIMS implementation is occurring in four phases:

Phase I: Collecting and organizing AFCEE IRP data, allowing users to retrieve data, generate reports, and download data.

Phase II: Loading data from other IRP sources (other service centers, historic reports, etc.) and providing on-line access to HQ USAF/CEVR and selected MAJCOMs and installations.

Phase III: Increasing the system capacity and updating querying and reporting capabilities to meet Air Force wide data requirements.

Phase IV: Implementing Geographical Information System (GIS) capabilities.

To support AFW-IRPIMS, each installation must review all previous data (for quality) and identify the data that needs to be loaded by the service center or A-E into the IRPIMS database. In addition, all new IRP contracts must require that data be provided to AFCEE in the IRPIMS format, on magnetic media.

RPMs wishing to use AFW-IRPIMS data may request hard copy reports and information from AFCEE. In addition, the U.S. Army Corps of Engineers, Omaha District, has implemented an ACC IRPIMS Satellite Service Center/Technical Information System (ACC ISSC/TIS) which, in addition to IRPIMS capabilities, includes GIS capabilities and interpretive software (modeling, simulation, visualization).

AFW-IRPIMS and ACC ISSC/TIS will assist RPMs by:

- Allowing access to historical and current data to focus site characterization requirements.
- Allowing access to data for interpretation and presentation.
- Allowing access to data from other similar Air Force-wide sites so that RPMs may seek information on remedy selection, cost, and performance.

For more information, consult the following references.

Air Combat Command, 1995, *Installation Restoration Program Information Management Action Plan and Operating Policy.*

HQ USAF/CEV 15 Apr 1992 Letter, Subject: Defense Environmental Restoration Account (DERA) Eligibility and Programming Guidance.

HQ USAF/LEEV 14 Dec 1990 Letter, Subject: Defense Environmental Restoration Account. (AF-wide implementation of IRPIMS)

Hunter, Philip M., 1990, The Installation Restoration Program Information Management System (IRPIMS), SUPERFUND '90, Proceedings of the 11th National Conference, Sponsored by Hazardous Material Control Research Institute, pp. 99-101.

Defense Environmental Restoration Account (DERA), A Module of the Work Information Management System, Environmental Subsystem (WIMS-ES) (*User's Guide, 23 Jul 1990, HQ AFCESA/SCW, on-line DERA WIMS-ES Documentation*).

Installation Restoration Program Information Management System (IRPIMS), Report Descriptions, Air Force Human Systems Division, IRP Program Office, May, 1990, Version 1.0.

AFW-IRPIMS newsletter.

7.4 OTHER

7.4.1 Management Action Plan

Overview. The Management Action Plan (MAP) is a document that guides the management of the installation IRP. It is intended to direct, integrate and optimize response actions under multiple environmental programs and facilitate coordination and communication between multiple activities and support personnel. The MAP is a macro-level management document, with pertinent data and status compiled in maps, tables and figures. For non-closure bases, the MAP should focus on achieving cleanup goals and implementing cleanup initiatives. MAPs should contain, at a minimum, the following information:

- Site status,
  - ⇒ Summary table of site information and phase
  - ⇒ Site map
  - ⇒ Relative site risk
  - ⇒ Operable Unit or zone designations
  - ⇒ Conceptual model
  - ⇒ Document deliverables cross-referenced by site
- Pertinent historical IRP information,
  - ⇒ History of operations
  - ⇒ Location of past hazardous substances
  - ⇒ Past restoration schedule
  - ⇒ Past requirements and costs by fiscal year
  - ⇒ Off-base property and on-base tenant maps and records
- Environmental condition of property map and contaminant concentration map(s),
- Base Comprehensive Plan,

- Status of IRP and compliance actions
  - ⇒ Source discovery and assessment
  - ⇒ Removal and interim remedial actions,
  - ⇒ Restoration schedule to date
  - ⇒ Document deliverables by project
  - ⇒ Decision Document and ROD summaries
  - ⇒ NFRAP summaries
  - ⇒ Community involvement
- Strategies to achieve restoration and community involvement goals,
- Schedules, requirements and costs to meet restoration and risk reduction goals,
- A list of specific issues (technical and administrative) to be resolved by the IRP team,

MAPs are used for the following purposes:

- The MAP allows the entire project team (RPM, ACC program manager, service center, A-E, regulatory agencies, RAB) to focus, track, direct and optimize environmental restoration activities in order to meet site cleanup and risk reduction goals.
  - ⇒ Use the MAP schedules to track deliverables.
  - ⇒ Use the "Issues to be Resolved" section to develop agendas for project team and RAB meetings.
  - ⇒ Use site information, environmental condition of property maps, and conceptual models when reviewing SOWs and reports.
  - ⇒ Use site information, strategies, projected schedules and costs to develop program documents and outyear program requirements.
  - ⇒ Use the regulatory strategy section to achieve regulatory compliance.
- The MAP provides the community with a detailed overview of the installation's IRP and its direction so that they may provide meaningful input to the process.
- The MAP provides ACC and HQ USAF/CEVR with a detailed overview of the installation's IRP and its direction so they may track progress, provide assistance and develop initiatives.
- The MAP provides support staff at the installation (PA, JA, BEE, CE) with a detailed overview of the installation's IRP and its direction, so that they may provide assistance consistent with the environmental cleanup and risk reduction objectives.

ACC CES/ESV also recommends that RPMs supplement MAPs by including details of issues specific to each project in the project file.

MAP Updates. MAPs have been completed for all ACC installations. However, the MAP is a living document and must be updated as necessary with changes in the program, schedule, site status or guidance, or with new information, policy or initiatives. At a minimum, ACC requires the entire MAP be updated biannually. Overall MAP updates are due 15 April and 15 October. By timing the MAP update to correspond with program development, RPMs can be sure that project requirements are based on the most current information. In addition, ACC requires the following tables to be updated monthly:

- Table 3-1, IRP Site Summary

- Table A1-1, Estimated Annual Cost Summary (By Site -- from site identification through site completion)
- Table A1-2, Estimated Annual Cost Summary (By PA/SI, RI/FS, etc.)

MAP development and updates are conducted by a project team, directed by the RPM and consisting of representatives from ACC, the service center, the A-E, and regulatory agencies. The *USAF MAP Guidebook* provides a road map to preparing and updating the MAP. The project team must take the following steps to update the MAP:

- Gather data to review and update status charts, budgets, narrative documentation and schedules.
  - ⇒ WIMS-ES
  - ⇒ Project level plans
  - ⇒ IRP Reports
- Learn about the new DoD, HQ USAF and ACC metrics and initiatives.
  - ⇒ Review these initiatives with respect to the installation IRP.
  - ⇒ Document current status and develop strategies to meet restoration and risk reduction goals using new initiatives.
  - ⇒ Document issues that need to be resolved; develop strategies to resolve these issues.
- Continue to seek and incorporate recommendations for streamlining and improving the program.

MAP Distribution and Coordination. MAPs should be distributed to the following organizations:

Information Only	Information and Coordination
HQ USAF/CEVR (30 Dec)	ACC CES/ESV
Information Repository	Service Center and A-E
	Regulatory Agencies
	RAB
	CE Organizations (Design and Construction, Programs, Operations and Real Property Flights)
	JA
	PA
	BEE
	RCO

For more information, consult the following references.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: Defense Environmental Restoration Program Management Guidance.

HQ USAF, May 1992, *United States Air Force, Environmental Restoration Program, Management Action Plan (MAP) Guidebook* and *MAP Guidebook Update*, May, 1993.

7.4.2 ECAMP Inspection

The Environmental Compliance Assessment Management Program (ECAMP) inspection is an audit of environmental programs and compliance at an installation. IRP ECAMP protocols cover the following categories:

- Management
- Funding Documentation and WIMS-ES
- Administrative Record
- Information Repository and Site Folder
- Commitment to Progress and Submissions
- Site Assessment and Corresponding Documentation
- Community Relations
- Agreements
- Decision Documents
- NPL
- POL Sites
- USTs
- Permits
- Well Management
- Training

RPMs should alternate annually between internal (conducted by RPM, ACC CES/ESV or service center) ECAMP inspections and external (conducted by the Air Force ECAMP team) ECAMP inspections. ECAMP inspections identify any problems with the installation IRP and make recommendations for achieving compliance. ECAMP protocols are great checklists for RPMs to use to improve IRP management. To prepare for an ECAMP, the RPM should take the following steps:

- Review previous ECAMP reports to ensure findings have been addressed/corrected.
- Have the following available:
  - ⇒ Copies of applicable laws, regulations and guidance documents,
  - ⇒ Compliance agreements and schedules,
  - ⇒ Locate letter of RPM appointment,
  - ⇒ Program documents
  - ⇒ Peer reviews
  - ⇒ MAP
  - ⇒ Commitment to Progress Submissions
  - ⇒ RAB documentation
  - ⇒ Community Relations Plan
  - ⇒ RI/FS SOWs
  - ⇒ NFRAP decision documents

- ⇒ UST records
- ⇒ Permits
- ⇒ Ground Water Monitoring Well Management Plan
- ⇒ Training Records

- Ensure the following are up-to-date:
  - ⇒ WIMS-ES site and requirements databases
  - ⇒ Administrative Record
  - ⇒ MAP

For more information, consult the following reference.

HQ USAF, 1994, *Environmental Compliance Assessment Management Program Manual (with ACC-specific IRP checklist, Summer 1994).*

8. SPECIAL CONSIDERATIONS FOR NATIONAL PRIORITY LIST (NPL) BASES AND INSTALLATIONS WITH INTERAGENCY AGREEMENTS (IAGS)

8.1 OVERVIEW OF THE NPL PROCESS

The National Priority List (NPL) registers and ranks what are believed to be the worst uncontrolled hazardous waste sites in the nation. Sites are scored and ranked using the Hazard Ranking System (HRS) criteria. EPA proposes adding sites with HRS scores greater than 28.5 to the NPL. Following a comment period, EPA formally adds sites to the NPL, publishing the final list in the Federal Register as Appendix B of the NCP. Federal facilities are grouped separately on the NPL since they are not eligible for Superfund monies.

EPA initially calculated HRS scores for DoD facilities during the 1980's. As a result of this scoring, EPA placed several ACC installations on the NPL. The HRS was subsequently revised in March 1991 and is now referred to as HRS II or revised HRS (rHRS) (see Appendix A of the NCP for additional information on rHRS). If federal facilities were not scored or if they scored below 28.5 during the initial HRS scoring period, EPA rescored them using the rHRS criteria.

EPA uses cumulative data from all IRP sites on an installation to calculate the HRS score. Therefore, EPA prefers to treat the entire installation as a "site" rather than "carving out" individual IRP sites for regulatory consideration. By definition, however, CERCLA considers a site to include only the geographic area representing the contaminant source and its extent of migration. This definition supports "carving out" IRP sites for regulatory consideration. The *USAF Environmental Restoration Program MAP Guidebook* recommends renegotiating the FFA following the RI to modify the definition of "site" in so that it is consistent with the CERCLA definition of "site."

To avoid having to backtrack, the RPM should make every effort to execute the IRP in complete compliance with CERCLA and the NCP even before the installation is proposed to the NPL. If the installation is proposed to the NPL, the RPM should coordinate with the EPA and state project managers prior to being finalized on the list. After inclusion on the NPL, an installation must do the following:

- Initiate an RI/FS in consultation with EPA and the state regulatory agency(ies).
- Within 180 days after completion of the RI/FS, enter into an Interagency Agreement (IAG) with EPA to conduct the RD/RA.
- Within 15 months of completing the RI/FS, the installation must initiate substantial, continuous, physical remedial action at the site.

Although the Air Force is the lead agency throughout the cleanup process, EPA has the final decision authority on the remedy selection.

For more information, consult the following references.

HQ USAF/CEVR 1 Mar 1993 Letter, Subject: Defense Environmental Restoration Account (DERA) Eligibility and Programming Guidance.

National Contingency Plan, 40 CFR Section 300, Appendices A and B.

CERCLA, Section 120.

8.2 FEDERAL FACILITY AND INTERAGENCY AGREEMENTS (FFAS AND IAGS)

8.2.1 Overview

Federal Facility Agreements (FFAs)(pre-RI/FS), also referred to as Interagency Agreements (IAGs)(post-RI/FS), are legal compliance agreements between the installation and one or more regulatory agencies. Most of the existing agreements (FFAs) cover the RI/FS through RD/RA phases of the program. Many of these FFAs incorporate RCRA Corrective Action requirements and state laws and regulations. Traditionally, FFAs were initiated when an installation was proposed to the NPL. FFAs outline the commitments of the parties to the cleanup process. The FFA's purpose is to:

- Ensure the investigation and cleanup of environmental impacts from past and present activities at the installation.
- Establish a procedural framework and schedule for conducting response actions at the installation, integrating the requirements of CERCLA, the NCP, NEPA, RCRA and applicable state laws.
- Facilitate cooperation between the installation and the regulatory agencies

The FFA is a serious compliance agreement, complete with schedules for completing response actions. The regulatory agencies may assess stipulated penalties against an installation for failing to meet the terms and conditions (especially schedules) of the agreement. The FFA also establishes a formal dispute resolution process that mandates the timely resolution of disagreements. If an FFA is already in place at the installation, the RPM must be familiar with all the provisions.

8.2.2 Current FFA/IAG Guidance

Overview. Although traditionally, installations on the NPL negotiated FFAs with EPA and the state regulatory agency or agencies prior to the RI/FS, current guidance (SAF/MIQ, 14 Apr 1993 Memorandum, Subject: Signing of Interagency Agreements for the Environmental Restoration of Air Force Installations -- ACTION MEMORANDUM) specifies that Air Force installations should only enter into IAG negotiations in accordance with CERCLA. CERCLA requires an IAG to be in place 180 days after completion of the RI/FS.

The SAF/MIQ guidance concerning FFAs also specifies that even though an agreement may not be in place, the RPM must conduct IRP response actions in accordance with the applicable laws and regulations and in consultation with EPA and the state regulatory agency(ies). The RPM must be vigilant in conducting the IRP to ensure that post-RI/FS IAG negotiations go smoothly and cleanup commences as planned, on schedule. If the RPM participates in FFA or IAG negotiations, the RPM must be an informed member of the team. The RPM can best serve the negotiating team by having a detailed, up-to-date MAP.

In the past, some non-NPL installations entered into FFAs with EPA and state regulatory agencies in order to facilitate and speed up the cleanup process. Currently, non-NPL installations wishing to enter into FFAs must request approval from SAF/MIQ.

Development and Coordination of IAGs. IAGs should include or reference the following:

- DoD FFA model language,
- DSMOA provisions and
- Anti-deficiency Act limitations for response actions.

If the IAG language differs significantly from the DoD FFA model language, it must be coordinated with DUSD(ES). The RPM must draft a memo highlighting the differences between the agreement and the DoD model language and the potential for setting a precedent for DoD. The RPM must follow the chain of coordination as follows:

- ACC CES/ESV (in coordination with HQ ACC/JAV)
- AFLSA/JACE (in coordination with HQ USAF/CEVR)
- SAF/MIQ and DUSD(ES)

Once the parties to the IAG are in agreement with the language of the document, the RPM should send a copy of the agreement via ACC CES/ESV for SAF/MIQ approval and OSD/other Military Department 72 hour concurrence. Following approval and concurrence, the parties may sign the document and release it for public comment. Following the public comment period, the RPM should draft a summary of public comments, noting how they were addressed. Forward this summary, along with the signed IAG, to AFLSA/JACE and HQ USAF/CEVR via ACC CES/ESV.

8.2.3 FFA Provisions

Stipulated Penalties. In accordance with the FFA, regulatory agencies may assess stipulated penalties against the installation for violations of terms and conditions of the agreement (especially missed deadlines). EPA has demonstrated a capacity to assess these penalties against installations. Take these penalties seriously. Unfortunately, paying these penalties is not as easy as "writing a check" from DERA or the installation operating budget. Congress must appropriate these funds. The adverse visibility to the installation and amount of time required for a Congressional justification of the penalty should be reason enough for RPMs to avoid this situation.

Schedules. The FFA provides a mechanism for developing and committing to schedules. For pre-RI/FS FFAs, installations negotiated schedules for submitting primary documents (work plans, RI/FS reports, Proposed Plans, and RODs) with the regulatory agencies. Upon agreement, the schedules were finalized and published with the FFA for public review. FFA provisions allow the regulatory agencies to assess stipulated penalties for missed primary document deadlines.

To avoid stipulated penalties, the RPM must meet scheduled delivery dates for primary documents. However, the FFA does provide a mechanism for requesting an extension to a deadline. To request an extension, the RPM must submit a timely written request with good cause justification for the delay. The RPM must stay on top of deadlines and request an extension when necessary. The service center project manager must also realize the importance of deadlines and ensure that A-Es produce complete documents on schedule. The service center project manager must notify the RPM and the ACC program manager well in advance of any potential delays, providing adequate justification for delays. Meeting deadlines avoids stipulated penalties and shows that the installation can successfully execute the program and fulfill the role of lead agency in the cleanup process.

Dispute Resolution. FFAs provide a formal process for resolving disagreements among the parties. This process is called dispute resolution and involves three levels.

1. **Informal Dispute Resolution.** The parties to the agreement attempt to resolve the disagreement among the project managers and their immediate supervisors. If the project managers cannot reach an agreement, they must raise the issue to the next level.
2. **Dispute Resolution Committee (DRC).** The DRC is comprised of one representative from each party to the agreement. The Air Force DRC representative is ACC CES/ES. RPMs must clearly outline the nature of the dispute for their DRC representatives. The DRC then has 21 days to resolve the dispute. If the DRC cannot resolve the dispute within 21 days, they raise the issue to the next level.

3. **Senior Executive Committee (SEC).** The SEC is comprised of a senior representative from each party to the agreement. The SEC also has 21 days to resolve the dispute. If the SEC cannot resolve the dispute, then the EPA Administrator makes the final resolution, unless the dispute concerns a Removal Action. For a dispute

concerning a Removal Action, SAF/MIQ makes the final resolution (because the Air Force, as lead agency, retains the authority to conduct Removal Actions).

Dispute resolution is a great tool for avoiding a stalemate that would inhibit progress toward cleanup. However, RPMs should use dispute resolution sparingly. By resolving disputes informally, RPMs will save significant time and effort in the long run.

If an issue is raised for formal dispute resolution, the RPM should develop a position paper describing:

- The nature of the dispute,
- The positions of all of the parties, and
- The desired outcome.

The RPM should also develop a supporting file containing the following information:

- A chronology of events surrounding the dispute,
- Copies of applicable correspondence, telephone logs, and maps,
- Summaries or excerpts of applicable reports, and
- An up-to-date MAP.

After an issue is raised and resolved through formal dispute resolution, ACC must provide HQ USAF/CEVR with a summary of the nature of the dispute and the resolution outcome.

8.3 THE IMPORTANCE OF COMMUNICATION

General. Good coordination and communication are important when an installation is on the NPL. The coordination effort requires phone calls, meetings and correspondence with regulatory agencies and service centers. RPMs must place great emphasis on these mechanisms of communication because so much of the decision-making process occurs during these interactions.

Telephone Conversations. Phone calls (including conference calls) are often a quick way for parties to communicate. However, there is no formal record of discussions and agreements made during the telephone conversation. The RPM must follow all significant telephone conversations with correspondence (conference calls should be followed up with minutes), to ensure understanding and agreement among all parties and to serve as a record of that agreement. RPMs should maintain a log of all telephone calls relating to IRP activities and keep the telephone logs and notes as part of the project file.

Meetings. Meetings allow the parties to meet face-to-face and discuss pertinent issues. Meetings require that significant personnel time be dedicated to travel and conference, so plan carefully, well in advance. Successful meetings require RPMs to:

- Establish, transmit and coordinate an agenda (that establishes goals),
- Invite the appropriate personnel,
- Hold a pre-meeting if necessary,
- Manage a productive meeting by:
  - ⇒ Sticking to the agenda,
  - ⇒ Summarizing major decisions,
  - ⇒ Calling on those with expertise to participate in the discussion and
  - ⇒ Establishing and reviewing action items;
- Record accurate meeting minutes by:
  - ⇒ Designating a recorder who is familiar with the discussions but not directly participating and
  - ⇒ Stopping to summarize periodically.

The RPM should compile and transmit the meeting minutes in a timely manner. This will allow the parties to review and comment on the minutes while the meeting is still fresh in their mind. After revision and acceptance by the parties, the minutes can stand as a record of the meeting, however they are not legally binding.

Correspondence. Correspondence is an important means of communication that establishes a written record of decisions. Reference the IRP project number and site number(s) on all correspondence and provide copies to all affected parties. The RPM must answer correspondence clearly, directly and promptly. Coordinate any regulatory correspondence with JA.

8.4 COMMUNITY INVOLVEMENT

Community involvement is important for all IRP efforts, but the additional publicity surrounding a NPL site and the NPL stigma may cause the community to become concerned. The RPM should address this concern through community involvement planning and the Restoration Advisory Board (RAB). In addition, the RPM must coordinate with the regulatory agencies' community relations specialists. For a complete discussion of community relations activities, refer to Section 4.1.1.

For more information, consult the following references.

DoD and U. S. EPA, Summer 1994, *Restoration Advisory Board Workshop Guidebook.*

U.S. Air Force, December 1993, *Installation Restoration Program Remedial Project Manager's Handbook*, Chapter 7.

HQ USAF, May 1992, *U.S. Air Force Environmental Restoration Program, Management Action Plan (MAP) Guidebook*, Section 2.46.

U.S. EPA, 1988, *Community Relations in Superfund, A Handbook*, EPA/540/G-88/002, Jun 1988.

CERCLA Section 117.

National Contingency Plan, Subpart E, 40 CFR Part 300.400.

8.5 AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR) PUBLIC HEALTH ASSESSMENTS (PHAS)

CERCLA 104 requires that ATSDR Public Health Assessments (PHAs) be performed at all NPL sites. The purpose of the ATSDR PHA is four-fold:

- To determine whether a hazardous waste site has a past, present or potential future impact on public health,
- To assist the parties in determining whether to take immediate or short-term actions to limit human exposure to hazardous substances at the site,
- To determine whether additional human exposure and health risk information is required (toxicological profiles, epidemiological studies, disease registries, data gap identification and sampling, health surveillance) and
- To determine whether additional health-related services are required (emergency response, health consultations, health education, health advisories).

ATSDR implements the PHA by:

- Conducting a site visit,
- Reviewing IRP data to determine contaminants of concern and human exposure pathways,
- Using health outcome data to compare local public health with national public health, and
- Soliciting community health concerns to determine if a site impacts health or quality of life.

ATSDR and DoD signed a Memorandum of Understanding (MOU) on 4 Oct 1989. Pursuant to this agreement, on 6 Jul 1990, the U.S. Air Force entered into an Interagency Agreement with ATSDR to conduct PHAs and other health-related activities at all Air Force installations. On 26 May 1994, HQ ACC/SGB released ACC ATSDR Program Management and Policy Guidance. This guidance specifies the plan and organizational framework for conducting ATSDR PHAs.

To prepare for the PHA, HQ ACC has initiated Data Gap Sampling and Analysis Plan (DGSAP) contracts for NPL installations. Each installation EPC must also establish an ATSDR Working Group, to be chaired by the Bioenvironmental Engineer (BEE).

Because the Air Force is considering conducting PHAs at all installations, HQ ACC is taking a proactive approach and preparing all installations for PHAs. Refer to Section 4.1.6 of this guide for more detailed guidance on ATSDR PHAs.

For more information, consult the following references.

HQ ACC/SGB 26 May 94 Memorandum, Subject: AF and ACC Agency for Toxic Substances and Disease Registry (ATSDR) Policy and Guidance -- ACTION MEMORANDUM, which transmits:

HQ USAF/CV 20 Apr 94 letter (*USAF ATSDR Activities Management Guidance*)
HQ ACC/CV 9 May 94 letter (*ACC ATSDR Activities Management Guidance*)

HQ USAF/SGP 20 Aug 90 Letter, Subject: Interagency Agreement Between the US Air Force and the Agency for Toxic Substances and Disease Registry (ATSDR).

U.S. EPA, 1987, *Guidance for Coordinating ATSDR Health Assessment Activities with the Superfund Remedial Process*, OSWER Directive 9282.4-02, 11 Mar 1987.

CERCLA Section 104.

8.6 RECORD OF DECISION (ROD) SIGNATORY

The Air Force Chief of Staff delegated his Record of Decision (ROD) signature authority for ACC NPL sites to the ACC Commander (HQ ACC/CC). The ACC Commander further delegated his signature authority to the ACC Vice Commander (HQ ACC/CV).

Prior to elevating the ROD or interim ROD for signature, the RPM must ensure the following are complete:

- A review of the justification, issues and alternatives associated with the remedial decision,
- A review of the content and format of the document to ensure consistency with Air Force and regulatory guidance,
- A peer review of the interim or final remedial design by a contractor or independent internal Air Force organization at the command level or higher,
- A review of the document by regulatory agencies and the RAB, and
- Approval of the document by the installation EPC.

To elevate the ROD or interim ROD for HQ ACC/CV signature:

- The RPM should forward a request to ACC CES/ESV, working closely with the appropriate program manager. At the same time, the RPM should staff a copy of the ROD and a memo to notify the installation commander of the request for HQ ACC/CV ROD signature and the ACC ROD signature staffing process (outlined in the next four bullets).
- ACC CES/ESV will coordinate a cross functional review (HQ ACC/JA, HQ ACC/PA, HQ ACC/CE, and any other appropriate offices)
- HQ ACC/CEV will present the ROD to the ELC for endorsement.
- ELC recommends HQ ACC/CV signature of the ROD.
- HQ ACC/CV reviews and signs or declines to sign ROD.

Following HQ ACC/CV ROD or interim ROD signature, ACC CES/ESV will forward the original to the other parties of the FFA or IAG for signature. The RPM, after receiving a copy of the signed ROD or interim ROD, should forward a copy of the document to HQ USAF/CEVR via ACC CES/ESV.

For more information, consult the following references.

ACC CES/ESV May 1995 Memorandum, Subject: Record of Decision (ROD) Signature Policy for National Priority Listed Installations.

HQ ACC/CC 21 Dec 1994 Letter, Subject: Delegation of Record of Decision (ROD) Approval Authority.

HQ USAF/CC 22 Nov 1994 Letter, Subject: Delegation of Record of Decision (ROD) Approval Authority.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance.

8.7 ANNUAL REPORT TO CONGRESS

SARA Section 211 requires that each federal facility on the NPL submit an annual report to Congress on the status of IRP activities. DoD usually develops the format and forwards it to HQ USAF/CEVR for distribution to the major commands and NPL installations. NPL RPMs are required to complete the report and submit to HQ ACC CES/ESV program managers for review. ACC CES/ESV will compile ACC NPL reports and submit to HQ USAF/CEVR for presentation to Congress. The report is usually a one-page summary of the status of IAGs or FFAs, DERA funds expensed and progress toward cleanup.

A. *BIBLIOGRAPHY OF SUPPORTING GUIDANCE AND REFERENCES*

A.1 APPLICABLE AIR FORCE GUIDANCE

Periodically, DUSD (ES), HQ USAF (including HQ USAF/CEV(R) (formerly HQ USAF/LEEV(R)), HQ USAF/SGP, AFLSA/JACE (formerly HQ USAF/JACE)), and ACC CES/ESV, transmit guidance and policy to the major commands. The following represents the most up-to-date guidance and policy, by subject:

Administrative Records

HQ USAF/LEEV 12 Jan 1988 letter, subject: Administrative Records for the Installation Restoration Program (IRP)

This letter establishes the Air Force responsibility for establishing IRP Administrative Records. This letter also provides considerations and recommendations for IRP Administrative Records.

Air Combat Command, 1993-1994, *(Installation-specific) Administrative Support Training Manual*

This manual, tailored to each installation, provides instructions on setting up and maintaining file plans, Administrative Record files and Information Repository files.

Warren, T., Wells M., and Tungland, L., 1995, *Proceedings of the 1995 Air Combat Command Environmental Quality Symposium*, "Administrative Record for the Installation Restoration Program"

This symposium paper provides guidelines for developing and maintaining Administrative Record files.

Agency for Toxic Substances and Disease Registry (ATSDR) Health Assessments

HQ USAF/SGP 20 Aug 1990 letter, subject: Interagency Agreement Between the US Air Force and the Agency for Toxic Substances and Disease Registry (ATSDR)

This letter provides a copy of the signed Interagency Agreement between ATSDR and SAF/MIQ concerning Health Assessments for NPL installations. This letter also appoints the installation BEE as the point of contact to coordinate visits by ATSDR and to provide ATSDR with an inventory of data.

HQ ACC/SGB 26 May 94 memorandum, subject: AF and ACC Agency for Toxic Substances and Disease Registry (ATSDR) Policy and Guidance -- ACTION MEMORANDUM, which transmits:

- **HQ USAF/CV 20 Apr 94 letter (*USAF ATSDR Activities Management Guidance)***
- **HQ ACC/CV 9 May 94 letter (*ACC ATSDR Activities Management Guidance)***

This memorandum provides Air Force and ACC guidance on coordinating ATSDR Public Health Assessments.

Cultural Resource Consideration

AFI 32-7065, *Cultural Resources Management.*

The Air Force Instruction governing all aspects of cultural resource management at Air Force installations.

Green, P., 1994, "Managing a Successful Cultural Resources Program," *Proceedings of the 1994 Air Combat Command Environmental Quality Symposium, 14-18 February 1994*, Langley AFB, VA, pp. 613-622.

and

Green, P., 1993, "Cultural Resources Requirements," *Proceedings of the 1993 Air Combat Command Environmental Quality Symposium, 1-5 March 1993*, Langley Air Force Base, VA, pp. 341-352.

Symposium articles pertaining to cultural resource management.

Decision Documents

HQ USAF/LEEV 19 Jan 1988 letter, subject: Installation Restoration Program (IRP) Decision Documentation

This letter reiterates the requirement for Decision Documents (pre-SARA guidance was provided in HQ USAF/LEEV 25 Sep 1986 letter), providing the reasoning and noting the appropriate signatory.

USAF OEHL/TS 22 Mar 1988 letter, subject: Technical Document to Support No Further Action at Installation Restoration Program (IRP) Sites

This letter provides a format for preparing technical documents to support the no further action decision.

***United States Air Force Environmental Restoration Program NFRAP Guide*, Summer 1994**

This document provides guidance for making, documenting and evaluation No Further Response Action Planned Decisions.

Defense and State Memoranda of Agreement (DSMOA)

HQ USAF/LEEV 22 Nov 1989 letter, subject: DoD and State Memoranda of Agreement (DSMOA)

This letter transmits DSMOA guidance. It is also the initial request for information for the DSMOA database, including points of contact and IRP costs (past and projected) for each installation.

***U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, December 1993, Appendix E.**

This appendix provides an information paper on DSMOAs.

Environmental Data Management and Decision Support (EDMDS)

ACC, 1995, *Environmental Data Management and Decision Support (EDMDS) Report* (installation-specific).

This document represents an implementation of a GIS computer system that overlays and interprets technical and spacial environmental data to determine environmental condition of property.

Haecker, M., Edwards, S., Moore, B. and Zaruba, B., 1995, "Exploiting Desk-Top GIS for Effective Environmental Information Presentation and Communication at U.S. Air Force Bases," *Proceedings, Air and Waste Management Association Annual Meeting*, San Antonio, TX.

and

Edwards, S., Yonkers, T., Moore, B., Briesmaster, B., Dappen, P., Haecker, M., and Cuttino, S., 11 March 1994, "Meeting the Environmental Information Management Challenge at US Air Force Bases," ***Proceedings of the 20th Environmental Symposium & Exhibition: "Department of Defense Environmental Security – Strategies for the 21st Century,"*** **March 14-17, San Antonio, TX.**

These articles describe the GIS system for determining and presenting environmental condition of property.

General Program Management Guidance

***Air Force Installation Restoration Program Management Guidance*, 1989.**

A comprehensive Air Force guidance manual on the IRP. Although some of the information may be outdated (the latest revision to the NCP was not finalized until March 1990) this is still a useful reference that covers many aspects of the IRP.

HQ USAF/LEEV 28 Oct 1989 letter, subject: Classification of Installation Restoration Program (IRP) Sites

This letter establishes the standardized two-letter DoD site-type codes and work progress database.

***U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, December 1993.**

This is the Air Force IRP management guide for RPMs.

HQ USAF/CEV 16 Sep 1994 memorandum, subject: 1995 Defense Environmental Restoration Program Management Guidance.

This is the most recent Air Force DERP policy, eligibility and programming guidance.

Information Management Action Plan (IMAP)

ACC CES/ESV, 28 March 1995 Memorandum, Subject: ACC Information Management Action Plan (IMAP).

IMAP transmittal letter.

Air Combat Command, March 1995, ***Installation Restoration Program Information Management Action Plan and Operating Policy.***

This document is a plan for managing electronic data from the IRP. The document also describes the responsibility of the IRP team in managing electronic data.

Installation Restoration Program Information Management System (IRPIMS)

***Installation Restoration Program Information Management System (IRPIMS), Report Descriptions*, Air Force Human Systems Division, IRP Program Office, May 1990, Version 1.0**

This is the IRPIMS user's manual.

***U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook*, December 1993, Appendix E.**

This appendix provides technical and contractual guidance on implementing Air Force wide IRPIMS.

Management Action Plan (MAP)

HQ USAF, May 1992, *United States Air Force, Environmental Restoration Program, Management Action Plan (MAP) Guidebook* and *MAP Guidebook Update*, May, 1993.

This document provides guidelines for drafting and updating MAPs.

National Environmental Policy Act (NEPA)

1 Aug 1990 Memorandum from: Dinah Bear, General Counsel, Executive Office of the President, Council on Environmental Quality; subject: Applicability of the National Environmental Quality Act to Superfund Actions at Federal Facilities

This memorandum states that NEPA should be implemented in conjunction with CERCLA/SARA at federal facilities.

AFI 32-7061, *Environmental Impact Analysis Process.*

This instruction provides guidance on conducting environmental analyses.

National Priorities List (NPL) and Interagency Agreements (IAGs) (also referred to as Federal Facility Agreements (FFAs))

HQ USAF/LEE 16 Jan 1986 letter, subject: Federal Facility Agreements in the Installation Restoration Program

This letter establishes the policy of entering into Federal Facility Agreements with EPA for NPL or proposed NPL sites.

HQ USAF/LEEV 28 Feb 1988 letter, subject: National Priority List (NPL) Sites - Pending Actions

This letter establishes the precedent for negotiating pre-RI/FS Interagency Agreements (IAGs) with EPA for NPL or proposed NPL installations.

HQ USAF/LEEV 11 Jul 1988 letter, subject: Interagency Agreements (IAG) for NPL Sites at DoD Installations (AF/LEE Ltr, Federal Facility Agreements in the IRP, 16 Jan 86)

This letter clarifies the precedent for negotiating pre-RI/FS Interagency Agreements (IAGs) to reconcile RCRA-CERCLA and Federal-State regulatory conflicts prior to the Record of Decision (ROD). This letter also states that IAGs should cover the entire installation rather than specific sites. In addition, this letter strongly recommends establishing Technical Review Committees (TRCs). Finally, this letter provides model IAG provisions developed by DASD(E) and EPA.

SAF/MIQ 14 Apr 1993 memorandum, subject: Signing of Interagency Agreements for the Environmental Restoration of Air Force Installations -- ACTION MEMORANDUM.

This memo states Air Force policy to enter into FFAs and IAGs, only as required by statute, after the RI/FS.

Natural Resource Trustee Coordination

AFI 32-7064, 8 March 1994, *Integrated Natural Resources Management.*

This Air Force Instruction explains how to manage natural resources on Air Force property.

AFCEE/ESS 24 Jan 1992 letter, subject: Natural Resource Co-Trustee Coordination Under CERCLA (Reference: AFCEE/ESS Conference Minutes dated 13 January 1992 for 11 December 1991 Meeting held in San Francisco, CA)

This letter references a meeting held 11 Dec 1992 with representatives of AFCEE/ESS, National Oceanic and Atmospheric Administration (NOAA), Department of the Interior (DOI) and EPA Region IX concerning natural resource trustee coordination. This letter supplements the minutes of this meeting and provides examples of natural resource trustee coordination and interaction, the applicable environmental laws and regulations and a draft listing of state natural resource trustees.

Presumptive Remedy Engineering Evaluation/Cost Analysis (PREE/CA)

U.S. Air Force, 5 May 1995, *Air Force Presumptive Remedy Engineering Evaluation/Cost Analysis.*

This document describes and applies the PREE/CA initiative.

ACC CES/ESV 3 May 1995 Memorandum, Subject: Presumptive Remedy Engineering Evaluation/Cost Analysis (PREECA).
This is the PREE/CA transmittal letter.

Private Property Access

HQ USAF/JACE 17 Apr 1990 letter, subject: Access to Private Land for Installation Restoration Program (IRP) Activities

This letter provides legal guidance for obtaining access to private property to perform IRP actions in accordance with CERCLA 104(e).

AFI 32-7066, 25 April 1994, *Environmental Baseline Surveys in Real Estate Transactions.*

This Air Force Instruction provides guidance on environmental baseline survey requirements and waivers for real property transactions.

Radioactive Sites, Management

HQ USAF/SGPR 9 Aug 1988 letter, subject: Maintenance Requirements for Radioactive Waste Burial Sites on Air Force Installations

This letter establishes maintenance requirements and responsibilities for radioactive waste burial sites.

HQ USAF/SGPR 1 Dec 1989 letter, subject: Management of Radioactive Waste Burial Sites Under the Installation Restoration Program

This letter provides interim guidance for investigation and exhumation of radioactive waste burial sites.

AFI 40-201, 25 July 1994, *Managing Radioactive Materials in the USAF.*

This Air Force Instruction provides guidance on disposing of radioactive material.

Rational National Standards Initiative (RNSI)

Air Combat Command, April- May 1995, (*Installation-specific) Rational National Standards Initiative Pathways, Parameters, and Equations Report.*

This is the installation-specific implementation of the RNSI initiative.

Warren, T., Wang, V. and Ross, J., "Rational National Standards Initiative for the Installation Restoration Program."

This article describes the RNSI concept.

Removal Assessments

HQ USAF/LEEV 12 Oct 1989 letter, subject: Removal Assessments at Installation Restoration Program (IRP) Sites

This letter recommends the assessment of IRP sites to determine if any removal actions are required to render sites safe from immediate hazards to public health and the environment. This recommendation is based on strategies developed from EPA's Superfund management review.

Relative Risk

DUSD(ES)/CL 13 Sep 1994 Memorandum, Subject: Relative Risk Evaluation Primer (Summer 1994 - Interim Edition).

The Primer is a detailed guide for evaluating relative risk at IRP sites.

DUSD(ES) 14 Apr 1994 Memorandum, Subject: Management Guidance for Execution of the FY94/95 and Development of the FY96 Defense Environmental Restoration Program (IX Priorities and Attachment 3).

The Guidance provides an explanation of the relative risk concept and brief instructions on evaluating relative risk for IRP sites.

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance (Section 6.8).

This Guidance provides HQ USAF/CEVR policy on implementing relative risk evaluation.

Restoration Advisory Boards (RABs)

HQ ACC/CEV 5 Feb 1994 Guidance Document, subject: ACC Guidance on Restoration Advisory Boards, Reference Number 93-022.

This is ACC's guidance on implementing RABs.

DoD and U.S. EPA, Summer 1994, *Restoration Advisory Board Workshop Guidebook, which includes* U.S. EPA and DoD, May 1994, Draft Version 2.4 of *Restoration Advisory Board Implementation Guidelines* and U.S. Air Force, March 1994 *Draft Guidance on Restoration Advisory Boards (RABs).*

This is comprehensive DoD RAB guidance, provided at RAB workshops.

WIMS-ES

Defense Environmental Restoration Account (DERA), A Module of the Work Information Management System, Environmental Subsystem (DERAMIS)

This is the WIMS-ES DERA module user's manual.

A.2 APPLICABLE ENVIRONMENTAL PROTECTION AGENCY (EPA) GUIDANCE

The Environmental Protection Agency has published many guidance manuals, Office of Solid Waste and Emergency Response (OSWER) directives and fact sheets for the Superfund program. These documents are available (although not free of charge) through NTIS. These Superfund documents are a valuable resource and are critical to understanding the program and the requirements. A working knowledge of these publications will greatly assist the RPM in the functional review of IRP documents. The following is a comprehensive but not complete list of available EPA publications. For a complete list, refer to the ***Catalog of Superfund Program Publications***, under **General Guidance**.

Administrative Records Guidance

***Final Guidance on Administrative Records for Selecting CERCLA Response Actions*, OSWER Directive 9833.3A-1, 3 Dec 1990, a Memorandum from Don R. Clay, EPA Assistant Administrator**

Section IVB contains specific information for Federal Facilities.

ATSDR Health Assessment Guidance

***Guidance for Coordinating ATSDR Health Assessment Activities with the Superfund Remedial Process*, OSWER Directive 9282.4 -02, 11 Mar 1987**

ARARs Guidance

***CERCLA Compliance with Other Laws Manual, Part I (Interim Final)* (EPA/540/G-89/006, Aug 1988) and *Part II: Clean Air Act and other Environmental Statutes and State Requirements* (EPA/540/G-89/009, Aug 1989)**

Community Relations Guidance

***Community Relations in Superfund: A Handbook*, Jan 1992**

***Planning for Sufficient Community Relations*, 3/7/90, OSWER Directive 9230.0-08**

***Superfund Community Relations Program: A Guide to Effective Presentations With Visual Aids*, EPA/540/G-89/001, Jun 1989**

Decision Document Guidance, Superfund

Guidance on Preparing Superfund Decision Documents: The Proposed Plan, the Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment, EPA/540/G-89/007, Jul 1989

General Guidance

Catalog of Superfund Program Publications, EPA/540/8-90/015

This catalog is the most comprehensive list of Superfund publications. It can be ordered free of charge from EPA's Public Information Center (PIC), the Center for Environmental Research Information (CERI), the Superfund Docket and Information Center (SDIC), and NTIS.

PA/SI Guidance

Guidance for Conducting Preliminary Assessments under CERCLA, September 1991, EPA/9345.0-01A

Guidance for Performing Site Inspections under CERCLA, 1992

RD/RA Guidance

Superfund Remedial Design and Remedial Action (RD/RA) Guidance, EPA/9355.0-04A, Jun 1986

Guidance on Expediting Remedial Design and Remedial Action, EPA/540/G-90/006, Aug 1990

RI/FS Guidance

Guidance for Conducting Remedial Investigations and Feasibility Studies (RI/FS) Under CERCLA, EPA/540/G-89/004, Oct 1988

Streamlining the RI/FS for CERCLA Municipal Landfill Sites. EPA/9355.3-11FS, Sep 1990.

Removal Action Guidance

There is a ten-volume series of guidance documents entitled "Superfund Removal Procedures." The first volume is listed below.

Superfund Removal Procedures: Action Memorandum Guidance, **EPA/9360.3-01, Sep 1990**

Use of Removal Approaches to Speed Up Remedial Action Projects, **OSWER Directive 9355.0-25A, 7 Jul 1989**

Risk Assessment Guidance

Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part A)(**EPA/540/1-89/002, Dec 1989**) **and** *Volume II: Environmental Evaluation Manual* (**EPA/540/1-89/001, Mar 1989**)

Site Closeout Guidance, Superfund

Procedures for Completion and Deletion of National Priorities List Sites, **EPA/540/G-89/002, Apr 1989**

Update to the "Procedures for Completion and Deletion of National Priorities List Sites" Guidance Document Regarding the Performance of Five-Year Reviews, **EPA/9320.2-03B, Dec 1989**

A.3 ENVIRONMENTAL LAWS AND REGULATIONS -- REFERENCES

The following references provide either information on environmental laws and regulations or the full text of the laws and regulations.

***Air Force Installation Restoration Program Management Guidance*, 1989; Chapter 3:** Legal and Historical Context of the IRP; **Appendix B:** Policy Documents; **Appendix F:** Synopsis of Key Laws Affecting the IRP (note that this document was published in 1989 and some of the laws and regulations may have been revised).

Federal Register Published daily, this is the most up-to-date source for changes in environmental laws and regulations. Proposed and final rules and revisions are published in the ***Federal Register***. These rules and revisions are usually accompanied by a preamble that explains the rulemaking background and provides a summary of responses to comments.

Bureau of National Affairs, Environment Reporter This is a comprehensive publication containing the full text of federal and state environmental laws and regulations. It is published in a loose-leaf binder for periodic updates. A weekly newsletter, called ***Current Developments***, gives information on the latest trends in environmental law, nationally and by state.

***CERCLA Compliance with Other Laws Manual, Part I* (Interim Final) (EPA/540/G-89/006, Aug 1988) and *Part II: Clean Air Act and other Environmental Statutes and State Requirements* (EPA/540/G-89/009, Aug 1989)**

This manual provides information on determining and evaluating potential ARARs.

B. APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS

The following are some of the laws, regulations and executive orders and memoranda that may impact the IRP either as a source of Applicable or Relevant and Appropriate Requirements (ARARs -- a source of cleanup standards and guidelines under CERCLA), as a source of consideration for NEPA implementation, or as a source of procedures and standards for cleanup of pertinent sites (i.e., TSCA for cleanup of PCB sites, state regulations for cleanup of hydrocarbon spills, etc.).

B.1 FEDERAL LAWS, REGULATIONS AND EXECUTIVE ORDERS

AHPA -- Archeological and Historic Preservation Act

AHPA requires preservation of significant scientific, prehistoric, or archaeological data during federal construction projects.

CAA -- Clean Air Act, 42 U.S.C. 7401 (BNA page 71:1101)

The purpose of the CAA is to establish ambient air quality standards for air pollutants and regulate release of hazardous substances to the ambient air.

CWA -- Federal Water Pollution Control Act as amended by the Clean Water Act of 1977, 33 U.S.C. 5101 (BNA page 71:5101)

The purpose of the CWA is to restore and maintain the chemical, physical and biological quality of the nation's waters through research and permitting. The CWA regulates point source discharge to navigable waters (defined by CWA as "waters of the United States including the territorial seas"). The CWA also includes provisions for protection and propagation of fish, shellfish and wildlife, provisions to eliminate discharge of toxic pollutants in toxic amounts, provisions related to waste water treatment, and provisions related to control of non-point source pollutants.

CZMA -- The Coastal Zone Management Act, 16 U.S.C. 1451 (BNA page 71:8001)

CZMA requires consideration of actions impacting a (federal or state-lead) coastal management zone. Any land or water use and natural resource impacts must be consistent with coastal zone management programs.

ESA -- Endangered Species Act, 16 U.S.C. 1531 (BNA page 72:8201)

ESA requires that federal actions not adversely impact endangered species or their habitats.

Executive Order 11988 Floodplain Management, 44 FR 43239, 24 Jul 1979 (BNA page 71:0271)

EO 11988 provides limits for construction activities on floodplains via the NEPA process.

Executive Order 11990 Protection of Wetlands, FR Doc. 77-15123, Filed 5-24-77 (BNA page 71:0291)

EO 11990 provides for the protection of wetlands to minimize destruction, loss or degradation via the NEPA process.

FIFRA -- Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 136 (BNA page 71:7501)

FIFRA may impact IRP pesticide disposal sites. FIFRA regulates the disposal of containers, rinsate and materials to collect spillage.

FWCA -- The Fish and Wildlife Coordination Act, 16 U.S.C. 661-666c (BNA page 71:8301)

FWCA requires that federal control or use of water (where the surface area is greater than 10 acres) consider the effect on fish and wildlife and prevent these resources from being lost or damaged.

NHPA -- National Historical Preservation Act, 16 U.S.C. 470

NHPA requires consideration of the effects of federal actions on historic property.

SDWA -- Safe Drinking Water Act, 42 U.S.C. 300f (BNA page 71:6041)

The SDWA establishes standards (Maximum Contaminant Levels (MCLs)) for organic and inorganic chemicals in public drinking water supplies.

TSCA -- Toxic Substances Control Act, 15 U.S.C. 2601 (BNA page 71:8501)

TSCA mandates testing and use restrictions for toxic substances to protect human health and the environment. IRP sites that may be impacted by TSCA include asbestos and PCB disposal or spill sites. TSCA provides guidelines and procedures for PCB cleanups.

WA -- The Wilderness Act

WA requires consideration of federal actions impacting a wilderness area.

WSRA -- The Wild and Scenic Rivers Act, 16 U.S.C. 1531 (BNA page 71:8301)

The WSRA establishes requirements for federal actions affecting designated wild, scenic or recreational rivers.

B.2 STATE AND LOCAL LAWS AND REGULATIONS

Many states and local authorities have promulgated laws and regulations that deal with hazardous waste, underground storage tanks and resource protection (water, air). These laws and regulations may provide a source of ARARs or even streamlined procedures and standards for dealing with cleanups such as hydrocarbon releases. It is important to work with the office of the Staff Judge Advocate to determine which state and local laws and regulations are applicable to the IRP and ensure that the service center incorporates the appropriate provisions in scopes of work for investigation and cleanup activities. It is also important to coordinate actions with state and local regulatory agencies to avoid having to implement the state and local provisions at a later date, potentially causing delays in cleanup and additional costs.

Many states are participating in the Defense and State Memorandum of Agreement (DSMOA) which provides funds to the state agency to support their IRP oversight activities (refer to Section 4.3.1 for additional information on the DSMOA). The DSMOA should enable the participating state agencies to review and provide input on IRP activities in a timely manner.

B.3 PERTINENT EPA MEMORANDA

EPA Memorandum on CERCLA Compliance With Other Environmental Statutes, 50 FR 47946, 20 Nov 1985 (BNA page 41:3341)

This memorandum provides guidance on evaluating Applicable and Relevant or Appropriate Requirements (ARARs) as CERCLA cleanup standards or guidelines. The memorandum provides definitions of the terms "Applicable" and "Relevant or Appropriate" and details how they should be applied, including the

criteria for waiving ARARs. The memorandum also deals with the application of RCRA regulations and an explanation of permit exemptions for on-site Remedial Actions. Additionally, the memorandum provides a list (although not up-to-date) of potential ARARs to consider during the RI/FS.

EPA Memorandum on Enforcement Actions at Federal Facilities Under RCRA and CERCLA, Signed 25 Jan 1988 (BNA page 41:3341)

This memorandum provides an explanation of EPA's statutory authorities under RCRA and CERCLA which may be used to achieve compliance. This memorandum states that federal facilities must comply procedurally and substantively with RCRA and CERCLA in the same manner as non-federal entities. This memorandum recognizes RCRA-CERCLA integration and details the following enforcement mechanisms for achieving cleanup at a federal facility:

1) RCRA Permit -- Corrective action requirements are integrated as conditions of the permit. This option is limited to RCRA hazardous wastes/constituents and may exclude certain CERCLA hazardous substances.

2) RCRA Corrective Action Order -- This can be issued at interim status facilities. Again, this option is limited to RCRA hazardous wastes/constituents and may exclude certain CERCLA hazardous substances.

3) Imminent and Substantial Endangerment Orders under CERCLA 106 -- This enforcement mechanism is reserved for sites that meet the criteria of imminent and substantial endangerment.

4) Interagency Agreement (IAG) under Section 120 of CERCLA -- This is the only enforcement mechanism that allows for RCRA-CERCLA integration. The IAG is intended to incorporate RCRA corrective action requirements and CERCLA statutory requirements. However, this mechanism is only intended to be applied where some or all of the federal facility is on the NPL.

EPA Designation, Reportable Quantities and Notification Requirements for Hazardous Substances Under CERCLA, 40 CFR Part 302 (BNA page 101:1251)

This document provides a listing of hazardous substances, their reportable quantities and requirements for notification if releases meet or exceed the listed reportable quantities.

For more information, consult the following references.

HQ USAF, 1989, ***Air Force Installation Restoration Program Management Guidance,*** **Chapter 3:** Legal and Historical Context of the IRP, **Appendix B:** Policy Documents; **Appendix F:** Synopsis of Key Laws Affecting the IRP (note that this document was published in 1989 and some of the laws and regulations may have been revised).

HQ USAF, May 1992, ***United States Air Force Environmental Restoration Program Management Action Plan Guidebook,*** **Section 1.**

HQ USAF, December 1993, ***U.S. Air Force Installation Restoration Program Remedial Project Manager's Handbook,*** **Chapter 3.**

HQ USAF/CEV 16 Sep 1994 Memorandum, Subject: 1995 Defense Environmental Restoration Program Management Guidance. The accompanying management guidance provides clarification on RCRA-CERCLA overlap and NEPA implementation.

Federal Register. Published daily, this is the most up-to-date source for changes in environmental laws and regulations.

Bureau of National Affairs, Environment Reporter. This is a comprehensive publication of federal and state environmental laws and regulations. It is published in a loose-leaf binder for insertion of periodic updates.

U.S. EPA, 1988 and 1989, ***CERCLA Compliance with Other Laws Manual Part I (Interim Final)*** (EPA/540/G-89/006, Aug 88) **and** ***Part II: Clean Air Act and Other Environmental Statutes and State Requirements*** (EPA/540/G-89/009, Aug 89).

C. IRP PROJECT VALIDATION CHECKLISTS

Narrative Checklist **C-1**

DD Form 1391 Checklist **C-9**

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST

Project Number: _____
Project Title: _____
Date: _____
Installation: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
Project Number:					
• Project number in correct format (four-letter installation code followed by fiscal year, followed by four-digit 7000 series number, e.g., MUHJ947003).					
• Project number and associated data is entered into WIMS-ES as a requirement.					
• **If requirement is a modification**: The project number contains the correct modification number (e.g., MUHJ94700301).					
• **If requirement is new:** The project number is original.					
Project Title:					
• The title uses the correct terminology, consistent with HQ USAF guidance, the NCP, and WIMS-ES to describe the IRP project requirement (e.g., RI/FS for Site SS-25).					
• The project requirement is programmed in a logical sequence (i.e., R/FS follows the PA/SI; PA/SI, RI/FS and RD/RA are not programmed for the same sites for the same fiscal year).					
• Site designators and site numbers are consistent with HQ USAF guidance (e.g., SS-25).					
Installation:					
• The full name of the installation is used, followed by the two-letter state abbreviation, followed by the MAJCOM abbreviation in parentheses (e.g., Nellis AFB, NV (ACC)).					
• If project requirement is for a **range or radar station**, the range or radar station is listed as the INSTALLATION (e.g., Avon Park Range, FL).					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST
(*Continued*)

Project Number: _____
Project Title: _____

ITEMS	**RPM**	**ACC PM**	**ESVW/ ESVE**	**ESVR**	**ESV**
Purpose:					
• The purpose is not a generic iteration of a purpose statement from the NCP or other guidance.					
• The purpose is site specific and addresses all sites listed in SITE INFORMATION.					
• **For PA/SI or RI/FS:** The purpose lists the number of soil borings, wells, etc., the types and numbers of samples, analyses and analytical methods, and other investigatory activities to be performed (e.g., records search, interviews, geophysical survey, treatability study). Also, **for FS**, describe the technologies to be evaluated.					
• **For RD:** The purpose notes and describes the selected remedial alternative and the objectives of this alternative, including contaminant cleanup level goals. The purpose also specifies whether RD is for the final RA or interim action leading to the final RA (i.e., operable unit).					
• **For LTM:** The purpose lists the number of wells, the frequency of sampling, the analyses and the objectives of the monitoring program (e.g., to monitor natural attenuation or track plume migration).					
• **For LTO:** The purpose lists the type and frequency of operation and maintenance activities and provides the objectives of LTO (e.g., to support final RA or to support IRA or Removal Action that inhibit contaminant migration until a final RA can be implemented).					
• **For Manpower:** Specify the number of individuals to be supported by this requirement.					
• **For Management:** Specify the number of trips, supplies, etc.					
• **For Technical Support:** Specify the numbers of contractors to support the restoration staff.					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST
(*Continued*)

Project Number: _____
Project Title: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
Items:					
• The items checked off are consistent with the project requirements.					
Background:					
• The background of the site(s) is provided, including the information that led to the decision to program the requirement. How and when the site(s) was identified, the facts surrounding the site(s)(nature and extent of contamination) and results of any previous studies (e.g., cause of the contamination, result of the PA/SI and RI/FS or EE/CA, including the number of wells, borings and samples, and analytical data, if applicable).					
• Provide the current status of the site.					
• Include relative risk, legal driver, milestone code, and milestone date (YYYYMM) of the site(s) and (for ACC PMs) enter into WIMS-ES.					
• Indicate contamination levels and cleanup action levels (if applicable).					
• **For PA/SI:** DERA eligibility is properly justified for each site, referencing information gathered and the DERA eligibility criteria in the HQ USAF DERA Eligibility and Programming Guidance.					
• **For RI/FS, RD, LTO and LTM:**					
⇒ The date and results of the PA/SI are provided.					
⇒ Specific number of wells, borings, samples and analytical results from all previous investigatory activities are provided for each site (contaminants and concentrations).					
⇒ The source (e.g., drums, pipeline, landfill), extent (dimensions of ground water plume, volume of soil contamination, acreage of landfill) and type of contamination (TCE, methylene chloride, lead, chromium) are noted.					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST
(*Continued*)

Project Number: _____
Project Title: _____

ITEMS	**RPM**	**ACC PM**	**ESVW/ ESVE**	**ESVR**	**ESV**
Background *(continued)*:					
• **For RI/FS, RD, LTO and LTM *(continued)*:**					
⇒ Source control measures are noted, if applicable (e.g., 20 drums were removed and disposed of Jun 1988, leaking pipeline repaired Sep 1985).					
⇒ Known risk to human health and the environment is documented. Supporting information and source of information is provided.					
• **For RD, LTO or LTM:**					
⇒ The date and results of RI/FS are recorded.					
⇒ Decision Document (DD) or Record of Decision (ROD) date is provided.					
⇒ The rationale for selection of the remedial action is provided.					
⇒ The specific cleanup level goals are provided.					
• **For RD or LTO:** The estimated efficiency of the cleanup system is provided (estimated total contamination and estimated rate and cost of removal/treatment).					
• **For LTO:**					
⇒ The completion date and description of the RA construction is provided.					
⇒ The cleanup levels completed are noted and the estimated cleanup levels to be completed are noted.					
• **For IRP steps that are being reaccomplished:** Explanation is provided to justify additional requirement (e.g., explain why additional RI is required). If site is reopened, provide rationale to explain why the site was reopened and expected results of additional work (e.g., samples are expected to support site closeout).					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST (*Continued*)

Project Number: _____
Project Title: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
Background *(continued)*:					
• **For installations on or proposed to the NPL:**					
⇒ HRS score and contaminant(s) of concern are provided and entered in WIMS-ES.					
⇒ FFA status, signature date, and date of required submittal is listed.					
⇒ If ATSDR health assessment is completed, hazard ranking classification is provided.					
• **Technical Support:** Explain why the effort must be contracted out.					
• Tell why the project needs to be accomplished in the current fiscal year.					
• **Regulatory Basis:** The specific titles and citations of applicable laws and/or regulations are provided.					
Description of Current Status:					
• The status of the current IRP step is provided in detail (e.g., schedules, deliverables, field work, removal actions, IRA).					
• The status of control measures taken at the site is provided (e.g., drums were removed, a fence was constructed, the site is uncontrolled).					
• The status of contaminant migration is provided (e.g., the contaminants in the soil are expected to reach ground water in five years if the soil is not treated).					
Cleanup Action Levels, if Known:					
• **For RD, LTO and LTM:** The ARARs or the ROD cleanup goals are provided (contaminant and concentration).					
Impacts if Not Approved:					
• The enforcement mechanism, mission impact, schedule impact, or threat to human health and the environment is described in detail and sources of statements are provided.					
• If "*Enforcement*" is checked, the vehicle for enforcement is provided under Regulatory Basis.					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST
(*Continued*)

Project Number: _____
Project Title: _____

ITEMS	**RPM**	**ACC PM**	**ESVW/ ESVE**	**ESVR**	**ESV**
Impacts if Not Approved (*continued*):					
• If "*Mission*" is checked, **BACKGROUND** or **Description of Current Status** explains how the mission is or will be impacted.					
• If "*Health Risk*" is checked: **BACKGROUND** or **Description of Current Status** describes the specific risk to human health and the environment and the source of that statement.					
• Provide primary impact if funds are not provided this fiscal year (e.g., will not be able to drill 20 sampling wells at a cost of $X, will not be able to sample 20 sites in Operable Unit 3, etc.).					
• Provide secondary impacts of not accomplishing the work scheduled for the current fiscal year (e.g., will not be able to prepare the RI/FS as planned).					
• Provide the tertiary impacts of not accomplishing the work this fiscal year (e.g., will cause a delay of X months in submitting the RI to the regulatory agencies).					
Relative Risk:					
• Relative Risk is provided for all projects and associated data (such as legal driver, milestone code, milestone date) is listed on the program document and (for ACC PMs) entered into WIMS-ES.					
• **Decision Document Signed:** Decision document signature date (actual or anticipated) is provided for all projects.					
• **Estimated Award Date:** Estimated award date updated and correct calendar year is listed. (For ACC PMs) Enter data into WIMS-ES					
Site Information:					
• Site designators and site numbers are correct and consistent with USAF guidance. Site designator "OT" is not used for new sites but may be kept for existing sites.					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST
(*Continued*)

Project Number: _____
Project Title: _____

ITEMS	**RPM**	**ACC PM**	**ESVW/ ESVE**	**ESVR**	**ESV**
Site Information (*continued*):					
• All sites for this project are included in the WIMS-ES module for the installation.					
• All sites for this project are listed with the correct WIMS-ES requirement.					
• Site descriptions are consistent with the WIMS-ES module.					
• Site priorities are consistent with USAF DERA Eligibility and Programming Guidance.					
• Site costs are equitably distributed for multiple sites, dependent on the amount of work to be performed at each site.					
Work Schedule:					
• Estimated project start and finish dates are provided. List the date that funding is required and will be executed in order to comply with the schedule outlined in the Gantt chart.					
• Schedule is broken down into milestones (e.g., award date, work plan, field work, reports, project finish, etc.).					
Contracting Agent: Contracting agent selected.					
Maps:					
• Map of installation is provided, showing all IRP sites. IRP sites associated with the projects are highlighted.					
• Individual maps of each site or group of sites are provided. The maps include local facilities and use, extent of soil and/or ground water contamination (e.g., plume configuration , if applicable), ground water flow direction, location of existing monitoring wells and/or soil borings (if applicable) and location of proposed monitoring wells and/or soil borings (if applicable).					

ACC CES/ESV IRP PROJECT VALIDATION NARRATIVE CHECKLIST
(*Continued*)

Project Number: _____
Project Title: _____

ITEMS	**RPM**	**ACC PM**	**ESVW/ ESVE**	**ESVR**	**ESV**
General Review Items:					
• Acronyms are spelled out when first used in the document.					
• Spelling and typographical errors have been checked.					
• The following statement has been included " I have reviewed this requirement certifying and validating that it meets the eligibility criteria for the use of DERA funds." and signed and dated by an authorized signatory.					
• The signatory's name and title are typed below the signature.					
• Identify the tool used to estimate the project cost (CE construction guides, previous experience with similar projects, service center, government estimates, A-E estimates in feasibility study, RACER, etc.).					
• Cost estimates and schedules have been coordinated with the service center.					
• Supervision and Review cost is the correct percentage (12 %).					
• Provide Gantt chart.					

ACC CES/ESV IRP PROJECT VALIDATION
DD FORM 1391 CHECKLIST

Project Number: _____
Project Title: _____
Date: _____
Installation: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
COMPONENT: AF (ACC) is listed.					
DATE: Date is correct or updated.					
INSTALLATION AND LOCATION:					
• Spell out the installation's official name in full and the state where it is located (e.g., MOUNTAIN HOME AIR FORCE BASE, IDAHO).					
• **If project requirement is for a range or radar station:** The name of the range or radar station is listed as the INSTALLATION (e.g., AVON PARK RANGE, FLORIDA).					
PROJECT TITLE:					
• The title uses the correct terminology consistent with USAF guidance, the NCP, and the WIMS-ES, to describe the IRP project requirement (e.g., RD/RA, IRA). Keep project title simple but descriptive.					
• The project requirement is programmed in a logical sequence (i.e., RD/RA follows the RI/FS; PA/SI, RI/FS and RD/RA not programmed for the same sites for the same FY).					
• Site designators and site numbers are consistent with USAF guidance (e.g., SS-25).					
PROGRAM ELEMENT: DERA is listed.					
CATEGORY CODE: N/A is listed.					
PROJECT NUMBER:					
• Project number is in correct format (Four letter installation code, followed by fiscal year, followed by four digit 7000 series number, e.g., MUHJ947003).					
• Project number and all associated data is entered into WIMS-ES as a requirement.					
• If project requirement is a modification, the project number contains the correct modification number (e.g., MUHJ92700301).					
• If project requirement is new, the project number is original.					

ACC CES/ESV IRP PROJECT VALIDATION
DD FORM 1391 CHECKLIST
(Continued)

Project Number: _____
Project Title: _____

ITEMS	**RPM**	**ACC PM**	**ESVW/ ESVE**	**ESVR**	**ESV**
PROJECT COST: Project cost matches the TOTAL cost under COST ESTIMATES section.					
COST ESTIMATES:					
• The first entry under ITEM 9 matches Block 4, PROJECT TITLE. Project cost in block 8 matches the total cost under item 9 in the COST ($000) column.					
• The major subcategories of work elements are listed in sufficient detail under ITEM 9, (e.g., excavation of contaminated soil or drums, installation of recovery wells or pumps, treatment system, sampling, etc.) General terms such as "mechanical," "civil," and "electrical" should be minimized. The subcategories are indented three spaces.					
• The unit of measure listed under U/M is specific for all work categories. Minimize the use of "LS" (lump sum).					
• QUANTITY multiplied by UNIT COST equals COST ($000).					
• Parentheses are placed around the associated COST ($000) for all work subcategories.					
• Supervision and Administration (S&A) is the correct percentage (8%).					
• Supervision and Review (S&R) is the correct percentage (3.5%)					
• Engineering Design During Construction (EDC) is the correct percentage (0.5%)					
• All percentage and calculations are correct.					
DESCRIPTION OF PROPOSED CONSTRUCTION:					
• Site codes are provided in format consistent with USAF guidance (site designator - site number, e.g., SS-25). Site designator "OT" is not used for new sites, but may be kept for existing sites. All sites are listed.					

ACC CES/ESV IRP PROJECT VALIDATION
DD FORM 1391 CHECKLIST
(Continued)

Project Number: _____
Project Title: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
DESCRIPTION OF PROPOSED CONSTRUCTION (*continued*):					
• Major work elements are described (e.g., labor, materials and equipment for the removal and disposal of 25 buried drums containing TCE).					
REQUIREMENT:					
• PROJECT: This project section describes what will be provided (e.g., this project will provide for the removal and disposal of leaking TCE drums and associated contaminated soil to prevent migration of TCE to ground water). What does this project provide?					
• PROJECT (*cont.*): The project is described in terms and details that can be easily understood by those not familiar with the project.					
• REQUIREMENT: • The regulatory basis for the project requirement is provided.					
• The decision-making process that led to the selection of the remedial or removal action is described (e.g., this project is a Removal Action alternative recommended by the EE/CA and documented in the Action Memorandum, signed 7 Apr 1992).					
• All similar sites on base have been evaluated to determine whether it may be economical to apply the cleanup method at additional sites.					
• Include relative risk, legal driver, milestone code and milestone date (YYYYMM) of the site(s) and (for ACC PMs) enter into WIMS-ES.					
• **For installations on or proposed to the NPL:** The NPL and FFA status is provided, including dates.					

ACC CES/ESV IRP PROJECT VALIDATION
DD FORM 1391 CHECKLIST
(Continued)

Project Number: _____
Project Title: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
CURRENT SITUATION					
• The background of the site(s) is provided, including how and when the site(s) was identified, the facts surrounding the site(s) (nature and extent of contamination) and the results of any previous studies (e.g., cause of the contamination, results of the PA/SI and RI/FS or EE/CA, including numbers of wells, borings and samples, and analytical data). Also included is a statement on the site(s) current status.					
• Funding history is included.					
• Included is the source (e.g., drums, pipes, landfills, etc.), extent (e.g., dimensions of the plume, volume of soil contamination, acreage of landfill), and type of contamination (TCE, lead, chromium).					
• Source control measures are identified.					
• Explain why the project needs to be accomplished in the current fiscal year.					
• List the date funding is required and will be executed in order to comply with the schedule outlined in the Gantt chart (e.g., estimated award date, work plan, filed work, reports, project finish, etc.).					
• The levels and types of contamination are provided.					
• Cleanup level goals and ARARs are listed.					
• Risk assessment results are provided, specifically, threat to human health and the environment and potential for migration.					
• **For installations on the NPL:** ATSDR hazard ranking classification is provided if available.					
IMPACTS IF NOT PROVIDED:					
• The enforcement mechanism, mission impact, schedule impact or threat to human health and the environment is described in detail and sources of statements are provided.					

ACC CES/ESV IRP PROJECT VALIDATION
DD FORM 1391 CHECKLIST
(Continued)

Project Number: _____
Project Title: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
IMPACTS IF NOT PROVIDED (*continued*):					
• Provide primary impact if funds are not provided this fiscal year (e.g., will not be able to drill 20 sampling wells at a cost of $X, will not be able to sample 20 sites in Operable Unit 3, etc.).					
• Provide secondary impacts of not accomplishing the work scheduled for the current fiscal year (e.g., will not be able to prepare the RI/FS as planned).					
• Provide the tertiary impacts of not accomplishing the work this fiscal year (e.g., will cause a delay of X months in submitting the RI to the regulatory agencies.).					
ADDITIONAL:					
• Site priorities are listed and are consistent with USAF DERA eligibility and Programming Guidance.					
• Relative Risk is provided for all projects and associated data (such as legal driver, milestone code, milestone date (YYYYMM)) is entered into WIMS-ES (by ACC PM) as a requirement.					
• Estimated Award Date: Estimated award date is updated and correct calendar year is listed. This data should be entered into WIMS-ES.					
• Contracting agent is provided.					
MAPS					
• Map of installation is provided, showing all IRP sites. IRP sites associated with the project are highlighted.					

ACC CES/ESV IRP PROJECT VALIDATION
DD FORM 1391 CHECKLIST
(Continued)

Project Number: _____
Project Title: _____

ITEMS	RPM	ACC PM	ESVW/ ESVE	ESVR	ESV
MAPS (*continued*):					
• Individual maps of each site or group of sites are provided. The maps include local facilities and use, extent of soil and/or ground water contamination (e.g., plume configuration, if applicable, ground water flow direction, location of existing wells and/or borings, if applicable, location of proposed monitoring wells and/or soil borings, if applicable and proposed location of wells and/or excavations required by the project requirement).					
GENERAL REVIEW ITEMS:					
• Entries for Blocks 1 - 8 are capitalized.					
• Acronyms are spelled out when first used in the document.					
• Spelling and typographical errors have been checked.					
• The following statement has been included: "I have reviewed this requirement certifying and validating that it meets the eligibility criteria for the use of DERA funds." and signed and dated by an authorized signatory.					
• The signatory's name and title are typed below the signature.					
• Major work elements are described (e.g., labor, materials and equipment for the removal and disposal of 25 buried drums containing TCE).					
• Identify the tool used to estimate the project cost (CE construction guides, previous experience with similar projects, service center, government estimates, A-E estimates in feasibility study, RACER, etc.).					
• Cost estimates and schedules have been coordinated with the service center.					

INDEX

—A—

A-106 7-7
ACC CES/ESV 2-1, 3-6
Accelerated Cleanup Program 4-30
ACP, See Accelerated Cleanup Program
Acquisition Strategy
  Site Investigation and Cleanup 6-6
Action Memorandum 6-17
Administrative Record 7-3
  Air Force Guidance A-1
  EPA Guidance A-10
  References 7-4
A-E 3-16
  Coordination, Site Investigation and Cleanup 6-9
AFCEE 3-5
Agency for Toxic Substances and Disease Registry, See ATSDR
Air Force Center for Environmental Excellence, See AFCEE
Annotated Bibliography A-1
Annual Report to Congress 7-7, 8-10
AOC 4-17, 6-1
Applicable and Relevant or Appropriate Requirements, See ARARs
ARARs 2-6, 6-21, A-10, B-8
Archeological and Historic Preservation Act (AHPA) B-1
Architect-Engineer, See A-E
Area of Concern, See AOC
ATSDR 4-17, 8-7
  Public Health Assessments 4-17, 8-7

—B—

Base Civil Engineer 3-10
Base Comprehensive Plan, See BCP
BCE, See Base Civil Engineer
BCP 3-10, 4-37, 5-3
BEE, See Bioenvironmental Engineer
Bioenvironmental Engineer 3-9, 3-14, 4-17, 8-7
  ATSDR Health Assessments, Responsibilities 3-14, 4-17, 8-7

—C—

Categorical Exclusion, See CATEX
CATEX 4-11

CERCLA 1-1, 2-4, B-1
Reauthorization 2-4
Civil Engineering
Coordination, General 3-10
Clean Air Act (CAA) B-1
Clean Water Act (CWA) B-1
Coastal Zone Management Act (CZMA) B-2
Commitment to Progress 5-4, 6-38, 7-6
Community Involvement 3-13, 3-19, 4-1
Community Relations Plan 6-27, 6-32
EPA Guidance A-10
IRA 6-20
LTM 6-37
LTO 6-37
NPL 8-6
PA/SI 6-12
RAB 4-4
RD/RA 6-32
Removal Action 6-19
RI/FS 6-27
Site Closeout 6-40
Comprehensive Environmental Response, Compensation and Liability Act, See CERCLA
Computer Requirements 5-48
Cultural Resource Consideration 4-14

—D—

DD Form 1391 Program Document 5-17
Decision Documents
Air Force Guidance A-2
Distribution 6-38
EPA Guidance A-11
IRA 6-18
NFRAP Guidance 4-20
Removal Action, Action Memorandum 6-17
RI/FS 6-26
DERA 1-1, 2-1
Defense and State Memorandum of Agreement, See DSMOA
Defense Environmental Restoration Account, See DERA
Defense Environmental Restoration Program, See DERP
DERA Eligibility 6-3
Guidance A-4
DERP 1-1, 2-4
Dispute Resolution 4-34, 8-4
DSMOA 4-42
Guidance A-3
DUSD(ES) 3-1

—E—

ECAMP Inspection 7-13
Economy Act Purchases 4-23
EDMDS 4-32, 5-9
EE/CA 4-35, 5-7, 6-14
ELB 3-5
ELC 3-5
Emergency Response 5-54
Endangered Species Act B-2
Engineering Evaluation/Cost Analysis, See EE/CA
Environmental Compliance, Assessment and Management Program, See ECAMP
Environmental Data Management and Decision Support, See EDMDS
Environmental Leadership Board, See ELB
Environmental Leadership Council, See ELC
Environmental Protection Agency, See EPA
Environmental Protection Committee, See EPC
EPA 1-1, 3-17
EPA Federal Agency Hazardous Waste Compliance Docket 6-3
EPA PA Form 6-11
EPC 3-10

—F—

Federal Facility Agreement, See FFA
Federal Insecticide, Fungicide, and Rodenticide Act, See FIFRA
FFA 8-4
  Air Force Guidance A-5
  Dispute Resolution 8-4
  Schedules 8-4
  Stipulated Penalties 8-3
FIFRA B-2
File Plan 7-1
Fish and Wildlife Coordination Act B-2
Floodplains, Executive Order 11988 B-2
Funding 2-1
Funding Level Adjustments 5-53

—G—

Goals 2-2

—H—

Hazardous and Solid Waste Amendments, See HSWA
Hazard Ranking System, See HRS
History of the IRP 1-2
HQ ACC/CEV 2-1, 3-6
HQ USAF/CEV 2-1, 3-4
HQ USAF/CEVR 2-1, 3-4

HRS 1-1, 2-6, 6-10 8-1
HSWA 1-2, 2-6, 4-7

—I—

IAG, See FFA
IMAP 4-31
Indefinite Delivery/Indefinite Quantity Contract, See ID/IQ
Information Management Action Plan, See IMAP
Interagency Agreement, See FFA
ID/IQ Contract 6-6, 6-10, 6-15, 6-23, 6-30
Information Repository 7-3
Installation Commander 3-9
Installation Restoration Program Information Management System, See IRPIMS
Interim Remedial Action, See IRA
IRA 6-14
  Program Document 5-26
IRPIMS 7-8, A-5

—L—

Laws and Regulations
  Applicable B-1
  CERCLA 1-1, 2-4
  Executive Order 12580 Superfund Implementation 2-5
  HSWA 2-6
  Implementing the IRP 1-1
  NCP 1-1, 2-5
  NEPA 2-8, 4-10
  Proposed Corrective Action Rule 2-7
  RCRA 2-6
  SARA 1-1, 2-4
  State and Local Laws and Regulations B-3
Long Term Monitoring, See LTM
Long Term Operation, See LTO
LTM 6-34
  Program Document 5-38
LTO 6-34
  Program Document 5-41

—M—

Management Action Plan, See MAP
Manpower 5-46
  Goals 2-3
MAP 5-3, 7-10
  Deliverable Schedule 5-4
  Goals 2-3
MILCON Waiver 4-28

—N—

Narrative Program Document 5-11
National Contingency Plan, See NCP
National Environmental Policy Act, See NEPA
National Priority List, See NPL
National Historical Preservation Act B-2
Natural Resources Trustee Coordination 4-12
  Guidance A-6
NCP 1-1, 2-5
NEPA 2-8, 4-10
  Guidance A-4
NFRAP Decision 4-20
  After LTM/LTO 6-37
  After PA/SI 6-13
  After RD/RA 6-33,
  After Removal Action/IRA 6-20
  After RI/FS 6-28
No Further Remedial Action Planned, See NFRAP
NPL 1-1, 8-1
  Community Involvement 8-6
  Definition 1-1
  Explanation of the NPL Process 8-1
  Federal Facility Agreements 8-2

—O—

Obligation Rate Goals 2-3
Operations and Maintenance, See LTO
Out-of-Cycle Requirements 5-53

—P—

PA/SI 6-10
  Program Document 5-23
Peer Reviews 4-24
  RD 6-33
  Removal Action/IRA 6-20
  RI/FS 6-27
Permit Exemptions 4-28
PREE/CA 4-34, 5-7
Preliminary Assessment, See PA/SI
Preliminary Assessment/Site Inspection, See PA/SI
Presumptive Remedies 6-14
Presumptive Remedy Engineering Evaluation/Cost Analysis, See PREE/CA
Prioritizing Requirements 2-1, 4-40, 5-50
Private Property Access 4-27
  Guidance A-5
Program Analyst 3-6, 3-7, 3-8

Program Documents 5-9
Checklist C-1
IRA 5-26
LTM 5-38
LTO 5-41
PA/SI 5-23
RD 5-32
RD/RA 5-35
Removal Action 5-26
RI/FS 5-29
Program Execution 2-1
Program Management Guidance A-4
Program Manager 3-6, 3-7, 3-8
Proposed Plan
IRA 6-18
RA 6-25
Public Affairs
ACC Responsibilities 3-9
Installation Responsibilities 3-13

—Q—

Quarterly Reports 7-4

—R—

RAB 2-3, 3-19, 4-4
RACER 5-6
Radioactive Sites 4-26
Guidance A-7
RAIP, See Remedial Action in Place
Range Policy 4-17
Rapid Response Capabilities, USACE 6-15
Rational National Standards Initiative, See RNSI
RCO 3-5
RCRA 1-2, 2-6
RCRA-CERCLA Integration
Comparison Between RCRA and CERCLA 4-8
Explanation 2-6, 4-7
Funding 4-9
Policy 4-8
RD/RA 6-29
EPA Guidance A-11
Program Documents
RD 5-32
RD/RA 5-35
REC 3-3
Record of Decision, See ROD
Regional Compliance Offices , See RCO

Regional Environmental Coordinator, See REC
Regulatory Agencies 3-17
  Document Review 6-7
  EPA 3-17
  State and Local 3-17
Relative Risk Evaluation 4-37
Remedial Action Cost Engineering and Requirements System, See RACER
Remedial Action in Place 4-22, 6-20, 6-33, 6-37, 6-38
Remedial Design/Remedial Action, See RD/RA
Remedial Investigation/Feasibility Study, See RI/FS
Remedial Project Manager, See RPM
Removal Action 6-14
  EPA Guidance A-12
  Program Document 5-26
Reopening Sites 6-1
Reportable Quantities 6-3, B-4
Resource Conservation and Recovery Act, See RCRA
Response Complete 4-21,4-22, 6-20, 6-33, 6-37, 6-38
Restoration Advisory Board, See RAB
RI/FS 6-21
  EPA Guidance A-11
  Program Document 5-29
Risk Assessment
  During RI/FS 6-24
  EPA Guidance A-12
RNSI 4-35
ROD
  IRA 6-18
  NPL 8-8
  RI/FS 6-26
RPM
  Appointment 2-1, 3-11
  Responsibilities 3-11

—S—

Safe Drinking Water Act, See SDWA
SAF/MIQ 2-1, 3-3
SARA 1-1, 1-2, 2-4
Scope of Work
  Site Investigation and Cleanup 6-6
SDWA B-2
Service Centers 3-14
Site Closeout 2-2, 4-21, 4-22, 6-37
  Decision Documentation 6-37
  EPA Guidance A-12
  Five-Year Review 6-39
Site Delisting 6-38

Site Identification
DERA Eligibility 6-3
How Sites or AOCs are Identified 6-1
Notification 6-3, B-4
Programming Requirements 6-4
Regulatory Orders 6-2
Reportable Quantities 6-3, B-4
What to Do When a Site is Identified 6-3
Solid Waste Management Units, See SWMUs
Staff Judge Advocate 1-2
ACC Responsibilities 3-8
Installation Responsibilities 3-13
Stipulated Penalties 8-4
Superfund Amendments and Reauthorization Act, See SARA
SWMUs 1-2, 2-7, 4-7

—T—

TDY and Training Policy 5-44
TDY and Training Reports 7-5
Third Party Sites 3-4
Toxic Substances Control Act, See TSCA
TSCA B-3

—W—

Wetlands, Executive Order 11990 B-2
Wild and Scenic Rivers Act B-3
Wilderness Act B-3
WIMS-ES 7-8
Work Information Management System, Environmental Subsystem, See WIMS-ES