



**U.S. Army
Environmental
Center**

VERSION 2

Base Realignment and Closure (BRAC) Cleanup Plan

**Fort Devens
Fort Devens, Massachusetts**

Prepared for:

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND 21010**

Prepared by:

**EARTH TECH
1420 KING STREET, SUITE 600
ALEXANDRIA, VIRGINIA 22314**

*Requests for this document must be referred to:
Commander, Fort Devens
Fort Devens, Massachusetts 01433*

AUGUST 1995

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AUGUST 1995

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TABLE OF CONTENTS

Section	Page No.
Executive Summary	ES-1
Chapter 1: Introduction and Summary	1-1
1.1 Environmental Response Objectives	1-2
1.2 BCP Purpose, Updates, and Distribution	1-3
1.3 BCT/Project Team	1-4
1.4 Installation Description and History	1-4
1.4.1 Property Description	1-4
1.4.2 History of Installation	1-7
1.5 Environmental Setting	1-13
1.5.1 Topography	1-13
1.5.2 Geology	1-13
1.5.3 Hydrogeology	1-20
1.5.4 Surface Water Hydrology	1-21
1.6 Hazardous Substances and Waste Management Practices	1-21
1.7 Off-Post Property/Tenants	1-21
1.7.1 Off-Post Property	1-21
1.7.2 Tenant Units	1-34
Chapter 2: Property Disposal and Reuse Plan	2-1
2.1 Status of Disposal Planning Process	2-1
2.1.1 NEPA Documentation	2-1
2.1.2 Disposal Plan	2-1
2.1.3 Reuse Plan	2-2
2.2 Relationship to Environmental Programs	2-2
2.3 Property Transfer Methods	2-10
2.3.1 Federal Transfer of Property	2-10
2.3.2 No-Cost Public Benefit Conveyance	2-11
2.3.3 Negotiated Sale	2-11
2.3.4 Competitive Public Sale	2-11
2.3.5 Widening of Public Highways	2-11
2.3.6 Donated Property	2-11
2.3.7 Interim Leases	2-12
Chapter 3: Installation-Wide Environmental Program Status	3-1
3.1 Environmental Program Status	3-1
3.1.1 Restoration Sites	3-41
3.1.2 Installation-Wide Source Discovery and Assessment Status	3-43

TABLE OF CONTENTS

Continued

Section	Page No.
3.2 Compliance Program Status	3-44
3.2.1 Storage Tanks	3-48
3.2.1.1 USTs.	3-48
3.2.1.2 ASTs.	3-72
3.2.2 Hazardous Substance Management	3-72
3.2.3 Hazardous Waste Management	3-75
3.2.5 Polychlorinated Biphenyls (PCBs)	3-77
3.2.6 Asbestos	3-78
3.2.7 Radon	3-78
3.2.8 RCRA Facilities	3-79
3.2.9 Wastewater Discharges	3-79
3.2.10 Oil/Water Separators	3-80
3.2.11 Pollution Prevention	3-80
3.2.12 NRC Licensing	3-80
3.2.13 Mixed Waste	3-80
3.2.14 Radiation	3-80
3.2.16 Medical Waste	3-81
3.2.17 Unexploded Ordnance	3-81
3.2.18 National Environmental Policy Act (NEPA)	3-82
3.2.19 Air Emissions	3-82
3.3 Status of Natural and Cultural Resources Programs	3-82
3.3.1 Vegetation	3-82
3.3.2 Wildlife	3-83
3.3.3 Wetlands and Flood Plains	3-83
3.3.4 Designated Preservation Areas	3-85
3.3.5 Rare, Threatened and Endangered Species	3-85
3.3.6 Cultural Resources	3-86
3.4 Environmental Condition of Property	3-86
3.4.1 CERFA Parcels	3-87
3.4.2 CERFA Parcels with Qualifiers	3-87
3.4.3 CERFA Disqualified Parcels	3-87
3.4.4 CERFA Excluded Parcels	3-91
3.4.5 Suitability of Installation Property for Transfer by Deed	3-91
3.5 Status of Community Involvement	3-96
Chapter 4: Installation-Wide Strategy for Environmental Restoration	4-1
4.1 Zone/OU Designation and Strategy	4-2
4.1.1 Zone Designations	4-2
4.1.2 OU Designations	4-2

TABLE OF CONTENTS

Continued

Section	Page No.
4.1.3 Sequence of OUs	4-4
4.1.3.1 Sequencing Strategy.	4-4
4.1.3.2 Remediation Timelines and Documents	4-6
4.1.4 Environmental Restoration Early Actions Strategy	4-11
4.1.5 Remedy Selection Approach	4-12
4.2 Compliance Strategy	4-13
4.2.1 Storage Tanks	4-14
4.2.1.1 USTs.	4-14
4.2.1.2 ASTs.	4-14
4.2.2 Hazardous Substances Management	4-14
4.2.3 Hazardous Waste Management	4-14
4.2.4 Solid Waste Management	4-16
4.2.5 Polychlorinated Biphenyls	4-16
4.2.6 Asbestos	4-16
4.2.7 Radon	4-16
4.2.8 RCRA Facilities	4-16
4.2.9 Wastewater Discharges	4-17
4.2.10 Oil/Water Separators	4-17
4.2.11 Pollution Prevention	4-17
4.2.12 NRC Licensing	4-17
4.2.13 Mixed Waste	4-17
4.2.14 Radiation	4-17
4.2.15 Lead-Based Paint	4-17
4.2.16 Medical Waste	4-18
4.2.17 Unexploded Ordnance	4-18
4.2.18 National Environmental Policy Act	4-18
4.2.19 Air Emissions	4-18
4.3 Natural and Cultural Resources Strategy(ies)	4-18
4.3.1 Vegetation	4-18
4.3.2 Wildlife	4-18
4.3.3 Wetlands and Flood Plains	4-19
4.3.4 Designated Preservation Areas	4-19
4.3.5 Rare, Threatened and Endangered Species	4-19
4.3.6 Cultural Resources	4-19
4.4 Community Involvement/Strategy	4-20

TABLE OF CONTENTS

Continued

Section	Page No.
Chapter 5: Environmental Program Master Schedules	5-1
5.1 Environmental Restoration Program	5-1
5.1.1 Response Schedules	5-1
5.1.2 Requirements by Fiscal Year	5-3
5.2 Compliance Programs	5-3
5.2.1 Master Compliance Schedules	5-3
5.2.2 Requirements by Fiscal Year	5-3
5.3 Natural and Cultural Resources	5-3
5.3.1 Natural and Cultural Resources Schedule(s)	5-4
5.3.2 Requirements by Fiscal Year	5-4
5.4 Meeting Schedule	5-4
Chapter 6: Technical and Other Issues To Be Resolved	6-1
6.1 Information Management	6-1
6.1.1 BCT Action Items	6-1
6.1.2 Rationale	6-2
6.1.3 Status/Strategy	6-2
6.2 Data Usability	6-3
6.2.1 BCT Action Items	6-3
6.2.2 Rationale	6-3
6.2.3 Status/Strategy	6-3
6.3 Data Gaps	6-3
6.3.1 BCT Action Items	6-4
6.3.2 Rationale	6-4
6.3.3 Status/Strategy	6-4
6.4 Background Levels	6-4
6.4.1 BCT Action Items	6-5
6.4.2 Rationale	6-5
6.4.3 Status/Strategy	6-5
6.5 Risk Assessments	6-5
6.5.1 BCT Action Items	6-5
6.5.2 Rationale	6-6
6.5.3 Status/Strategy	6-6
6.6 Installation-wide Remedial Action Strategy	6-6
6.6.1 BCT Action Items	6-6
6.6.2 Rationale	6-7
6.6.3 Status/Strategy	6-7

TABLE OF CONTENTS

Continued

Section	Page No.
6.7 Interim Monitoring of Groundwater and Surface Water	6-8
6.7.1 BCT Action Items	6-8
6.7.2 Rationale	6-8
6.7.3 Status/Strategy	6-8
6.8 Excavation of Contaminated Materials	6-8
6.8.1 BCT Action Items	6-8
6.8.2 Rationale	6-9
6.8.3 Status/Strategy	6-9
6.9 Protocols for Remedial Design Reviews	6-9
6.9.1 BCT Action Items	6-9
6.9.2 Rationale	6-10
6.9.3 Status/Strategy	6-10
6.10 Conceptual Models	6-10
6.10.1 BCT Action Items	6-10
6.10.2 Rationale	6-10
6.10.3 Status/Strategy	6-10
6.11 Cleanup Standards	6-10
6.11.1 BCT Action Items	6-11
6.11.2 Rationale	6-11
6.11.3 Status/Strategy	6-11
6.12 Initiatives for Accelerating Cleanup	6-11
6.12.1 BCT Action Items	6-12
6.12.2 Rationale	6-12
6.12.3 Status/Strategy	6-12
6.13 Remedial Actions	6-13
6.13.1 BCT Action Items	6-13
6.13.2 Rationale	6-13
6.13.3 Status/Strategy	6-13
6.14 Review of Selected Technologies for Application of Expedited Solutions .	6-13
6.14.1 BCT Action Items	6-13
6.14.2 Rationale	6-14
6.14.3 Status/Strategy	6-14
6.15 Hot Spot Removals	6-14
6.15.1 BCT Action Items	6-14
6.15.2 Rationale	6-14
6.15.3 Status/Strategy	6-15
6.16 Identification of Clean Properties	6-15
6.16.1 BCT Action Items	6-15
6.16.2 Rationale	6-15
6.16.3 Status/Strategy	6-15

TABLE OF CONTENTS

Continued

Section	Page No.
6.17 Overlapping Phases of the Cleanup Process	6-15
6.17.1 BCT Action Items	6-16
6.17.2 Rationale	6-16
6.17.3 Status/Strategy	6-16
6.18 Improved Contracting Procedures	6-16
6.18.1 BCT Action Items	6-17
6.18.2 Rationale	6-17
6.18.3 Status/Strategy	6-17
6.19 Interfacing with the Community Reuse Plan	6-17
6.19.1 BCT Action Items	6-17
6.19.2 Rationale	6-18
6.19.3 Status/Strategy	6-18
6.20 Bias for Cleanup Instead of Studies	6-18
6.20.1 BCT Action Items	6-18
6.20.2 Rationale	6-18
6.20.3 Status/Strategy	6-18
6.21 Expert Input on Contamination and Potential Remedial Actions	6-18
6.21.1 BCT Action Items	6-19
6.21.2 Rationale	6-19
6.21.3 Status/Strategy	6-19
6.22 Generic Remedies	6-19
6.22.1 BCT Action Items	6-19
6.22.2 Rationale	6-19
6.22.3 Status/Strategy	6-19
6.23 Partnering (Using Innovative Management, Coordination, and Communication Techniques)	6-20
6.23.1 BCT Action Items	6-20
6.23.2 Rationale	6-20
6.23.3 Status/Strategy	6-20
6.24 Updating the CERFA Report and Natural/Cultural Resources Documentation	6-20
6.24.1 BCT Action Items	6-20
6.24.2 Rationale	6-21
6.24.3 Status/Strategy	6-21
6.25 Implementing the Policy for On-Site Decision Making	6-21
6.25.1 BCT Action Items	6-21
6.25.2 Rationale	6-21
6.25.3 Status/Strategy	6-21

TABLE OF CONTENTS

Continued

Section	Page No.
6.26 Structural and Infrastructural Constraints to Reuse	6-21
6.26.1 BCT Action Items	6-22
6.26.2 Rationale	6-22
6.26.3 Status/Strategy	6-22
6.27 Other Technical Reuse Issues to be Resolved	6-22
6.27.1 BCT Action Items	6-22
6.27.2 Rationale	6-22
6.27.3 Status/Strategy	6-22
Chapter 7: Primary References	7-1
Appendix A: Fiscal Year Funding Requirements/Costs	
Appendix B: Installation Environmental Restoration Documents Summary Tables	
Appendix C: Decision Document/ROD Summaries	
Appendix D: No Further Response Action Planned (NFRAP) Summaries	
Appendix E: Conceptual Site Model Data Summaries	
Appendix F: Other Ancillary BCP Materials	

TABLE OF CONTENTS

Continued

LIST OF FIGURES

Figure		Page No.
Figure 1-1	Location of Fort Devens	1-9
Figure 1-2	Surrounding Off-Post Land Use	1-11
Figure 1-3A	Location of Past Hazardous Substance Activities	1-23
Figure 1-3B	Location of Past Hazardous Substance Activities	1-25
Figure 1-3C	Location of Past Hazardous Substance Activities	1-27
Figure 1-3D	Location of Past Hazardous Substance Activities	1-29
Figure 2-1	Disposal and Reuse Parcels	2-5
Figure 2-2	Reuse Districts at Fort Devens	2-7
Figure 3-1A	Sites, Zones, and OUs Currently Under Investigation	3-10
Figure 3-1B	Sites, Zones, and OUs Currently Under Investigation	3-12
Figure 3-2	Environmental Condition of Property	3-89
Figure 3-3	Property Suitable for Transfer	3-93
Figure 4-1	Sequence and Primary Document Timetable for OUs	4-9

LIST OF TABLES

Table		Page No.
Table ES-1	BCT/Project Team Action Items	ES-4
Table 1-1	Current BCT/Project Team Members	1-5
Table 1-2	Property Acquisition Summary	1-14
Table 1-3	History of Installation Operations	1-19
Table 1-4	Hazardous Substance Activities at Fort Devens	1-22
Table 1-5	Hazardous Waste Generating Activities	1-31
Table 1-6	Off-Post Properties	1-35
Table 1-7	On-Post Tenant Units	1-36
Table 2-1	Reuse Parcel Data Summary	2-3
Table 2-2	Existing Legal Agreements/Interim Leases	2-13
Table 3-1	Preliminary Location Summary	3-3
Table 3-2	Environmental Restoration Site/Study Area Summary	3-14
Table 3-3	Environmental Restoration Early Action Status	3-42
Table 3-4	Mission/Operational-Related Compliance Projects	3-45
Table 3-5	Closure-Related Compliance Projects	3-46
Table 3-6	Compliance Early Action Status	3-46
Table 3-7	Environmental Compliance Permits, Licenses, Notifications and Registrations	3-47
Table 3-8	Underground Storage Tank Inventory	3-49
Table 3-9	Aboveground Storage Tank Inventory	3-73
Table 4-1	Relationship Between OUs, Sites, and Reuse Parcels	4-5
Table 4-2	Cleanup Sequence	4-7

LIST OF ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
ACM	Asbestos-Containing Material
AOC	Area of Contamination
AREE	Area Requiring Environmental Evaluation
AST	Aboveground Storage Tank
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
BEC	Base Environmental Coordinator
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulation
CRP	Community Relations Plan
CWA	Clean Water Act
DA	Department of the Army
DENIX	Defense Environmental Network Information Exchange
DERA	Defense Environmental Restoration Account
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EE	Environmental Evaluation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMO	Environmental Management Office
EnPA	Enhanced Preliminary Assessment
FFA	Federal Facilities Agreement
FONSI	Finding of No Significant Impact
FORSCOM	Forces Command
FS	Feasibility Study
FY	Fiscal Year
GIS	Geographic Information System
IRDMIS	Installation Restoration Data Management Information System
IRP	Installation Restoration Program
JBOS	Joint Boards of Selectmen
LTM	Long-Term Monitoring
MAAF	Moore Army Airfield
MADEP	Massachusetts Department of Environmental Protection
MEP	Master Environmental Plan
MEPA	Massachusetts Environmental Policy Act
MGLB	Massachusetts Government Land Bank
MSDS	Material Safety Data Sheet
NCP	National Oil and Hazardous Substances Pollution Contingency Plan

LIST OF ACRONYMS

Continued

NEPA	National Environmental Policy Act
NFA	No Further Action
NFRAP	No Further Response Action Planned
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil, and Lubricants
PX	Post Exchange
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation/ Feasibility Study
ROD	Record of Decision
SA	Study Area
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SPCC	Spill Prevention Control and Countermeasure
SI	Site Investigation
SWMU	Solid Waste Management Unit
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Center
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
UXO	Unexploded Ordnance
WWTP	Wastewater Treatment Plant

BCP GLOSSARY OF TERMS

Applicable or Relevant and Appropriate Requirement (ARAR). Cleanup standards, standards of control, and other environmental protection requirements, criteria, or limitations promulgated in federal or state regulations that define remedial action requirements at CERCLA sites.

Area Requiring Environmental Evaluation (AREE). Individual site, multiple sites or program area identified through an environmental assessment or site investigation as a potential threat to human health or the environment which requires further investigation. Roughly synonymous with an Area of Contamination (AOC). A study area, site, or AREE where contamination has been found.

BRAC Cleanup Team (BCT). Team formed to manage environmental programs for BRAC installations consisting of a U.S. Army installation representative, USEPA region representative, and state environmental agency representative.

Base Environmental Coordinator (BEC). U.S. Army representative of the BCT.

Base Closure and Realignment Act (BRAC Act). The Base Closure and Realignment Act of 1988 (P.L. 100-526, 102 Stat. 2623) (BRAC 88 or BRAC I) and the Defense Base Closure and Realignment Act of 1990 (P.L. 101-0510, 104 Stat. 1808) (BRAC 91, 93, 95) which legislated the closure or realignment of military bases.

Base Transition Coordinator (BTC). DOD representative who serves as the primary point of contact for the public at a BRAC installation and assists in disposal and reuse planning and coordination for the property.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (1980). Otherwise known as Superfund; provides for liability, compensation, cleanup and emergency response for hazardous substances released to the environment. It was amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). Section 120 of CERCLA specifically addresses procedures to be followed for federal facilities investigation and cleanup including BRAC installations. Section 120(h) was amended by the Community Environmental Response Facilitation Act of 1992 (CERFA).

Community Environmental Response Facilitation Act (CERFA). Amendment to CERCLA which established new procedures for contamination assessment, remediation (cleanup), and regulatory agency notification and concurrence for federal facility closures. CERFA requires the U.S. Army to identify uncontaminated property; its primary goal is to accelerate the transfer of property that can be immediately reused and redeveloped. The USAEC prepared CERFA reports for all U.S. Army BRAC installations. Included in the report is an environmental condition of property map which classifies property in four categories, CERFA clean, excluded, qualified and disqualified.

BCP GLOSSARY OF TERMS

Continued

Community Relations Plan (CRP). Formal plan for community relations activities at an NPL site (see Public Involvement and Response Plan).

Corrective Measures Study (CMS). Third phase of the RCRA corrective action program for a facility consisting of the identification of corrective action requirements and the evaluation and selection of appropriate remedies for these problems identified in the RFI. The CMA roughly equates to the FS and PP prepared for sites being investigated under CERCLA.

Decision Document (DD). Document which formalizes the selection of remedial actions which are to be implemented at the installation. DDs are prepared for installations not on the National Priorities List. The DD corresponds roughly to a Record of Decision (ROD) for an NPL site.

Defense Environmental Restoration Account (DERA). Defense Appropriations Act funding mechanism for the DERP IRP (except the BRAC IRP).

Defense Environmental Restoration Program (DERP). Program established in 1984 to promote and coordinate efforts for the evaluation and cleanup of contamination at Department of Defense (DOD) installations. The program currently includes: the Installation Restoration Program (IRP), under which DOD installation investigations and site cleanups are conducted; and Other Hazardous Waste (OWH) Operations, through which research, development and demonstration programs aimed at improving remediation technology and reducing DOD waste generation rates are conducted. DERP is managed centrally by the Office of the Secretary of Defense. SARA provides continuing authority for the Secretary of Defense to carry out this program in consultation with the USEPA and in compliance with CERCLA and SARA guidelines.

Early Action. Also called an interim action. Early actions are remedial actions taken to respond to an immediate site threat or take advantage of an opportunity to significantly reduce risk quickly. These actions are typically limited in scope and are followed by other OU actions that complete site restoration for the long-term. Examples of early or interim actions are construction of a temporary landfill cap, and removal of contaminated soil to prohibit contamination of groundwater.

Environmental Assessment (EA). Document prepared to evaluate the environmental impacts of a federal action in compliance with NEPA when an EIS may not be necessary. If the EA indicates that there may be negative impacts to the environment from the proposed action, an EIS is required. If no significant impact is identified in the EA, a Finding of No Significant Impact (FONSI) is documented and no further evaluation under NEPA is required.

BCP GLOSSARY OF TERMS

Continued

Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). Title III of SARA which requires certain facilities to coordinate emergency planning with local and regional authorities and prepare hazardous material inventory and release data (Tier I and II and Toxic Release Inventory Reports). Executive Order 12856 signed August 3, 1993 requires that federal facilities comply with EPCRA.

Environmental Impact Statement (EIS). Document required by the NEPA which examines major federal actions to determine their impact on the environment. Installation disposal and reuse actions require the preparation of NEPA documentation.

Environmental Investigation/Alternatives Analysis (EI/AA). Terminology used to describe RI/FS studies conducted at U.S. Army installations which are not on the NPL.

Explanation of Significant Difference (ESD). Document which identifies significant changes that are being made to a component of the remedial action remedy in a ROD or DD. If fundamental changes are made to the overall remedy they are documented in a ROD or DD amendment and not a ESD.

Feasibility Study (FS). CERCLA environmental restoration study undertaken to develop and evaluate options for remedial action. Generally performed concurrently with and using data gathered during the RI. The FS evaluates remedial action alternatives based on technical feasibility and cost effectiveness, regulatory requirements, public health effects, and environmental impact.

Federal Facility Agreement (FFA). Binding agreement between the party responsible for cleanup of a NPL site and the USEPA which formalizes the CERCLA procedures and schedules to be followed for the site.

Federal Facility Site Restoration Agreement (FFSRA). Binding agreement between the party responsible for cleanup of a non-NPL site and the lead state environmental agency which formalizes the CERCLA procedures and schedules to be followed for the site. The FFSRA equates to a FFA for an NPL site.

Hazard Ranking System (HRS). System established by the USEPA for evaluating contaminated sites based on the potential hazard posed to public health and the environment. The system uses PA/SI data to generate a score ranging from 0 to 100 for each installation or individual site evaluated. Installations with a score above 28.5 may be included on the NPL.

Installation Restoration Data Management Information System (IRDMIS). Database developed by the U.S. Army and maintained by the USAEC to manage sampling and analysis data generated at U.S. Army installations undergoing environmental investigation and restoration.

BCP GLOSSARY OF TERMS

Continued

Installation Restoration Program (IRP). Program implemented under the DERP to investigate and remediate DOD installations. The IRP conforms with the NCP and CERCLA and applies guidelines promulgated by the USEPA. The IRP for active installations is funded by the DERA, the IRP for BRAC installations is funded through the Military Construction Act.

National Oil and Hazardous Substance Pollution Contingency Plan (NCP). Plan which provides the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances in accordance with CERCLA and the Clean Water Act (CWA). These procedures include the completion of a Preliminary Assessment, Remedial Investigation/Feasibility Study, Proposed Plan, Remedial Design and Remedial Action.

National Environmental Policy Act (NEPA). Act passed in 1970 to encourage the assessment of environmental impact in federal decision making processes. The Act requires the preparation of an EIS/EA for significant federal actions.

National Pollutant Discharge Elimination System (NPDES). USEPA administered program authorized by the Clean Water Act (CWA) to monitor wastewater discharges to surface and groundwaters. NPDES elements include industrial and sanitary wastewater discharge permitting programs and storm water permitting programs.

National Priority List (NPL). Listing of CERCLA hazardous substance release sites scoring 28.5 or higher under the USEPA Hazard Ranking System. Such sites are first proposed for NPL listing. Following a public comment period, proposed NPL sites may be listed on the NPL or may be deleted from consideration for placement on the list. Regulatory oversight for CERCLA site restoration actions at NPL installations is provided by the USEPA. Such installations are required to enter into an FFA.

No Further Response Action Planned (NFRAP). Designation given to an AREE or IRP site when investigation (SI or RI/FS) results indicate site does not require remedial action or, after adequate remedial actions have been completed. NFRAP is synonymous with no further action (NFA).

Operable Unit (OU). Environmental restoration unit identified as part of the CERCLA environmental restoration process to aid in the development of a remedial action strategy for the installation. Operable units may address geographical portions of an installation, specific installation problems, initial phases of an action, sets of actions performed over time or concurrent actions located in different portions of the installation.

Preliminary Assessment (PA). The first phase of investigation in the CERCLA environmental restoration process. The PA consists of a review of existing information and site reconnaissance if appropriate, to determine areas requiring additional evaluation (AREEs).

BCP GLOSSARY OF TERMS

Continued

Proposed Plan (PP). Document which identifies the preferred remedial action alternative for a site and which provides a brief summary of all of the alternatives studied in the detailed analysis phase of the RI/FS.

Public Involvement and Response Plan (PIRP). U.S. Army document which outlines the program established to inform the community of the IRP at an installation and provides for community involvement in the cleanup process. The PIRP is synonymous with the Community Relations Plan (CRP). A PIRP or CRP is required for NPL sites and may also be prepared for U.S. Army installations which are not on the NPL but are undergoing investigation under the active installation or BRAC IRP.

RCRA Facility Assessment (RFA). First phase of the RCRA corrective action program for a facility consisting of a records review and site inspection to gather information on releases at the facility. The RFA process includes an evaluation of SWMUs as well as preliminary determinations regarding the need for further investigation. The RFA roughly equates to the PA conducted under the CERCLA environmental program.

RCRA Facility Investigation (RFI). Second phase of the RCRA corrective action program for a facility conducted at installations where the RFA identified the need for further evaluation. The RFI consists of multimedia investigations conducted to characterize the extent of releases at the RCRA facility. The RFI roughly equates to the RI conducted under the CERCLA environmental restoration process.

Record of Decision (ROD). Document which formalizes the selection of remedial actions which are to be implemented at an NPL site. The ROD certifies that the remedy selection process was carried out in accordance with CERCLA and with the NCP. It describes the treatment, engineering, and institutional components of the remedial action and remediation goals. The ROD roughly equates to a DD for a non-NPL site.

Remedial Action (RA). Final phase of the CERCLA environmental restoration process during which the actual construction of the remedy or implementation phase of site cleanup occurs. When all phases of the remedial activity at the site have been completed in compliance with the terms of the ROD or DD the site can be designated NFRAP.

Remedial Design (RD). Engineering phase of the CERCLA environmental restoration process during which technical drawings and specifications are developed for the subsequent Remedial Action. These specifications are based upon the detailed description of the remedy and the cleanup criteria provided in the ROD or DD.

BCP GLOSSARY OF TERMS

Continued

Remedial Investigation (RI). CERCLA environmental restoration process phase undertaken to determine the nature and extent of the problem represented by a release of CERCLA hazardous substances. The RI includes multimedia sampling, field studies, monitoring, data analysis and completion of a baseline risk assessment and ecological evaluation to determine the nature, extent, and impacts to the human health and environment from contaminants present at the site if no remedial action is taken.

Resource Conservation and Recovery Act (RCRA). Federal law introduced in 1976 as an amendment to the Solid Waste Disposal Act. RCRA consists of 9 subtitles including subtitles C, D, and I which outline management requirements for hazardous waste, solid waste and underground storage tanks containing petroleum products, respectively.

Restoration Advisory Board (RAB). Board which acts as a forum for discussion and exchange of cleanup information between the DOD installation representatives and the public at BRAC installations where property will be available for transfer. The RAB consists of DOD component, USEPA, state environmental agency, and local community representatives, and is jointly chaired by the BEC and a local community member.

Site Inspection (SI). CERCLA investigation conducted if a Preliminary Assessment indicates the need for further investigation. SIs routinely involve visual inspections and the collection and analysis of multimedia samples to evaluate the extent of the problem and to determine whether a more detailed study such as an RI/FS is necessary.

Solid Waste Management Unit (SWMU). Waste management unit at a RCRA facility from which hazardous constituents might migrate. SWMUs may include containers, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators and recycling units, and wastewater treatment units.

Spill Prevention Control and Countermeasures (SPCC). Actions taken by an installation to address potential releases of hazardous substances or petroleum products. A SPCC Plan which documents procedures established by an installation to effect these response actions may be required for an installation pursuant to the Clean Water Act, RCRA, or SARA.

Superfund Amendments and Reauthorization Act (SARA). Law and amendments to CERCLA which address liability, compensation, cleanup and emergency response for hazardous substance releases. Title III of SARA is the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA).

Zone. Geographically contiguous area amenable to investigation in an SI or RI as a single unit identified to organize installation field efforts, group data from multiple investigations, facilitate the development of conceptual site models, prepare detailed maps and otherwise manage investigation activities. Zones are different than OU response actions.

EXECUTIVE SUMMARY

Introduction

This Base Realignment and Closure (BRAC) Cleanup Plan (BCP) describes the status, management and response strategy, and action items related to Fort Devens ongoing environmental restoration and associated compliance programs. These programs support full restoration of the installation property, which is necessary to meet the requirements for property disposal and reuse activities associated with the closure of the installation.

The scope of the BCP is based on requirements derived from the following laws: the BRAC Act; National Environmental Policy Act (NEPA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Community Environmental Response Facilitation Act (CERFA); Resource Conservation and Recovery Act (RCRA); and other applicable laws.

The BCP is intended to be a dynamic planning document, developed by a BRAC Cleanup Team (BCT) consisting of U.S. Army, U.S. Environmental Protection Agency (USEPA), and state representatives. It was necessary to make certain assumptions and interpretations to develop the schedule and cost estimates provided in this plan. The BCP will be updated regularly to reflect the current status and strategies of remedial actions, compliance programs, and disposal and reuse planning. This document is the latest in a series of updates/modifications and represents conditions and strategies as of August 1995.

Status of Disposal, Reuse, and Interim Lease Process

Fort Devens was identified for closure on the Defense Secretary's BRAC 1991 list. Only the North Post and Main Post were identified for closure; the South Post will be realigned as a U.S. Army Reserve Enclave. Fort Devens will officially close in July 1997. The disposal planning process of Fort Devens is ongoing and involves three interrelated activities: the NEPA documentation process, development of a disposal plan, and development of a community reuse plan. The first two items are the responsibility of the U.S. Army. The third is the responsibility of the Fort Devens Reuse Committee, an agency created for the purpose of developing a plan for reuse and redevelopment of the installation.

These three activities have been completed at Fort Devens. The Draft Disposal and Reuse Environmental Impact Statement was released in September 1994. To date, property disposal has not occurred at Fort Devens. Future property disposals at Fort Devens are anticipated to include Federal transfer and negotiated sale. The Fort Devens Reuse Committee has developed a reuse plan, which was approved on 7 December 1994.

Status of Environmental Restoration Program

The IRP effort at Fort Devens was initiated in 1982 and has continued to the present. In 1982, an Installation Assessment (Preliminary Assessment) was conducted at Fort Devens. No further CERCLA-related studies were recommended in the assessment. In 1985, a RCRA Facility Assessment (RFA) was conducted to identify solid waste management units (SWMUs) to be included in Fort Devens's RCRA Part B permit application for a hazardous waste storage facility.

Forty SWMUs were identified during the RFA. A Master Environmental Plan (MEP) was initiated in 1988, in order to define areas requiring investigation, to outline types of studies required, and to assist the U.S. Army with continuity of the Fort Devens IRP program. The interrelationship between the U.S. Army's IRP and the CERCLA/Superfund Amendments and Reauthorization Act (SARA) process is delineated in the MEP. Fort Devens was placed on the National Priority List (NPL) in December 1989, as a result of volatile organic compound contamination in the groundwater underlying the Shepley's Hill Landfill and metal contamination in the groundwater underlying the Cold Spring Brook Landfill. In 1991, a Federal Facilities Agreement (FFA) was signed by the U.S. Army and the USEPA Region I. The FFA sets the framework for the implementation of the CERCLA/SARA process at Fort Devens.

With the inclusion of Fort Devens on the Defense Secretary's BRAC 1991 list, an Enhanced Preliminary Assessment (EnPA) was initiated to address areas not normally included in the CERCLA process. The EnPA, completed in April 1992, identified 59 site-specific areas requiring environmental evaluation (AREEs) and 10 installation-wide AREEs (AREE 60 through AREE 69). Fort Devens later added the installation's storm sewers as an installation-wide AREE (AREE 70).

Following the EnPA, a BRAC Environmental Evaluation (EE) was conducted for eight installation-wide AREEs identified in the EnPA, including AREEs 61, 63, 65, 66, 67, 68, 69, and 70. These EEs were conducted during the 1993-1995 time frame. BRAC EEs were not conducted for installation-wide AREEs 60, 62, or 64. The 59 site-specific AREEs became Study Areas (SAs) or Areas of Contamination (AOCs) according to the results of Site Investigations (SIs) conducted for each AREE. The SIs have determined the SAs that require no further action (NFA), the SAs that will become NFA sites following minor removal of contamination, and the SAs that are now AOCs and will undergo Remedial Investigation/Feasibility Studies (RI/FS).

Fort Devens has grouped the SAs and AOCs according to priority of cleanup. This grouping system is dynamic in that the SAs and AOCs move from group to group following investigative studies at the sites. The most current grouping for each site is listed in Table 3-2.

Several restoration-related compliance actions have also been conducted at Fort Devens. These include underground storage tank (UST) removal (AREE 63), asbestos removal (AREE 65), PCB-contaminated transformer removal (AREE 66), radon monitoring (AREE 67), lead-paint surveys (AREE 68), and contaminated soil removal from historic spill sites (AREE 69).

Key Restoration and Transferability Strategies and Schedules

Fort Devens has shifted its focus from the function of an active installation to compliance and restoration for disposal and reuse of the property. The BCP programs are currently being implemented to focus restoration activities towards final transfer of installation property.

A comprehensive strategy to identify and implement appropriate remedial actions has been established. It fully considers regulatory requirements, any disposal guidelines, and reuse goals of the local community. The strategy focuses on the identification and implementation of effective interim and early actions to mitigate risks to human health and the environment. Through the CERCLA RI/FS and installation-wide decision document process, the strategy also provides for the identification of appropriate, cost effective and integrated remedial actions, installation-wide. The BCT is working with the Fort Devens environmental restoration Project Team to expedite the implementation of these remedial actions by accelerating schedules, overlapping remedial design phases, and other innovative actions in order to restore Fort Devens and transfer the property as quickly as possible.

Summary of Current BCP Action Items

Table ES-1 provides a listing of recommendations and issues associated with environmental restoration, compliance, and technical/management action items that require further evaluation and implementation by the BCT/Project Team. Bottom-up review program numbers specified in the Department of Defense (DOD) BCP Guidebook which relate to each action item are identified in the table. The status of each of these action items is also identified.

TABLE ES-1. BCT/PROJECT TEAM ACTION ITEMS

Action Item	Status			
	Program Review Item	In Progress	To Be Performed	Completed
COMPLIANCE ACTIVITIES				
Hazardous Materials/Waste Management				
- Close hazardous waste storage facility	7	x		
- Close landfills	7	x		
- Close accumulation areas on BRAC property	7	x		
Storage Tanks				
- Determine what USTs and ASTs will be removed	7	x		
- Develop management procedures	7	x		
Asbestos				
- Conduct additional testing of possible ACM	7	x		
Radon	7	x		
- Mitigate radon-contaminated facilities				
PCBs	16	x		
- Replace all PCB-contaminated transformers				
Lead-based Paint				
- Conduct building inspection	7	x		
- Conduct limited sampling	7	x		
CERCLA 120(H)(3) ACTIVITIES				
Property Suitable for Transfer				
- Update environmental condition of property maps	9	x		
COMMUNITY RELATIONS ACTIVITIES				
Update community relations plan	8	x		
MANAGEMENT AND ADMINISTRATIVE SUPPORT ACTIVITIES				
Review BCP periodically	19	x		
Establish chemical background concentrations	23	x		
Refine GIS program	21	x		
Determine need for groundwater zones	15	x		
Finalize general soils management policy	15	x		
Determine remedial design review process	15	x		
Establish cleanup and human health standards	24	x		
Finalize central soil treatment facility program	15	x		
Determine who has authority to sign RODs	15	x		

CHAPTER 1

► INTRODUCTION AND SUMMARY ◀

The purpose of this Base Realignment and Closure (BRAC) Cleanup Plan (BCP) is to summarize the current status of the Fort Devens environmental restoration and associated environmental compliance programs. The BCP also presents a comprehensive strategy for implementing response actions at the installation that are necessary to protect human health and the environment. This strategy integrates activities being performed under the BRAC Installation Restoration Program (IRP) and installation environmental compliance programs to support full restoration of Fort Devens.

The BCP is intended to be a dynamic planning document. It was necessary to make certain assumptions and interpretations to develop the schedule and cost estimates provided. As additional data become available, implementation strategies and cost estimates could be altered. Such changes will be reflected in future updates to the BCP. This version of the BCP was prepared with information available as of August 1995.

Chapter 1 of the BCP describes the objectives of the environmental restoration program, explains the purpose of the BCP, introduces the Project Team formed to review the program, and provides a brief description and history of the installation.

Chapter 2 summarizes the current status of the Fort Devens property disposal planning process and describes the relationship of the disposal process to other environmental programs.

Chapter 3 summarizes the current status and past history of the Fort Devens IRP and associated environmental compliance programs, community relations activities that have occurred to date, and the environmental condition of installation property.

Chapter 4 describes the installation-wide strategy for environmental restoration, including the strategies for dealing with each site on the installation. This chapter also summarizes plans for managing installation compliance programs, natural resource programs, and community relations activities.

Chapter 5 provides master schedules of planned and anticipated activities to be performed throughout the duration of the environmental restoration program, including associated compliance activities.

Chapter 6 describes specific technical and/or administrative issues to be resolved and presents a strategy for resolving these issues.

Chapter 7 provides a list of primary references utilized in the preparation of the BCP.

The following appendices are included in this document:

- ▶ Appendix A presents summary tables of past, current, and projected costs for the installation environmental restoration program.
- ▶ Appendix B presents technical documents and data loading summary, listings of previous environmental restoration program deliverables by program and by site.
- ▶ Appendix C presents summaries of the Decision Documents for each site or operable unit for which a remedial action was selected.
- ▶ Appendix D presents summaries of the Decision Documents for each site or operable unit for which a no further response action planned (NFRAP) decision has been made.
- ▶ Appendix E presents working conceptual models for each site for which an RA was selected.
- ▶ Appendix F presents ancillary materials relevant to the BCP including environmental justice issues at Fort Devens, AREE descriptions, and a BCP distribution list.

1.1 Environmental Response Objectives

The Base Environmental Coordinator (BEC) is responsible for the management and overall implementation of environmental programs at Fort Devens. The U.S. Army Environmental Center (USAEC) has conducted Enhanced Preliminary Assessment (EnPA) and Remedial Investigation/Feasibility Study (RI/FS) investigations at the installation. Other environmental investigation, remedial design (RD), remedial action (RA), and compliance program support is provided by the U.S. Army Corps of Engineers (USACE), New England Division.

The BRAC Cleanup Team (BCT), installation, USAEC, and other supporting U.S. Army agencies combined objectives for the environmental restoration and compliance program at Fort Devens are as follows:

- ▶ Protect human health and the environment;
- ▶ Strive to meet reuse goals established by the U.S. Army and the community, consistent with legislation relevant to Fort Devens closure;
- ▶ Comply with existing statutes and regulations;
- ▶ Conduct all restoration activities in a manner consistent with Section 120 of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act

(SARA); Massachusetts underground storage tank (UST) regulations and other applicable regulations;

- ▶ Continue efforts to identify all potentially contaminated areas and incorporate any new sites into the BCP progress as appropriate;
- ▶ Establish priorities for environmental restoration and restoration-related compliance activities so that property disposal and reuse goals can be met;
- ▶ Initiate selected removal actions to control, eliminate, or reduce risks to manageable levels;
- ▶ Continue to identify and map the environmental condition of installation property with the intent of identifying areas suitable for transfer by deed;
- ▶ Complete the environmental restoration process as soon as practicable for each site, in an order of priority that takes into account both environmental concerns and redevelopment plans;
- ▶ Consider future land use when characterizing risks associated with releases of hazardous substances, pollutants, contaminants, or hazardous wastes;
- ▶ Continue to develop, screen, and select RAs that reduce risks in a manner consistent with statutory requirements;
- ▶ Commence RAs for (1) environmental and (2) property disposal and reuse priority areas as soon as practicable;
- ▶ Advise the real estate arm of the USACE of property that is deemed suitable for transfer and properties that are not suitable for transfer because they are either not properly evaluated or pose an unacceptable human health or environmental risk;
- ▶ Conduct long-term RAs for groundwater and any necessary reviews to evaluate the progress of remediation; and
- ▶ Establish interim and long-term monitoring (LTM) plans for RAs as appropriate.

1.2 BCP Purpose, Updates, and Distribution

This BCP summarizes the status of Fort Devens' environmental restoration and compliance programs, and the comprehensive strategy for environmental restoration and restoration-related compliance activities. It lays out the response action approach being implemented at the installation to support installation closure. In addition, it defines the status of efforts to resolve technical issues so that continued progress and implementation of scheduled activities can occur. The Fort Devens BCP strategy and schedule is designed to streamline and expedite the necessary

response actions associated with Fort Devens to facilitate the earliest possible disposal and reuse activities.

This BCP is a "living document" and will be updated semiannually, or more frequently if determined to be necessary. Updates of the BCP will be distributed to each member of the Fort Devens Project Team, as well as to additional individuals identified in the distribution list provided in Appendix F as Table F-1. In addition, the BEC for Fort Devens will prepare monthly updated attachments to the BCP and distribute them to the other BCT members for comment.

1.3 BCT/Project Team

The Fort Devens Project Team has been established and is led by Mr. Chambers. Mr. James Chambers is the BEC and represents the Installation Commander. The BCT also includes Remedial Project Managers from the U.S. Environmental Protection Agency (USEPA), Region I, and the Massachusetts Department of Environmental Protection (MADEP).

The Fort Devens Project Team consists of the BCT and additional individuals whom the BCT selects to assist in the environmental restoration process at Fort Devens, including the Base Transition Coordinator, representatives from the Environmental Management Office (EMO), U.S. Army Forces Command (FORSCOM), USAEC, USACE, New England Division, Massachusetts Government Land Bank (MGLB), and Joint Boards of Selectmen (JBOS) for the towns of Ayer, Harvard, Shirley and Lancaster. The Project Team is led by the BEC. Project Team meetings are held regularly for the purpose of conducting periodic program reviews and reaching consensus on decisions with the USEPA and the MADEP.

Table 1-1 lists the team members and specifies their roles and responsibilities. Other support staff who contribute in the areas of toxicology and risk assessment, legal, Resource Conservation and Recovery Act (RCRA) compliance, fate and transport, field support, ecological, etc. are not all listed. BCT and Project Team members may consult/coordinate with additional staff as necessary.

1.4 Installation Description and History

This section provides a general description and historical summary of Fort Devens.

1.4.1 Property Description

Fort Devens is comprised of 9,280 acres and is divided into North, Main, and South Posts. Fort Devens is located in the towns of Ayer and Shirley in Middlesex County, and the towns of Harvard and Lancaster in Worcester County. The facility is located approximately 35 miles northwest of Boston, Massachusetts. The majority of the land adjacent to Fort Devens is used for natural resources conservation and public open space and recreation. Residential areas are located to the west of the Main Post and east of the North Post. Massachusetts Highway 2 divides the South Post from the Main Post. The Nashua River runs through the North, Main,

TABLE 1-1. CURRENT BCT/PROJECT TEAM MEMBERS

Name	Title	Phone	Role/Responsibility
BRAC CLEANUP TEAM			
James Chambers	Component Project Manager (Lead Agency)	(508) 796-3114	Base Environmental Coordinator/ Remedial Project Manager
James Byrne	USEPA Project Manager	(617) 573-5799 (617) 573-9662 (FAX)	BRAC Cleanup Team Representative
Lynne Welsh	MADEP Project Manager	(508) 792-7653 (508) 792-7621 (FAX)	BRAC Cleanup Team Representative
OTHER KEY PARTICIPANTS			
Paul Exner	ABB-ES, Project Manager	(617) 245-6606 (617) 245-5060 (FAX)	Manages the Groups 1A (RI/FS); Groups 3, 5, & 6 (SI/RI/FS); and Groups 2 & 7 (SI/RI/FS)
Beth Flynn	Applied Geographics, Inc.	Not Available	MADEP GIS Contractor
Mark Heuberger	Arthur D. Little, Inc., Project Manager	(617) 498-6131 (617) 498-7021 (FAX)	Manages the Main Post SI for USAEC
Richard Waterman	Arthur D. Little, Inc., Project Manager	(617) 498-5562 (617) 498-7021 (FAX)	Manages the BRAC Environmental Evaluation for USAEC
Robert MacMaster	DOD Transition Coordinator	(508) 796-3985	Base Transition Coordinator
John Rasmuson	BRAC Officer	(508) 796-3752 (508) 796-3572 (FAX)	Fort Devens BRAC Office Manager
Bob King	Ecology & Environment, Inc., Project Manager	(703) 522-6065 (703) 558-7950 (FAX)	Manages the Group 1B (RI/FS) for USAEC
Don Koch	ETA, Inc., Project Manager	(410) 461-9920 (410) 750-8565 (FAX)	Manages the Groundwater Modeling Efforts for USAEC
H. Carter Hunt, Jr.	Fort Devens Deputy Commander	(508) 796-2601	Assist Commander for Fort Devens
Ronald Deflippo	Fort Devens Environmental Coordinator	(508) 796-3835 (508) 796-6244 (FAX)	Technical Support for EMO
Judith Kohn	Environmental Coordinator Fort Devens Reuse Center/Massachusetts Government Land Bank	(508) 772-6340	Project Management (Environmental)
Phil Morris	Fort Devens Public Affairs Officer	(508) 796-3307 (508) 796-2159 (FAX)	Fort Devens Public Affairs Support
Ron Ostrowski	Fort Devens Environmental Management Officer	(508) 796-3665 (508) 796-3699 (FAX)	Manages the EMO
John Harms	Legal Counsel	(508) 796-3586 (508) 796-3047 (FAX)	Fort Devens Environmental Legal Counsel
George Gricius	FORSCOM Environmental Office	(404) 669-7796 (404) 669-7327 (FAX)	Program Management
Victor Bonella	FORSCOM BRAC Office	(404) 752-4701	Program Management

TABLE 1-1. CURRENT BCT/PROJECT TEAM MEMBERS**Continued**

Name	Title	Phone	Role/Responsibility
Molly Elder	Project Coordinator, MADEP	(508) 792-7653 (508) 792-7621 (FAX)	Project and contract management
Chris Knuth	Project Geologist, MADEP	(508) 792-7653 (508) 792-7621 (FAX)	Technical Support
John Regan	Project Engineer, MADEP	(508) 792-7653 (508) 792-7621 (FAX)	Technical Support
Dave Salvatore	UST and Spills Coordinator, MADEP	(508) 792-7653 (508) 792-7621 (FAX)	Technical Support
Eric Knapp	Massachusetts Government Land Bank Representative	(508) 772-6340	Senior Project Manager
David Knisely	Legal Counsel, Massachusetts Government Land Bank	(617) 367-3990 (617) 367-5002 (FAX)	Project Management (Environmental) for MGLB
Mary Doyle	Metcalf & Eddy, Inc.	Not Available	MADEP Consultant
Ivan Sosa	Project Chemist	(410) 671-1577 (410) 671-1680 (FAX)	Chemistry Oversight
Mike Cast	Public Affairs Officer	(410) 671-1270 (410) 671-3132 (FAX)	Public Affairs Support and Oversight
Mark Applebee	Project Manager, USACE, New England Division	(617) 647-8227 (617) 647-8614 (FAX)	Project Management (Remedial Action Design) for USACE
Tom Best	Project Manager, USACE, New England Division	(617) 647-8085 (617) 647-8891 (FAX)	Remedial Action Oversight for USACE
Darrell Deleppo	Project Manager, USACE, New England Division	(617) 647-8712 (617) 647-8891 (FAX)	Project Management for USACE
Charles George	Environmental Engineer/ Project Officer, USAEC	(410) 671-1625 (410) 671-1635 (FAX)	Project and Contract Management
William Houser	Project Health and Safety Coordinator, USAEC	(410) 671-1591 (410) 671-1680 (FAX)	Health and Safety Oversight, Asbestos and Lead-Based Paint
Wayne Mandell	Project Geologist, USAEC	(410) 671-1518 (410) 671-1548 (FAX)	Geology Oversight
Robert Dibiccaro	USEPA Office of Regional Counsel	(617) 565-3449 (617) 565-1141	Legal Counsel
Peter Golonka	Technical Support to USEPA on Fort Devens Project	(617) 742-2659 (617) 227-3851 (FAX)	USEPA Consultant
Leo Kay	USEPA Public Affairs Office, Community Relations Specialist	(617) 565-3423 (617) 565-3415	Community Relations Oversight
Patience Whitten	USEPA Office of Regional Counsel	(617) 565-3449 (617) 565-1141	Legal Counsel
Steven Micrzykowski	U.S. Fish and Wildlife Service, Natural Resources Trustee	(207) 827-5938 (207) 827-6099 (FAX)	Technical Support to USEPA for Ecological Risk Assessments

and South Posts. The Nashua River is the South Post's eastern boundary, and the Boston and Maine Railroad is the Main Post's eastern boundary. The location of Fort Devens and the land use surrounding the installation are depicted in Figures 1-1 and 1-2, respectively.

Fort Devens' mission is to command, train, and provide logistical support for nondivisional troop units. In addition, Fort Devens provides support for the portion of the U.S. Army Intelligence School located at Fort Devens, the Army Readiness Region, and the Army Reserve and Army National Guard for the New England area. The Main Post has provided all of the on-post housing, including over 1,700 family units and 9,800 bachelor units (barracks and unaccompanied officers' quarters); community services (such as the shoppette, cafeteria, post exchange, bowling alley, golf course, and hospital); administrative buildings; classroom and training facilities; maintenance facilities; and ammunition storage. An important element of land use on the Main Post is the Nashua River Greenway. An area of 300 feet on either side of the centerline of the river has been identified as part of the Nashua River Greenway Management Plan.

The North Post is located directly north of the Main Post. The principal activity on the North Post was the Douglas E. Moore Army Airfield (MAAF). The airfield was used for military purposes and consists of two fixed-wing runways and two rotary wing runways. The North Post also contains a wastewater treatment plant (WWTP) for Fort Devens, including associated rapid infiltration basins and sludge drying beds. The remainder of the North Post was designated as troop training areas. The South Post is located south of Massachusetts Highway 2 and contains individual training areas designated for troop training, range activities, and a drop zone.

1.4.2 History of Installation

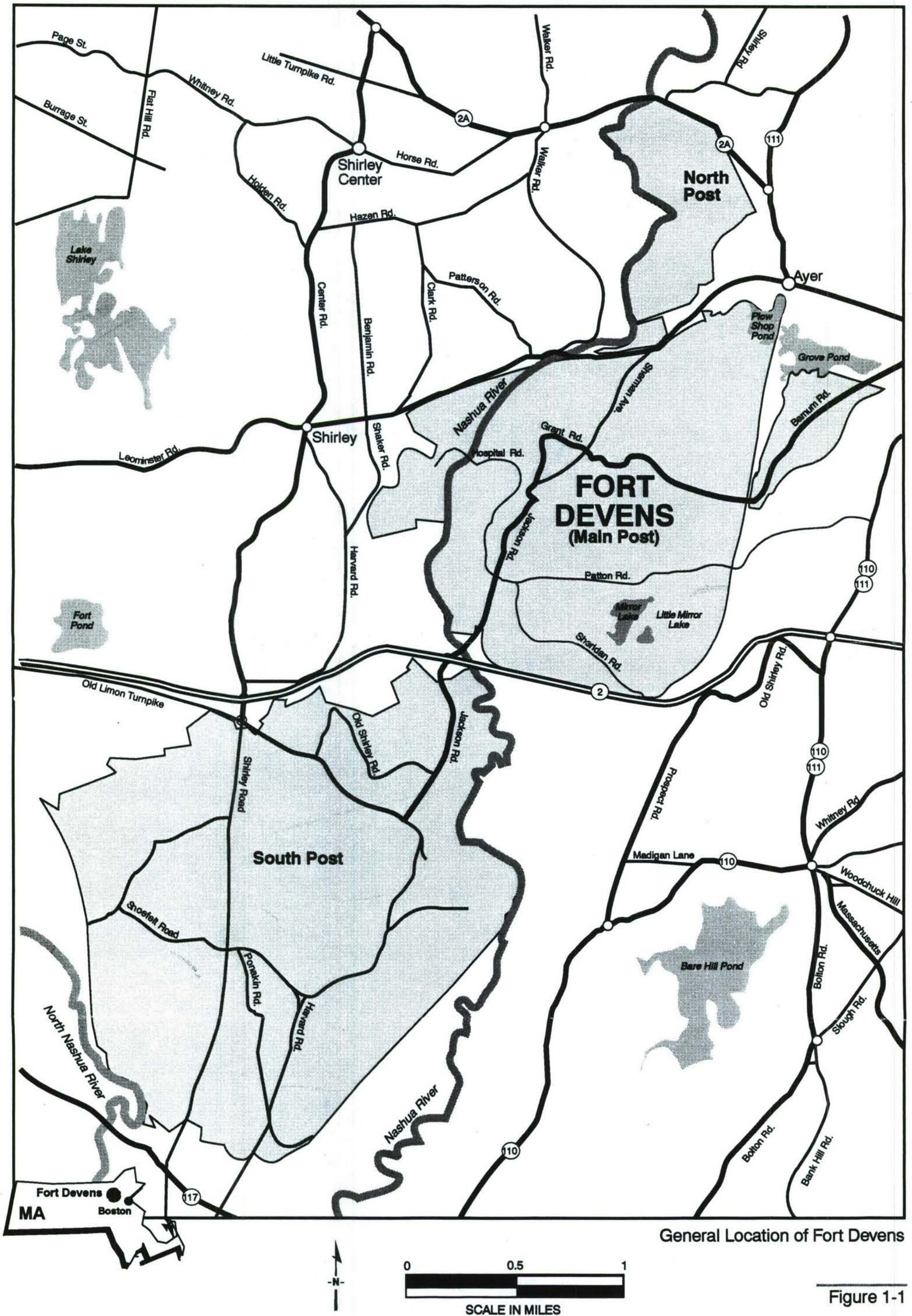
Camp Devens was created as a temporary cantonment in 1917 for training soldiers from the New England area. Camp Devens served as a reception center for selectees, as a training facility, and at the end of World War I, as a demobilization center. Peak military strength during World War I was 38,000 troops. After World War II, Camp Devens became an installation of the U.S. Army Field Forces, CONARC in 1962, and the FORSCOM in 1973.

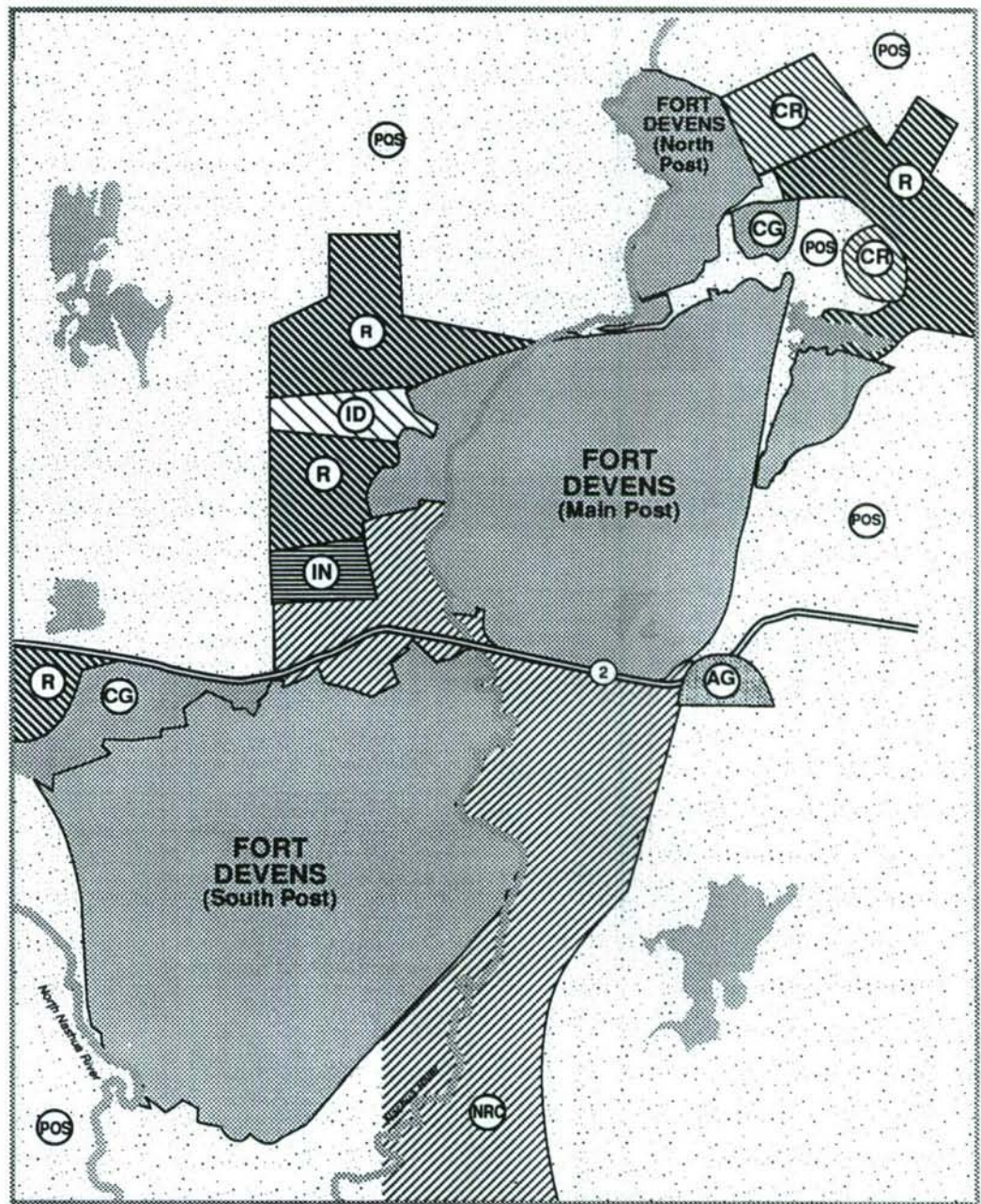
In 1921, Camp Devens was placed in caretaker status. During the summers from 1922 to 1931, it was used as a training camp for National Guard troops, Reserve units, Reserve Officer Training Corps cadets, and the Civilian Military Training Corps. In 1929, Dr. Robert Goddard used Fort Devens to test his early liquid-fuel rockets, and there is a monument to him located on Sheridan Road near Jackson Road Gate.

In 1931, troops were again garrisoned at Camp Devens. It was declared a permanent installation, and in 1932 it was formally dedicated as Fort Devens. In 1940, Fort Devens became a reception center for New England draftees. Fort Devens expanded to more than 10,000 acres and a 1,200-bed hospital was built. In 1941, the airfield was constructed.

During World War II, more than 614,000 inductees were processed at Fort Devens. Fort Devens' population reached a peak of 65,000. Three Army divisions and the Fourth Women's Army Corps trained at Fort Devens, and it was the location of the Army's Chaplain School, the

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EXPLANATION

- POS Public Open Space and Recreation
- R Residential
- CG Commercial General
- CR Commercial Residential Mixed
- IN Industrial

- AG Agricultural
- NRC Natural Resources Conservation
- IN Institutional



Surrounding
Off-Post
Land Use

Figure 1-2

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Cooks and Bakers School, and a basic training center for Army nurses. A prisoner of war camp for 5,000 German and Italian soldiers was operated at Fort Devens from 1944 to 1946. At the end of the war, Fort Devens again became a demobilization center, and in 1946 it reverted to caretaker status.

Fort Devens was reactivated in July 1948 and again became a reception center during the Korean War. It has been an active Army facility since that time. Currently, the mission at Fort Devens is to command and train its assigned duty units; operate the South Boston Support Activity in Boston, Massachusetts, Sudbury Training Annex, and Hingham USAR Annex; and to support the 10th Special Forces Group (A). The U.S. Army Intelligence School, U.S. Army Reserves, Massachusetts Army National Guard, and Reserve Officer Training Programs are also located at Fort Devens.

BRAC 91 identified the North and Main Posts of Fort Devens for closure and the South Post for realignment. Closure was legislated to begin by 30 September 1992, and be completed by 31 July 1997. Since the BRAC announcement, Fort Devens has continued its mission to support the U.S. Army Intelligence School and the Reserve Units, but has begun the process of closing the Main and North Posts and the realignment of the South Post. All mission-related activities will be discontinued at the installation by the legislated closure date in July 1997. A property acquisition summary that outlines the real estate history of Fort Devens is provided in Table 1-2. Historical activities conducted at the installation are summarized by time period in Table 1-3.

1.5 Environmental Setting

This section provides a brief description of the environmental setting at Fort Devens.

1.5.1 Topography

Prior to the construction of Fort Devens, there were farmed open areas and forested areas. Local relief at Fort Devens ranges from 250 feet above mean sea level within the flood plain area along the Nashua River to 350 feet above mean sea level at Shepley's Hill, and reaches a maximum of 455 feet above mean sea level at Whittemore Hill. This topography is typical of the results of glacial activities that formed the Nashua River Valley outwash plain. Predominant land forms on the South Post include a series of Kaine terraces dissected by secondary tributary streams and wetlands with esker-like ridges around Cranberry and Oak Hill Ponds.

1.5.2 Geology

There are four major soil associations found at Fort Devens. These soil associations run north to south and include the following:

- ▶ The Winooski-Limerick-Saco association includes very deep, nearly level soils that are moderately well drained, poorly drained, and very poorly drained. These soils are located along the Nashua River Basin.

TABLE 1-2. PROPERTY ACQUISITION SUMMARY

Tract Number	Previous Land Owner	Fee Land (acres)	Acquisition Date
17	Allen, C.F.	7.00	NA
292	Benedict, G.W.	8.25	NA
187	Blood, S.A.	42.12	NA
182.01	Boston & Main RR	102.92	NA
59	Brewer, D.G.	9.00	NA
58	Brewer, G.A.	18.00	NA
124	Brown, A.L.	0.11	NA
26	Brown, W.	11.14	NA
188	Parker, Ester	8.00	NA
178	Bruce, E.D.	5.00	NA
NL7	Bruce, E.T.	7.50	NA
13	Bulger, J.M. & A.A.	2.00	NA
NA	Callahan	1.00	NA
109	Chapman, M.	43.46	NA
98	Clark, Thos.	7.87	NA
24	Clough, M.B.	19.93	NA
25.01, 25.02	Clough, M.B.	27.20, 27.20	NA
152	Davis, B.M.	1.55	NA
20	Davis, Julia B.	30.00	NA
255, 28, 87	Dickinson, D.H.	2.00, 31.00, 5.00	NA
C-4	Dickinson, J.W.	3.33	NA
46	Dickinson, S.C.	9.12	NA
NL19	Dickinson, Willard	6.00	NA
23	Donlon, M.A.	7.87	NA
22	Dudley, C.W.	4.00	NA
136, 145	Dudley, E.L.	25.00, 9.16	NA
NL10	Farmer, F.H.	53.75	NA
8, 8.01	Farmer, L.J.F.	3.00, 2.25	NA
2	Farrar & Hubbard	2.80	NA

TABLE 1-2. PROPERTY ACQUISITION SUMMARY**Continued**

Tract Number	Previous Land Owner	Fee Land (acres)	Acquisition Date
C-1, 252	Farwell, J.	15.50, 6.00	NA
285	Fletcher, Mary	4.00	NA
19	Fletcher, M.F.	12.75	NA
84.01	Foti & Crocicchio	35.00	NA
15.01, 15.01	French, A.E.	15.19, 1.00	NA
NL18	Fuller, W.A.	3.25	NA
205	Gerrish, V.T.	6.00	NA
40.01, 40.02	Harlow, J.B.	0.50, 4.21	NA
62	Hazen, K.E.	65.00	NA
3	Hewes, C.H.	0.50	NA
43	Hill, D.R.	74.00	NA
19	Holden, Geo.	2.00	NA
C-5, 18.01, 18.02	Hovey, E.F.	2.00, 30.00, 30.00	NA
88, 88.01, 88.02, 88.03, 88.04	Hovey, Ella	10.00, 6.00, 3.00, 18.00, 5.00	NA
63.01, 63.02	Joyce, Patrick	38.00, 5.00	NA
130	Keith, F.L.	14.00	NA
52	Knight, H.A.	3.75	NA
64	Leahy, Mary	1.00	NA
NL2	Lovering, A.B.	5.00	NA
317.01	Lovering, J.L.	30.00	NA
317.02	Lovering, F.	9.25	NA
39	Lovering, J.B.	84.00	NA
48, 48, 48, 49	Madden, M.A.	25.00, 86.00, 2.50, 10.00	NA
5	Markham, J.F.	12.00	NA
45	Maynard, J.E.	4.00	NA
36	McGregor, H.R.	62.00	NA

TABLE 1-2. PROPERTY ACQUISITION SUMMARY**Continued**

Tract Number	Previous Land Owner	Fee Land (acres)	Acquisition Date
47	Mead, H.P.	112.36	NA
60	McNalley, D.J.	45.00	NA
150	Normand, A.S.	44.00	NA
212	Page, S.M.	6.50	NA
17	Parker, F.E.	7.00	NA
163.01, 163.02	Perham, A.D.	4.00, 10.00	NA
42	Peters, F.H.	45.00	NA
13.02, 13.01A, 13.01B, 13.03, 13.04, 13.04, 13.06, 13.07, 13.08, 13.09, 13.10, 13.11, 13.11, 13.12, 13.13, 13.14, 13.14, 13.15A, 13.16, 13.17, 13.18, 13.20, 13.21, 13.21, 13.22, 13.23, 56.01, 56.02, 56.03, 56.03, 56.03, 56.06, 146.01, 146.02	Phelps, L.W. Hrs	1.00, 111.34, 88.00, 114.22, 5.95, 38.48, 18.00, 70.24, 7.00, 23.50, 22.00, 2.50, 4.50, 9.40, 10.00, 19.25, 13.50, 31.50, 4.30, 51.00, 4.00, 38.00, 39.00, 41.00, 7.55, 53.50, 4.25, 9.25, 4.00, 4.50, 3.00, 20.00, 15.00, 3.68	NA
235	Pollard, H.A.	11.00	NA
89	Pratt, H.G.	45.00	NA
284, 287.02, 287.03	Prescott, A.E.&O.A.	12.53, 8.00, 0.80	NA
57.01, 57.02, 57.03, 57.04, 57.05, 57.06, 57.07, 57.08, 57.09, 57.10, 57.12, 140.01, 140.03	Richardson, E.A.&C.E.	50.00, 7.00, 12.01, 17.11, 2.46, 5.50, 7.00, 11.37, 8.63, 5.25, 5.00, 60.00, 7.00	NA

TABLE 1-2. PROPERTY ACQUISITION SUMMARY**Continued**

Tract Number	Previous Land Owner	Fee Land (acres)	Acquisition Date
44	Royal, A.T.	13.36	NA
NL6	Scully, T.W.	1.00	NA
9	Sherwin, W.W.	17.00	NA
115.02	Stone, H.D.	2.00	NA
10	Thayer, H.A.	7.00	NA
NL1, NL11	Town of Ayer	5.00, 8.00	NA
6, 6.01, 6.02, 41, 191	Turner, A.H.	4.50, 10.00, 9.19, 10.75, 5.37	NA
NL16	Unitarian Church of Harvard	4.00	NA
50, 51.01, 51.02	Warrant & Dow	80.00, 28.84, 12.50	NA
C-3	Whitcomb, C.	4.50	NA
34	Willard, Abel	1.00	NA
NL8	Willard, J.W.C.	20.83	NA
37, 234.01, 234.02, 234.03	Worcester, C.F.	2.00, 17.00, 8.75, 14.93	NA
NL14	Wrangham, C.	2.00	NA
200	Boston & Main RR	16.12	NA
201	Town of Shirley	22.27	NA
202	Samson Cordage Works	105.83	NA
203	Bourgeois, Rose D.	4.90	NA
204	Deyo, Edward L.	5.65	NA
205	Lambert, Henry	5.80	NA
206	Lambert, Merlyn	1.26	NA
207	Kawalewskis, Waglawas	43.33	NA
208	Files, Esther	4.83	NA
209	Boston & Maine RR	1.23	NA
211	Files, Esther	24.00	NA
216	Town of Shirley	1.00	NA
217	Samson Cordage Works	2.24	NA

TABLE 1-2. PROPERTY ACQUISITION SUMMARY**Continued**

Tract Number	Previous Land Owner	Fee Land (acres)	Acquisition Date
221	Boston & Maine RR	52.80	NA
158	Ayer Driving Assoc.	16.50	NA
182	Boston & Main RR	5.77	NA
NL4	Davis, Susan	11.51	NA
16	Dodge, Belle M.	170.00	NA
29	Dupuis, C	180.00	NA
313.01, 313.02, 313.03, 313.04, 313.05, 313.06	Farnsworth, L.J.	16.00, 30.00, 20.00, 30.00, 30.00, 33.00	NA
11, 33	Fessenden, A.D.	65.37, 14.00	NA
27	Hackeff	8.61	NA
21.02	Harlow, Ed & Parsons	5.00	NA
30	Hewes, E.R.	34.64	NA
15	James, D.	8.00	NA
1	Kemp, H & F	31.52	NA
14	Mead, Henry C.	63.00	NA
21.01	Parsons	10.00	NA
13.24, 13.25, 13.26, 13.27, 13.28, 13.29	Phelps, Levi	6.45, 18.00, 12.40, 7.31, 20.00, 10.00	NA
57.11	Richardson, L & C	3.00	NA
265A	Steere, David	26.75	NA
249.01, 249.02	Stone, Lewis	21.00, 12.03	NA
12	Tuttle, Levi	7.60	NA
7, 265	Webb, Emma	8.60, 19.00	NA
61	Wood, Robert	30.00	NA

Key: NA = Not Available

TABLE 1-3. HISTORY OF INSTALLATION OPERATIONS

Period	Type of Operation	Weapon System	Hazardous Substance Activities	Map Reference (see Figure 1-3)
Pre-1917	Residential, farmland, railroad operations	None	None identified	NA
1917-1921	(Camp Devens) Training, reception, and demobilization center; primarily tent housing	Infantry, cavalry, artillery	Landfill and disposal areas	6
1921-1931	(Caretaker Status) Training, rocket testing	Infantry, cavalry, artillery	None identified	NA
1932-1940	(Fort Devens) Troop garrison, limited construction	Unknown	None identified	NA
1941-1946	Reception center, training center, POW camp, demobilization center, extensive construction	Infantry, cavalry, artillery	Historic gas stations, motor repair, waste accumulation areas, airfield operations, wastewater treatment plant, landfill and disposal areas	1, 2, 3, 4, 6
1946-1948	Caretaker Status	Unknown	No new hazardous substance activities identified (some previously continue identified activities)	NA
1948-1952	Reception center, training center, limited construction	Unknown	Entomology shops, DRMO, Cannibalization Yard, TDA maintenance yard	7, 8
1952-1964	Training, troop garrison	Unknown	No new hazardous substance activities identified (some previously continue identified activities)	NA
1964-1972	Reception center, training center, troop garrison, moderate construction	School (training), active units	No new hazardous substance activities identified (some previously continue identified activities)	NA
1972-1991	Training, troop garrison	School (training), active units	Incinerators	5
1991-Present	Training, troop garrison, preparation for closure	School (training), active units	No new hazardous substance activities identified (some previously continue identified activities)	NA

Key: NA = Not Available

- ▶ The Hinkley-Merrimac-Windsor soil association is made up of very deep, nearly level to steep soils that are moderately well drained, poorly drained, and very poorly drained. These soils are located on washout plains. This soil association makes up the majority of the soils on the North and Main Posts.
- ▶ The Paxton-Woodbridge-Canton soil association is made up of very deep, nearly level to steep soils that are well drained and moderately well drained. These soils are located on uplands. This soil association makes up the majority of the soils on the South Post.
- ▶ The Chatfield-Hollis soil association is made up of moderately deep and shallow, gently sloping to moderately steep soils that are well drained or somewhat excessively drained. These soils are located on uplands. There are four different areas on the Main Post that are made up of this soil association.

The surficial geology throughout most of Fort Devens is characterized by three primary types of glacially derived unconsolidated sediments. A mantle of Pleistocene-Age glacial till, outwash, and lacustrine (lake) deposits, ranging in thickness from a few inches to approximately 100 feet, blanket the irregular bedrock surface underlying Fort Devens. Glacial till is composed of a poorly sorted matrix of clay, silt, gravel, and boulders. Outwash is composed of coarser grained sediments including sand, pebble, cobble gravel, and boulders. Lacustrine or lake deposits consist of clays and sands.

The surficial materials within the Main and North Posts are comprised of lacustrine deposits with outwash deposits along the outerboundaries of the installation. Glacial till is evident of Shepley's Hill. The sediments in the southern training area are comprised mainly of stratified glacial outwash that was deposited over a broad area.

The bedrock at Fort Devens is a complete assemblage of intensely folded and faulted metasedimentary rocks with occasional igneous intrusions. Bedrock occurs at depths of approximately 100 feet to ground surface where it outcrops at Shepley's Hill. Two rock subunits exist at Fort Devens, the Merrimack and Worcester Formations.

1.5.3 Hydrogeology

The principal aquifers under Fort Devens follow the Nashua River Valley. The Main Post unconsolidated aquifers considered favorable for high-yield wells are in the proximity of and hydraulically interconnected to surface water bodies. Groundwater at Fort Devens occurs primarily within the permeable glacial outwash deposits of sand, gravel, cobble, and boulders.

Saturated thickness of the primary aquifer ranges upwards to 60 feet. Depth to the water table ranges from 0 to 30 feet. The primary aquifer is influenced by the Nashua River, and flow directions at other locations on Fort Devens are largely site-specific.

1.5.4 Surface Water Hydrology

The north and south branches of the Nashua River converge less than a mile south of the South Post boundary. The Nashua River flows northward along the northeastern boundary of the South Post area and along the western boundary of the Main Post. The Nashua River continues northward and discharges to the Merrimack River at Nashua, New Hampshire. Several secondary feeder streams and brooks throughout the reservation control drainage on the installation and drain to the Nashua River.

Several fresh water impoundments occur within Fort Devens, including Robbins Pond, Mirror Lake, Little Mirror Lake, Slate Rock Pond, Oak Hill Pond, and Cranberry Pond. Along the northeast boundary of the Main Post are Plow Shop Pond and Grove Pond.

1.6 Hazardous Substances and Waste Management Practices

Several activities involving the handling of hazardous substances and petroleum, oil, and lubricants (POL) have occurred at Fort Devens throughout its history. These activities include fuel oil storage and distribution, motor pool and service station operations, maintenance of vehicles, aircraft, and small engines, photographic processing, and landfilling. Table 1-4 identifies the hazardous substance activities conducted at Fort Devens. Figures 1-3A through 1-3D show the locations of these hazardous substance activities.

Activities at Fort Devens have resulted in the generation of hazardous wastes including waste photographic developing chemicals, waste paints, waste solvents, waste herbicides, used oil, antifreeze, gasoline and refrigerant. Table 1-5 outlines these hazardous and nonhazardous waste activities by building number, source operation, and current disposition.

Recognized past waste disposal practices at Fort Devens have included the incineration of medical wastes, veterinary wastes (animal carcasses) and classified documents, in addition to the burning of household wastes at Shepley's Hill Landfill by incineration. Landfilling of various solid wastes has occurred in numerous on-site construction debris disposal areas. These disposal practices no longer occur. Hazardous and solid wastes currently generated on-site are managed in accordance with all applicable state and federal regulations and are disposed of off-site via licensed hazardous and solid waste haulers. Releases to the environment that have occurred from historical disposal practices are being effectively addressed through the installation's ongoing BRAC IRP.

1.7 Off-Post Property/Tenants

Property owned by Fort Devens and tenants located at the installation are described in this section.

1.7.1 Off-Post Property

The BCT has decided not to include off-post properties under the control of Fort Devens in this BCP. This decision was made for two reasons:

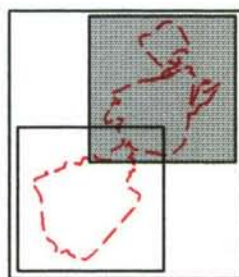
TABLE 1-4. HAZARDOUS SUBSTANCE ACTIVITIES AT FORT DEVENS

Hazardous Substance Activity	Map Reference (see Figures 1-3C and 1-3D)
Historic gas stations	1 (SA 43s) (see Figure 1-3A)
Waste accumulation areas	2 (SA 61s, SA 22, SA 30) (see Figure 1-3B)
Air field activities	3 (SA 31, 47, 50)
Wastewater treatment plant	4 (SA 19, 20, 21)
Incinerators	5 (SA 1, 2, 3, 4, 42)
Landfill and disposal areas	6 (AOC 5, 18, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 40, 41, 46)
Entomology shops	7 (SA 33, 34, 35, 36, 37)
DRMO, Cannibalization Yard, TDA Maintenance Yard	8 (SA 32, 44, 52)



EXPLANATION

- Activity Location
- Installation Boundary



0 1750 3500
FEET

Location of Past
Hazardous
Substance
Activities
North and
Main Posts
Reference 1.

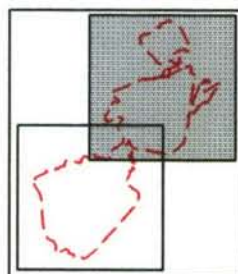
Figure 1-3A

Note: See Table 1-4 for hazardous substance activities reference number explanation.



EXPLANATION

- Activity Location
- Installation Boundary



0 1750 3500
FEET

Location of Past
Hazardous
Substance
North and
Main Posts
Activities
Reference 2

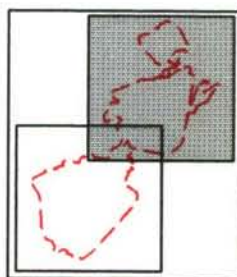
Figure 1-3B

Note: See Table 1-4 for hazardous substance activities reference number explanation.



EXPLANATION

- Activity Location
- Installation Boundary



0 1750 3500
FEET

Location of Past
Hazardous
Substance
Activities
North and
Main Posts
References 3-8

Note: See Table 1-4 for hazardous substance activities reference number explanation.

Figure 1-3C

TABLE 1-5. HAZARDOUS WASTE GENERATING ACTIVITIES

Facility	Activity	Name of Waste Material	Generation Rates	Disposition
Burke Reserve Center (Bldg. 3774)	G, AS	Waste Oil Virgin Oil Antifreeze Solvents *	NA	DRMO
Regional Training Site/Medical (Bldg. 1677)	G, AS	Waste Rags Filters Virgin Oil Antifreeze	NA	DRMO
104th Transportation Company Motor Pool	G, AS	Waste Oil Waste Rags Virgin Oil Filters Solvents*	NA	DRMO
Sport Utility Motor Pool (Bldgs. 3451, 3457)	G, AS	Waste Oil Virgin Oil Solvents*	NA	DRMO
AAFES Gas Station	G, AS	Waste Oil Filters Waste Antifreeze Solvents*	NA	DRMO
Reserve Motor Pools (Bldgs. 616,617)	G, AS, SS	Waste Oil Filters Antifreeze Solvents*	NA	DRMO
Reserve Motor Pools (Bldgs. 601, 602, 603, 604)	G, AS, SS	Waste Oil Filters Antifreeze Solvents*	NA	DRMO
2nd and 3rd Battalion, 10th SF Motor Pools (Bldgs. 612, 613, 615)	G, AS, SS	Waste Oil Filters Antifreeze Solvents*	NA	DRMO
Golf Course Maintenance Shop (Bldg. 3606)	G, AS	Waste Oil* Filters* Antifreeze* Solvents* Pesticides	NA	DRMO
TMP Motor Repair Shop (Bldg. 2517)	G, AS	Waste Oil Antifreeze* Solvents*	NA	DRMO
Reserve Motor Pool (Bldg. 2602)	G, AS	Waste Oil* Antifreeze* Solvents*	NA	DRMO
Reserve Motor Pool (Bldg. 3601)	G, AS	Waste Oil* Antifreeze* Solvents*	NA	DRMO

TABLE 1-5. HAZARDOUS WASTE GENERATING ACTIVITIES**Continued**

Facility	Activity	Name of Waste Material	Generation Rates	Disposition
TDA Maintenance Facility and Reserve Maintenance Training (Bldg. 3713)	G, AS, SS	Battery Electrolyte Waste Oil Solvents* Metal Flakes Waste Antifreeze Filters Waste Rags	NA	DRMO
Airfield Support Facilities (Bldgs. 3813, 3818)	G, AS	Filters Magnesium Dust Alkaline Batteries Waste Oil* Waste Rags* Solvents* Paint	NA	DRMO
Roads and Grounds Vehicle Maintenance Shop (Bldg. 219)	G, AS, SS	Waste Antifreeze Waste Oil* Filters Grease Solvents*	NA	DRMO
DPW Maintenance Shop and Storage Shed (Bldg. 247)	G, AS, SS	Waste Oil* Solvents* Oil Filters Antifreeze	NA	DRMO
HHC 10th SF Motor Pool (Bldgs. 2446, 2479)	G, AS, SS	Waste Oil Waste Antifreeze Waste Rags Filters Solvents*	NA	DRMO
Airfield Fuel Dispensing Office (Bldg. 3809)	G, AS	Waste Rags Jet Fuel Antifreeze Spent Naptha	NA	DRMO
Photographic Laboratory (Bldg. 1453)	G, AS	Photo Developing Solution	NA	DRMO
Auto Craft Shop (Bldg. 3587)	G, AS, SS	Waste Oil Waste Antifreeze Filters Rags Solvents	NA	DRMO
Golf Cart Storage Shed (Bldg. 3625)	G, AS	Gasoline	NA	DRMO
Computer Room (P-3)	G, AS	Microfiche Waste	NA	DRMO
Cutler Army Hospital X-Ray and Dental X-Ray Rooms (Bldg. 3654)	G, AS	Waste Developer Solution	60 gal/month	DRMO
Vail Dental Clinic (Bldg. 2729)	G, AS	Waste Developer Solution	1.25 gal/month	DRMO
Veterinary Clinic (Bldg. 1450)	G, AS	Waste Developer Solution	60 gal/year	DRMO
Health Clinic Warehouses (Bldg. 3757)	SS	Waste Developer Solution	NA	DRMO

TABLE 1-5. HAZARDOUS WASTE GENERATING ACTIVITIES**Continued**

Facility	Activity	Name of Waste Material	Generation Rates	Disposition
Heating and Electrical Shops (Bldgs. 1417, 1420)	G, AS, SS	Waste Oil Waste Pipe Material	NA	DRMO
O'Neil Building (Bldg. 3412)	G, AS	Waste Rags	NA	DRMO
Intelligence and Reserve Training School (Bldg. 3413)	G, AS	Waste Oil Waste Antifreeze	NA	DRMO

Key: G = Generator
AS = Satellite Accumulation Point
DRMO = Defense Reutilization and Marketing Office
SS = 90-Day Accumulation Point
NA = Not Available
* = May have included this material

1. These properties are not listed in the BRAC Act and continued maintenance and operation (including environmental restoration and compliance) of these properties will be the role of the entity responsible for the Reserve Enclave at Fort Devens.
2. The focus of this BCP is to provide complete integration of environmental restoration, environmental compliance, and reuse planning and activities on all BRAC property. Off-post properties are not BRAC properties.

Table 1-6 is provided for future revisions of the BCP if it is decided that off-post properties will be listed.

1.7.2 Tenant Units

There are no non-Department of Defense (DOD) organizations located at Fort Devens. Twenty-five significant tenant organizations on the installation were identified from installation real property records. The major tenants on Fort Devens are the 10th Special Forces Group, U.S. Army Intelligence School Division, 94th Army Communications, Regional Training Site-Maintenance, Medical and Dental Activity, and the Post Exchange (PX). The tenants and the buildings they occupy are identified in Table 1-7.

TABLE 1-6. OFF-POST PROPERTIES

Description	Acreage	Date of Acquisition	Environmental Status	Location	Remarks
	The BCT has decided not to include off-post properties under the control of the Fort Devens in this BCP.				

TABLE 1-7. ON-POST TENANT UNITS

Tenant	Building
10th Special Forces Group	T-600, P-612, P-613, P-614, P-615, T-631, P-637, P-638, P-640, P-641, P-647, P-653A, P-653B, P-653C, P-653D, P-656A, P-656B, P-656C, P-656D, P-656E, P-666, P-675, P-678C, P-678D, P-679, P-680, P-686, P-687, P-1454, P-1455, P-1456, P-1457, P-1458, P-1459, P-1460, P-1461, P-1462, P-1463, P-1465, P-1466, P-1468, P-1470, P-1471, P-1472, P-1474, P-1476, P-1477, P-1478, T-1481, T-1601, T-1603, T-1606, T-2201, T-2202, T-2207, T-2291, T-2400, T-2410, T-2411, T-2412, T-2413, T-2416, T-2417, T-2420, T-2421, T-2422, T-2423, T-2424, T-2425, T-2426, T-2428, T-2429, T-2431, T-2432, P-2441, T-2446, T-2479, T-2505, T-2508, T-2529, T-2532ABC, T-2534, T-2535, T-2536, T-3609, T-3622, T-3623, P-3800, T-3801, T-3803, T-3807, T-3824, P-3840
U.S. Air Force	P-688A, P-648
Marines	P-688C, P-670
Navy	P-688B, P-655
HPSA	P-688D
Criminal Investigation Division	T-1608, T-2735
USACE, New England Division	T-1629
USACE, New York Division	T-1628
78th Division	P-697
94th Military Police	T-3749, T-3753
Reserve Officer Training Corps	T-1631, T-2734
Defense Reutilization and Marketing Office	T-204, P-213, T-214, T-218, T-222, T-228
94th Army Communications	P-643, P-694, P-695, T-1623, T-1633, T-1643, T-1667, T-2296, P-3411, T-3582, P-3748, T-3750, T-3751, T-3755, T-3756, S-3759
Regional Training Site - Maintenance or Medical	T-622, T-1413, T-1637, T-1640, T-1642, T-1644, T-1645, T-1647, T-1648, T-1671, P-1677, P-1696, P-3713A
Medical and Dental Activity	P-464B, P-464C, P-674, P-681, P-691, P-1448, P-1450, T-2283, P-2729, T-3618, P-3654, T-3757, T-3758
Readiness Group Devens	P-25
756th Engineering	P-255, P-603, P-604, P-T0T, P-608, T-2011, T-2012
4/157th Aviation	P-602, P-605, T-2418, T-2636, T-2686, T-2687, T-2688

TABLE 1-7. ON-POST TENANT UNITS**Continued**

Tenant	Building
11th Special Forces	T-1657, T-1658, T-1659, T-1660, T-1661
187th Infantry	T-1411, T-3544, P-3773, P-3774, P-3775, P-3776
Massachusetts Air National Guard, 26th MMC	T-2206, T-2209, T-2651
126th Military Intelligence	T-1670
ITAAS	T-2281

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CHAPTER 2

► PROPERTY DISPOSAL AND REUSE PLAN ◀

This chapter describes the status of the disposal planning process and the relationship between the disposal process and environmental programs at Fort Devens. It also identifies property transfer methods presently being utilized or considered in the disposal process.

2.1 Status of Disposal Planning Process

BRAC 91 identified Fort Devens' Main and North Posts for closure and the South Post for realignment. Closure and realignment were legislated to begin 30 September 1992, and to be completed by 31 July 1997. The U.S. Army has initiated the disposal process for the installation. This process involves three interrelated activities: the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) process, development of a disposal plan, and development of a community reuse plan. This process is designed to integrate goals of both the U.S. Army and the towns of Shirley, Ayre, Lancaster, and Harvard in order to provide for the efficient transfer of the Fort Devens mission within the U.S. Army and minimize the impact of closure on the community.

2.1.1 NEPA Documentation

A draft Disposal and Reuse EIS was prepared in September 1994. The EIS identifies, documents, and evaluates the effects of disposal and reuse of the Fort Devens property under several plans. The existing conditions at Fort Devens as of December 1990 constituted the baseline for the analysis of the effects of disposal and reuse and identification of mitigation. The effects of the proposed action on socioeconomics were assessed using the Economic Impact Forecast System developed by the U.S. Army Construction Engineering Research Laboratory. This model allows all base closure and realignment actions to be evaluated in the same way. The final Disposal and Reuse EIS was issued July 1995.

2.1.2 Disposal Plan

A disposal plan has been developed for Fort Devens by the USACE, New England Division. The plan fully considers the reuse planning goals of the local redevelopment authority, the Massachusetts Government Land Bank (MGLB), and incorporates U.S. Army BRAC disposal hierarchy requirements established by Public Law (P.L.) 100-526 and the Federal Property and Administration Services Act. This hierarchy includes the following in the sequence provided: (1) Offer facility to DOD agencies for use; (2) Offer facility to other federal agencies; (3) Offer facility under Section 501 of the McKinney Act (excluding property taken by DOD agencies) to sponsoring organizations for the homeless; (4) Offer facility to state and local government agencies; and (5) Offer the property through competitive bid to the private sector. The Pryor Act Amendment amended this process as it pertains to the identification of facilities for use by providers for the homeless. Rather than mandating a disposal screening outside of the community reuse planning process, a program has been introduced that provides for the

identification of reuse opportunities by homeless providers through the cooperative effort of the MGLB and representatives of local homeless providers.

2.1.3 Reuse Plan

The MGLB and the Joint Boards of Selectmen (JBOS) prepared a Fort Devens Reuse Plan that was approved by the towns of Ayer, Harvard, and Shirley in separate town meetings. The Reuse Plan identified approximately 2,900 acres for reuse activities. Approximately 250 acres will be utilized by the Federal Bureau of Prisons for a Medical Center Complex. Approximately one-third of the acreage of the North and Main Posts will be left as open space for recreation, roads and expansion of the Oxbow National Wildlife Refuge. The Oxbow National Wildlife Refuge is managed by the U.S. Fish and Wildlife Service.

Several reuse districts have been identified for innovation and technology business uses, rail, industrial, and trade-related uses, environmental business, and residential use.

The Department of Labor has requested approximately 35 acres for a job training center, which would be located near Verbeck Gate.

The Army Reserve Enclave, to be located in the center of the Main Post on approximately 182 acres, will provide facility support to the Army Reserve organization at Fort Devens. The enclave will also contain facilities for the active Army component remaining on Fort Devens and support the reserve training activities that will be relocated to the South Post.

The Army Reserve Regional Training Site, also part of the Army Reserve Enclave, will be located on approximately 132 acres on the west side of the Nashua River on the Main Post. The training site will be used to provide technical training support and certification for area maintenance, medical, and intelligence reserve units. This facility will consolidate these activities currently scattered throughout the post.

The Army has developed a reuse parcel map of Fort Devens which assists in identifying the location of sites (SAs and AOCs) and reuse activities. Table 2-1 presents summary information on the Army reuse parcels and an approximate time table for transfer by deed of each parcel as outlined by the BRAC Office at Fort Devens. Table 2-1 also identifies the correlation between the Army reuse parcels, the Reuse Plan reuse districts, and the sites on the installation. Figure 2-1 depicts the Army reuse parcels and Figure 2-2 depicts the reuse districts as they are identified in the Fort Devens Reuse Plan.

A copy of the Fort Devens Reuse Plan can be obtained by contacting the MGLB at Fort Devens.

2.2 Relationship to Environmental Programs

Disposal and reuse activities at Fort Devens are intimately linked to environmental investigations, restoration, and compliance activities for two basic reasons:

- ▶ Federal property transfers to nonfederal parties are governed by CERCLA Section 120(h)(3)(B)(i).

TABLE 2-1. REUSE PARCEL DATA SUMMARY

Reuse Parcel	Approximate Acres	Priority	Current Use Description	Proposed Reuse	Sites	Projected Transfer Date	Transfer Mechanism	Recipient*
A	5	NA	Undeveloped, golf course	Entryway	NA	TBD	Negotiated Sale	MGLB
B	250	1	Cutler Army Hospital and golf course	Federal Bureau of Prisons (low and medium security hospital complex)	SA 1, 49	June 1995	Federal	Federal Bureau of Prisons
C	115	2	Building 2602	Innovation/ technology/ business (light industrial/ manufacturing/office/ R&D)	SA 13, 36, 43L, 43M, 43N, 43O, 45, 58	TBD	Negotiated Sale	MGLB
D	130	3	Movie theater, pool, dental clinic, water tanks	Innovation/ technology/business (light industrial/ manufacturing/ office/R&D)	SA 43K, 56	TBD	Negotiated Sale	MGLB
E	130	TBD	Open space, magazine, Building 2210	Innovation/ technology/business (light industrial/ manufacturing/ office/R&D)	SA 24	NA	NA	MGLB
F	210	TBD	Davao Circle Housing	Innovation/ technology/business (light industrial/ manufacturing/ office/R&D)	None	NA	NA	MGLB
G	75	TBD	Sports arena, soccer fields, community center	Innovation/ technology/business (light industrial/ manufacturing/ office/R&D Recreation)	SA 43R	NA	NA	MGLB
H	175	TBD	Enlisted barracks, motor pool, administration	Army Reserve Enclave	SA 43H, 43I, 43J	September 1995	Federal	U.S. Army
I	60	TBD	Community services, commercial, retail	Business and community services and innovation and technology	AOC 43G, SA 43C, 43B, 43D, 43E, 43F	TBD	Negotiated Sale	MGLB
J	220	TBD	Housing units - Birch, Spruce/Maple, Locust, Oak Hill, Grant Road	Residential	None	TBD	Negotiated Sale	MGLB
K	45	TBD	Elm/Walnut Housing	Residential	None	NA	Negotiated Sale	MGLB
L	115	TBD	Vicksburg Square	Innovation and Technology	None	TBD	Negotiated Sale	MGLB
M	60	TBD	Willard Farm, football, tennis, track softball facilities	Recreation and Native American Cultural and Center	None	TBD	Negotiated Sale	MGLB
N	35	TBD	Verbeck Housing	Department of Labor-Job Corps Center, local government (municipal facilities/institutional/ community)	None	TBD	Negotiated Sale	MGLB
O	105	TBD	Bates and Buena Vista Housing and Elementary School	Residential and open space, residential (residential/R&D)	AOC 69W	TBD	Negotiated Sale	MGLB
P	20	TBD	Housing	McKinney Act Property (homeless shelter)	None	TBD	Federal	Sylvia's Haven, Inc.
Q	440	3	Utility, maintenance, warehousing, light industrial	Rail related uses (transportation/ intermodal light industrial/ manufacturing/ warehouse/distribution)	AOC 4, 5, 18, 32, 43A, 44, 52; SA 2, 3, 22, 23, 29, 33, 34, 35, 38, 48	TBD	Negotiated Sale	MGLB

TABLE 2-1. REUSE PARCEL DATA SUMMARY

Continued

Reuse Parcel	Approximate Acres	Priority	Current Use Description	Proposed Reuse	Sites	Projected Transfer Date	Transfer Mechanism	Recipient*
R	60	3	Vehicle maintenance and repair, warehousing	Rail related uses (transportation/ intermodal light industrial/ manufacturing/ warehouse/distribution)	SA 38, AOC 44, 52, 57 (partial)	TBD	Negotiated Sale	MGLB
S	60	3	Reserve Center and maintenance	Rail related uses (transportation/ intermodal light industrial/ manufacturing/ warehouse/distribution)	AOC 57 (partial)	TBD	Negotiated Sale	MGLB
T	415	TBD	Shiloh and Salerno Circle Housing	Development reserve (special use)	SA 16	TBD	Negotiated Sale	MGLB
U	130	1	Intelligence School and Trailer Park	U.S. Army Reserve Enclave	SA 43S, 51, 55	September 1995	Federal	U.S. Army Reserve
V	60	TBD	Baseball fields and open space	Retail business and offices	None	TBD	Negotiated Sale	MGLB
W	50	TBD	Shirley Housing	Office, light industrial, research and development, residential (residential/recreational/ community/institutional)	SA 10	September 1995	Negotiated Sale	MGLB
X	245	TBD	Wastewater Treatment and Sand Filter Beds	Environmental business (light industrial/ manufacturing office/R&D)	AOC 9, SA 19, 20, 21	TBD	Negotiated Sale	MGLB
Y	270	TBD	Moore Army Airfield	Development Reserve Airport Reuse (airport/ heliport/light industrial/ manufacturing/ recreation/entertainment)	SA 30, 31, 47, 50	TBD	Negotiated Sale	MGLB
Z	890	1	Open space, recreation, roads	Oxbow National Wildlife Refuge expansion	AOC 11, SA 17, 37, 37A, 37B, 37C, 37D, 40, 43Q, 49, 56, 59	September 1995	Federal	U.S. Fish and Wildlife Service

*Source: Fort Devens Reuse Plan.

Key: NA = Not Available
TBD = To Be Determined

Note: Site 39 is located on former Fort Deven's property, which is currently part of the Oxbow National Wildlife Refuge. The following sites and AOCs are located on the South Post: 6, 7, 8, 12, 14, 15, 42, 46, 53, and AOCs 25, 26, 27, and 41.



Reuse Parcels
at Fort Devens

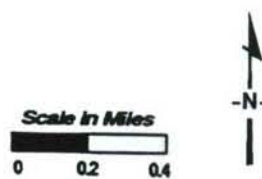
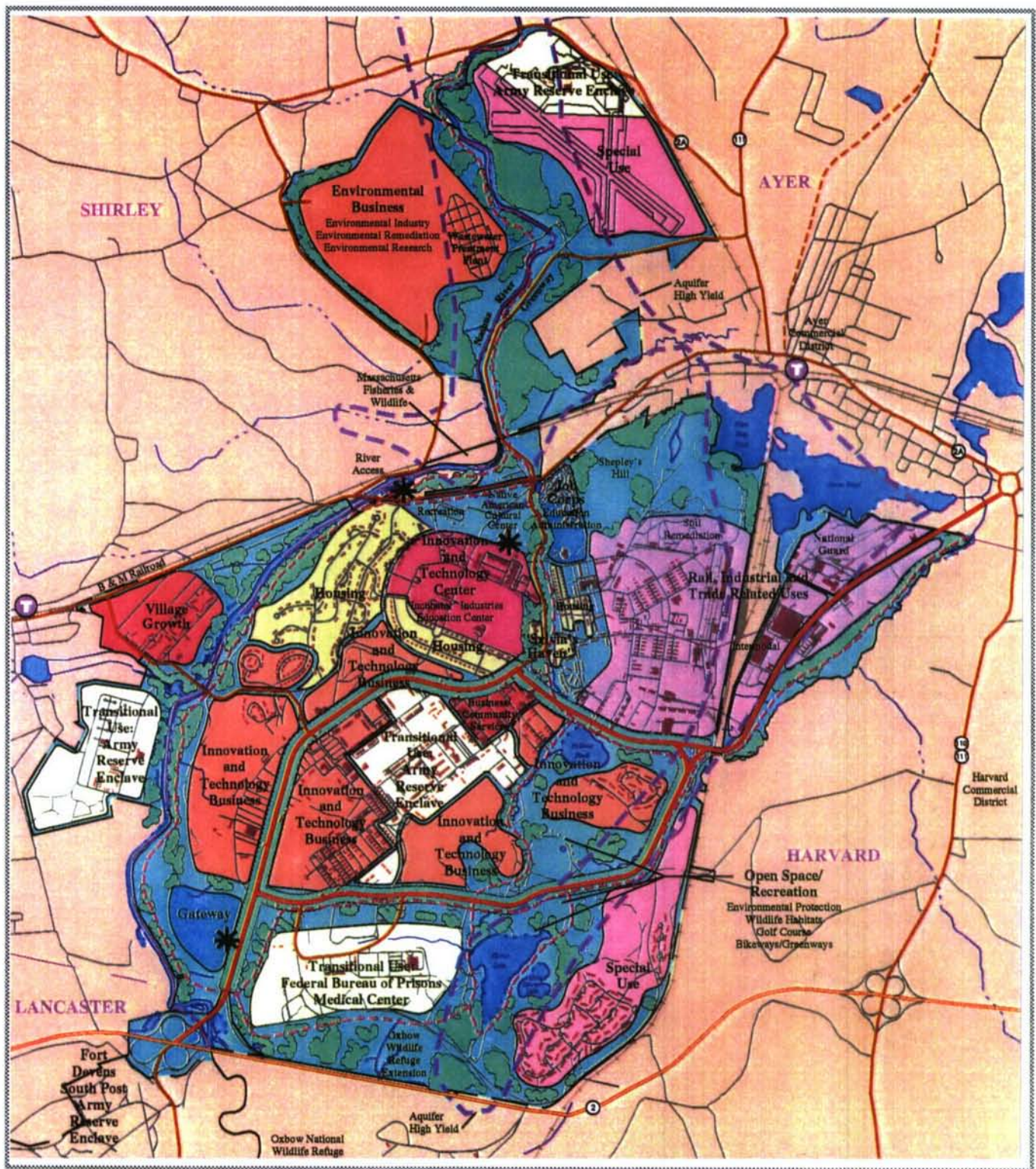


Figure 2-1

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Source: Devens Reuse Plan, November 1994

- | | |
|---------------------------------------|--|
| Open Space & Recreation | Transitional Use Army Reserve Enclave & Federal Bureau of Prisons Medical Center |
| Innovation & Technology Business | Gateway |
| Rail, Industrial & Trade-Related Uses | Special Use |
| Environmental Business | High Yield Aquifer |
| Housing | Conceptual Trails & Bikeways |
| Business & Community Services | Commuter Rail |
| Innovation & Technology Center | |

Reuse Districts
at Fort Devens

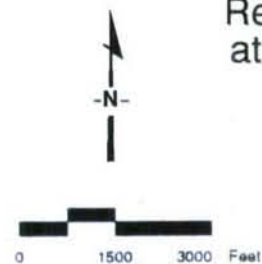


Figure 2-2

Fort Devens, Massachusetts-August 1995

- ▶ Residual contamination may remain on certain properties after RAs have been completed or put into place, thereby restricting the future use of those properties.

CERCLA Section 120(h)(3)(B)(i) requires deeds for federal transfer of previously contaminated property to contain a covenant that all RAs necessary to protect human health and the environment have been taken. The 1992 Community Environmental Response Facilitation Act (CERFA) amendment to CERCLA provided clarification to the phrase "has been taken." This clarification states that all RA has been taken if the construction and installation of an approved RD has been completed, and the remedy has been demonstrated to the Administrator to be operating properly and successfully. It further states that the carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to the Administrator to be operating properly and successfully, does not preclude the transfer of the property. This deed requirement applies only to property on which a hazardous substance was stored for 1 year or more, or is known to have been disposed of or released. CERCLA also requires that deeds for property on which a hazardous substance was stored for more than 1 year, released or disposed, include information on the type, quantity, and the time at which the storage or release occurred.

The requirement for complying with CERCLA 120(h), the possibility of residual contamination at the installation, and the remediation of the site according to future use are factored into the property disposal and reuse process at Fort Devens. This is accomplished in the following manner.

- ▶ Fort Devens is subject to the Defense Environmental Restoration Program and the USEPA CERCLA "Superfund" Program for NPL sites.
- ▶ The USEPA has established protocols for the investigation and remediation of NPL sites. These protocols include the RI/FS process. A baseline risk assessment, which is completed as part of the remedial investigation (RI), includes an evaluation of current human health and ecological impacts at the site and the surrounding area as well as future impacts on reasonable reuses. The feasibility study (FS) evaluates the effectiveness of various RA alternatives in mitigating risk for these reasonable reuses considering factors such as regulatory compliance, effectiveness, implementability, and cost. The FS also evaluates the human health and ecological impacts of the actual RA to populations on site and the surrounding area. One or more of the FS alternatives are chosen for site implementation and are recorded in a Record of Decision (ROD).
- ▶ Fort Devens is well along in the RI/FS process (see Section 3.1). Both the RI risk assessments and FSs that have been completed for the installation consider future reuses that are consistent with those presented in the Fort Devens Reuse Plan. Future FSs, RDs, and any RAs that are initiated will also consider the proposed reuses of the installation by the MGLB.

Fort Devens environmental restoration strategy and schedule is designed not only to remediate sites in a manner consistent with reuse goals but also to streamline and expedite the necessary RAs in order to facilitate the earliest possible disposal. Because of the need to delineate between

areas suitable and unsuitable for transfer according to historical activities and restoration status, the USAEC has developed an environmental condition of property map and a property suitable for transfer map for Fort Devens (see text and figures in Chapter 3) using, in part, data from the CERFA investigation of the installation. The environmental condition of property map allows the visualization of both contaminated areas and areas of no suspected contamination, and the relationship of these areas to disposal and reuse parcels. The property suitable for transfer map identifies those properties that have had no hazardous substance storage and/or releases, that have had releases but have been remediated, or that have a remedy in place and are therefore available for transfer under CERCLA.

CERFA established stringent requirements to designate a parcel as a CERFA "clean" parcel. A portion of the property and several buildings at Fort Devens are not classified as CERFA "clean"; however, they present no threat to human health and the environment. Ongoing RI/FS and site restoration activities are defining properties that present no such risk according to a risk assessment analysis, and provide for the identification of appropriate site remediation where a risk is found to exist. The BCT will continue to update and refine the environmental condition of property and property suitable for transfer maps for Fort Devens as RI/FS data become available and as site restoration is completed. Appropriate environmental documentation will be developed as necessary for transfer of each specific parcel.

2.3 Property Transfer Methods

The disposal methods and an approximate timetable for the transfer by deed for each reuse district at Fort Devens is under development. The disposal and reuse of each district is based on environmental condition, market demand and the reuse goals of the community. The disposal process follows the hierarchy established by the DOD for BRAC installations. Federal and McKinney Act screening has been completed. The Fort Devens Project Team, which is responsible for prioritizing reuse district disposal, is working with the Fort Devens Reuse Committee to identify other disposal methods and reuse priorities for each district so that these factors may be considered in the Fort Devens IRP program and disposal planning process. The community reuse goals for each district and the phased development plan presented in the Fort Devens Reuse Plan are integral in this process.

The various property transfer methods being considered at Fort Devens are identified in the following sections. Disposal transfer methods that may not be currently applicable but that may be considered in the future disposal actions at the installation have also been identified.

2.3.1 Federal Transfer of Property

Federal transfer of property at Fort Devens through the Stewart B. McKinney Homeless Assistance Act has been completed. Sylvia's Haven, Inc., has requested 50 housing units, a chapel, and a community center on 20 acres of land. The Fort Devens Reuse Task Force Subcommittee on the homeless is being proactive by meeting with the homeless providers to discuss which building facilities would be appropriate and economically feasible for use. The Reuse Plan calls for a maximum of 282 residential units, with approximately 25 percent being reserved for low or moderate income individuals or families.

There are three other federal land disposition options that are possible:

- ▶ The Department of Labor has requested approximately 35 acres for a Job Corps Training Facility.
- ▶ Federal Bureau of Prisons has requested approximately 245 acres for construction of a Federal Bureau of Prisons Medical Center.
- ▶ U.S. Fish and Wildlife Service (USFWS) has requested approximately 900 acres for expansion of the Oxbow National Wildlife Refuge and a "greenway" along the Nashua River.

2.3.2 No-Cost Public Benefit Conveyance

This property transfer method allows for the transfer, at no cost, of property to state and local agencies. This option would require coordination with the MGLB. Any proposed conveyance must be for direct public use, and must be in accordance with the Reuse Plan. To date, no such proposed transactions from either the local government or the MGLB have been identified.

2.3.3 Negotiated Sale

This property transfer method involves direct negotiation with the purchasing entity for the purchase of excess property. The Pryor Amendments to the 1993 Defense Authorization Act have allowed for reduced cost sales (below market value) to stimulate redevelopment and reflect capital outlays by redevelopment interests. For transfer to state and local use, this may be the method of transfer for those properties identified for state/local use in the screening process.

2.3.4 Competitive Public Sale

This property transfer method involves competitive public sale of properties remaining for closure after the screening process and/or those not being transferred by negotiated sale. The property is put up for public sale through a variety of bid processes, and the transfer to the selected purchaser is executed. To date, no such proposed transactions have been identified.

2.3.5 Widening of Public Highways

There is no indication at this time that any property at Fort Devens will be transferred for the widening of public highways.

2.3.6 Donated Property

This property transfer method involves donation of property, usually to a state or local government entity. This is usually done for property of "no anticipated commercial value," such as a roadway. There is no indication at this time that any property at Fort Devens will be donated.

2.3.7 Interim Leases

Interim leases are a means by which the Army grants a lease to an entity to allow for interim use of property prior to transfer. The Disposal and Reuse EIS states interim leases that are currently under consideration are an intermodal transportation facility, a Federal Bureau of Prisons Medical Center and minimum-security prison camp, use of a portion of Building 3713 by Raytheon Corporation, a joint MGLB/JBOS office/base reuse resource center in Building 2602 and a United Native American Cultural Center in Building P-5.

Table 2-2 identifies the grantee, property/facility, effective date, and termination date of each interim lease agreement currently in place at Fort Devens.

TABLE 2-2. EXISTING LEGAL AGREEMENTS/INTERIM LEASES

Type of Instrument	Contract Number	Grantee	Purpose	Term
License	010-1	Willard Family Assoc.	To erect a memorial	4/9/35 - Indefinite
Easement	01-2	Wachusett Elec. Co.	Right of way for transmission of electric current	12/2/46 - 12/1/96
Easement	010-4	New England Power Co.	Right of way for transmission of electric current	12/29/17 - Indefinite
Easement	010-5	New England Power Co.	Right of way for transmission of electric current	7/8/18 - Indefinite
Easement	010-6	New England Power Co.	Right of way for transmission of electric current	7/8/18 - Indefinite
Easement	010-7	New England Power Co.	Right of way for transmission of electric current	7/8/18 - Indefinite
Easement	010-8	Commonwealth of Massachusetts	Right of way for road across portions of Fort Devens (91.2 AC) transmission of electric current	5/22/50 - Indefinite
Easement	010-10	Commonwealth of Massachusetts	Right of way to extend and maintain road at Fort Devens	8/12/41 - Indefinite
Easement	010-12	Commonwealth of Massachusetts	Right of way to widen existing road at northern boundary	11/28/27 - Indefinite
Easement	010-14	Commonwealth of Massachusetts	Right of way for public road and bridge across parcels of land at Fort Devens	6/18/47 - Indefinite
Permit	DACA51-4074-119	HEW	Elementary School and addition	6/1973 - Indefinite
Easement	DACA51-2-72-197	Mass Electronic	Right of Way to maintain transmission line for telephone line	11/4/63 - 11/3/2013
License	DACA33-3-88-43	Spectacle Pond Park Association	Non-exclusive right of way for access to boat pier	3/15/88 - 3/14/93

TABLE 2-2. EXISTING LEGAL AGREEMENTS/INTERIM LEASES**Continued**

Type of Instrument	Contract Number	Grantee	Purpose	Term
License	DACA33-3-88-42	American National Red Cross	Maintain and operate Buildings 3575 and 3579	9/17/88 - 9/16/93
Easement	DACA51-2-77-513	Commonwealth of Massachusetts	Right of way for relocation of Route 2A (7.71 AC)	5/30/77 - Indefinite
Easement	DA19-016-E-2060	Northeast Gas Transmission Company	Right of way for gas pipeline	6/30/52 - 6/29/2002
Lease	DACA51-1-71-296	Worcester County National 1 Bank	Banking Facility	3/22/71 - 3/21/96
License	DACA33-3-88-58	Pan Am World Airways Inc.	Airline tickets	11/1/88 - 10/31/93
Lease	DA19-016-E-7034	Fort Devens Hs. #17 Inc.	Housing Units (53.4 AC)	9/14/60 - 9/13/2015
Lease	DA19-016-E-7035	Fort Devens Hs. #18 Inc.	Housing Units (48.2 AC)	9/14/60 - 9/13/2015
Lease	DA19-016-E-7036	Fort Devens Hs. #19 Inc.	Housing Units (65.3 AC)	9/14/60 - 9/13/2015
Lease	DA19-016-E-7037	Fort Devens Hs. #20 Inc.	Housing Units (42 AC)	9/14/60 - 9/13/2015
Lease	DA19-016-E-7038	Fort Devens Hs. #21 Inc.	Housing Units (14 AC)	9/14/60 - 9/13/2015
Easement	DA19-016-E-7253	Town of Ayer	Right of way to install 18 inch sewer force main	6/6/61 - 7/5/2011
Easement	DA19-016-E-8153	AT&T Co.	Right of way for underground communication cable	8/20/64 - 8/19/2014
Lease		B&M Railroad	Building 3712	April 1993 - April 1994
Easement	DACA-33-2-69-91	Town of Ayer	Right of way for installation of sewer lift station	3/31/69 - 3/20/2019
Easement	DACA51-2-77-513	Commonwealth of Massachusetts	Right of way for relocation of Route 2A	5/20/77 - Indefinite
Easement	DACA33-2-89-54	Tennessee Gas Pipeline	Right of way for gas pipeline	6/30/89 - 6/29/2039

TABLE 2-2. EXISTING LEGAL AGREEMENTS/INTERIM LEASES**Continued**

Type of Instrument	Contract Number	Grantee	Purpose	Term
License	DACA33-3-88-59	Massachusetts Air National Guard	Use of Bldgs. T2651, 2206, 2209	9/23/88 - 9/22/93
License	DACA51-3-88-23	Service Fed. Credit Union	Credit Union	10/1/91 - 9/30/93
License	DEH-65	Americal Div.	Museum	10/1/91 - 9/30/93
License	DEH-66	Boy/Girl Scouts	Meetings and storage	10/1/91 - 9/30/93
Easement	DACA51-2-76-326	New England Power Co.	To construct and maintain overhead transmission wires on Fort Devens	1/19/76 - 1/2026
Easement		New England Telephone	To install cable	6/10/74 - Indefinite
License	DA19-016-ENG-8136	AT&T Co.	To construct communications system	8/20/64 - 8/19/66
License		New England Power Co.	New England Power/Quebec Transmission Line Project	3/8/88 - Indefinite
Permit	DA19-035-A1-4015	Boston Gas Co.	Gas mains and facilities located at Fort Devens	6/1/95 - Indefinite
License		Riding Club	House horses and ride on the installation	Pending
Permit	DACA33-4-88-54	FBI	Request for range	6/1/88 - 5/31/93
License	DACA51-3-86-543	FMC Corp.	Installation of ground water monitoring wells	6/1/86 - 5/31/91
License	DACA33-3-89-69	MIT Lincoln Lab	Use of range area	6/1/86 - 5/31/91
License	DACA33-3-89-69	MIT Lincoln Lab	Use of range area	3/93 - Pending

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CHAPTER 3

► INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS ◀

This section provides a summary of the current status of environmental restoration projects, installation-wide source discovery and assessment activities, and ongoing compliance activities at Fort Devens. It also summarizes the status of the cultural and natural resources program, community involvement to date, and the environmental condition and suitability for transfer of the installation property.

3.1 Environmental Program Status

The BRAC office at Fort Devens is responsible for establishing and maintaining all environmental programs, compliance matters, and remediation efforts at Fort Devens. Two principal Army components assist the installation's efforts. The USAEC is conducting BRAC site investigation activities at the installation and the USACE, New England Division provides support in areas including RD, RA, and natural and cultural resource management. Fort Devens was listed on the National Priorities List (NPL) in December 1989. The lead regulatory oversight agency at the installation is currently the USEPA, Region I. Prior to listing on the NPL, the MADEP was the lead agency at the installation.

Environmental restoration programs at Fort Devens are currently conducted under the BRAC IRP program in compliance with applicable Department of the Army (DA), DOD, state and federal statutes and regulations, particularly CERCLA. Environmental compliance programs at Fort Devens are completed in compliance with applicable DA, DOD and state regulations, and federal regulatory programs including those administered under the Clean Air Act (CAA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), RCRA, Toxic Substances Control Act (TSCA), and SARA.

On 15 November 1991, Fort Devens and USEPA Region I signed a Federal Facilities Agreement (FFA) pursuant to the following authorities: Section 120 of CERCLA, Sections 6001, 3008(h), 3006, and 3004(u) and (v) of the RCRA, NEPA, and the Defense Environmental Restoration Program. The MADEP did not sign the FFA because the Army would not recognize state authority as delegated by federal statutes, especially RCRA.

The FFA requires compliance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), CERCLA guidance and policy, RCRA guidance and policy, and applicable state law. Under Section 5.9 of the FFA, the Master Environmental Plan (MEP) has been developed to be the detailed, comprehensive plan for the work to be performed pursuant to CERCLA. The MEP is updated annually to reflect decisions made on each site. The Army, MADEP and USAEC have approved the BCP to replace the MEP.

Under Section 6.3 of the FFA, Fort Devens agreed to undertake, fund, implement, and report on the following tasks, if required:

- ▶ Preliminary assessment and site inspection of potentially contaminated sites;
- ▶ RIs of all contaminated sites;
- ▶ FSs for all contaminated sites;
- ▶ Proposed plans and RODs for all contaminated sites;
- ▶ RAs, removals, and RDs for all contaminated sites; and
- ▶ Operation and maintenance of RAs at contaminated sites.

An environmental restoration program has been in place at Fort Devens for approximately 6 years. A summary of some of the major milestones in the IRP and compliance programs at the installation is provided below.

- ▶ EnPA and CERFA investigations have been completed. Sixty-nine areas requiring environmental evaluation (AREEs) were identified in the EnPA, the installation added another AREE following the EnPA, and an additional eight were identified during the CERFA investigation.
- ▶ An RI/FS has been completed in phases for individual sites. Fifteen operable units (OUs) have been identified at this time.
- ▶ UST and polychlorinated biphenyl (PCB) transformer removals have been completed as compliance early actions.

Table 3-1 lists 59 site-specific AREEs, designated as study areas (SAs), and areas of contamination (AOCs); 10 installation-wide AREEs, which have been and/or are currently being investigated at the installation; and three new AREEs, which have been identified as the result of the BCT's Bottom-up Review. At this time, the eight AREEs identified during the CERFA investigation are not being evaluated. The table identifies the various investigations conducted at each site and summarizes investigation findings. The environmental restoration sites and study areas at the installation are summarized in Table 3-2. The various sites are also identified on Figure 3-1. Defense Site Environmental Restoration Tracking System (DSERTS) site numbers are provided in Table 3-2 for sites where the data is available. The DSERTS data base tracks the status of IRP activities initially funded under the Defense Environmental Restoration Account (DERA) from the identification stage to completion of RAs and development of NFA documentation. Historically, DERA has funded NFA documentation and RAs at Fort Devens.

TABLE 3-1. PRELIMINARY LOCATION SUMMARY

AREE Number	AREE Description	Environmental Investigation Report Results/Findings					Final Determination
		EnPA	CERFA	SI	RI/FS	Findings	
SA 1	Cutler Army Hospital Incinerator	×	×			NFA.	NFA in MEP update - April 1993
SA 2	Veterinary Clinic Incinerator	×	×			NFA.	NFA in MEP update - April 1993
SA 3	Intelligence School Incinerator	×	×			NFA.	NFA in MEP update - April 1993
AOC 4	Sanitary Landfill Incinerator	×	×		×	Organic and inorganic contaminants impacting groundwater and sediments (OU includes AOCs 5 and 18).	RI/FS, ROD during Fiscal Year 1995
AOC 5	Shepley's Hill Landfill	×	×		×	Organic and inorganic contaminants impacting groundwater and sediments (OU includes AOCs 4 and 18).	RI/FS, ROD during Fiscal Year 1995
SA 6	Landfill No. 2 - South Post Area 7b	×	×			No contaminants found.	Removal Action Landfill Consolidation Study
SA 7	Landfill No. 3 - South Post Impact Area	×	×			No contaminants found.	NFA in MEP update - April 1993
SA 8	Landfill No. 4 - South Post Area 8a	×	×			No contaminants found.	NFA
AOC 9	North Post Landfill (Landfill No. 5)	×	×	×	×	Building rubble disposal. No evidence of hazardous waste.	RI/FS Work Plan in May 1995
SA 10	Landfill No. 6 - Near Shirley Gate	×	×			No evidence of any disposal.	NFA, June 1995
AOC 11	Landfill No. 7 - Near Lovell Street	×	×		×	Building rubble disposal; possible inorganic contaminants impacting surface water and sediments.	RI ongoing - Draft RI Report - April 1995
SA 12	Landfill No. 8 - South Post Combat Pistol Range	×	×			Soil and sediment contaminated with metals, pesticides, and PCBs. Sediment contamination not attributed to the landfill.	Removal Action Landfill Consolidation Study
SA 13	Landfill No. 9 - Near Lake George Street	×	×	×		Tree stumps and other solid waste disposal. No evidence of hazardous waste.	Landfill Consolidation Study, solid waste closure required
SA 14	Landfill No. 10 - South Post (Abandoned Quarry Dixie Road)	×	×			Surface water contaminated with metals; sediments contaminated with metals, petroleum products, organic chemicals, pesticides, and explosives.	NFA, June 1995
SA 15	Landfill No. 11 - South Post (Helipad)	×	×			Soil contaminated with petroleum products.	RA Complete, NFA, January 1995

TABLE 3-1. PRELIMINARY LOCATION SUMMARY

Continued

AREE Number	AREE Description	Environmental Investigation Report Results/Findings					Final Determination
		EnPA	CERFA	SI	RI/FS	Findings	
SA 16	Landfill No. 12 Shoppette Landfill	x	x			No contaminants found.	NFA, January 1995
SA 17	Landfill No. 13 - Little Mirror Lake	x	x			Historic evidence of World War II grenades.	SSI Report April 1995
AOC 18	Landfill No. 1 - Asbestos Cell	x	x		x	Organic and inorganic contaminants impacting groundwater and sediments (OU includes AOCs 4 and 5).	RI/FS, ROD during Fiscal Year 1995
SA 19	Wastewater Treatment Plant	x	x	x		No evidence of hazardous waste release.	NFA, January 1995
SA 20	Rapid Infiltration Basins	x	x	x		No evidence of hazardous waste release.	NFA, January 1995
SA 21	Sludge Drying Beds	x	x	x		Inorganics detected below beds, but remediation would overly impact habitat.	NFA, January 1995
SA 22	Hazardous Waste Storage Facility	x	x			No evidence of hazardous waste release.	NFA
SA 23	Paper Recycling Center	x	x			No evidence of hazardous materials release.	NFA
SA 24	Waste Explosive Storage Bunker	x	x	x		No evidence of explosives release.	NFA, March 1993
AOC 25	EOD Range, South Post	x	x		x	Groundwater and surface soil are contaminated with explosives.	Final RI Report August 1994, ROD date September 1995
AOC 26	Zulu I and II Ranges, South Post	x	x		x	Soil, groundwater, and sediments are contaminated with heavy metals and explosives.	Final RI Report August 1994, ROD date September 1995
AOC 27	Hotel Range, South Post	x	x		x	Metals found in groundwater and sediments. Pesticides found in sediments. Explosives found in groundwater and soil.	Final RI Report August 1994, ROD date September 1995
SA 28	Training Area 14, South Post	x	x			No contamination found.	NFA, June 1994
SA 29	Transformer Storage Area	x	x			No contamination found.	NFA, January 1995
SA 30	Drum Storage Area, MAAF	x	x	x		All hazardous waste/petroleum compounds below levels of concern.	NFA, January 1995
SA 31	Firefighting Training Area, MAAF	x	x	x		Petroleum compounds below levels of concern.	NFA, January 1995

TABLE 3-1. PRELIMINARY LOCATION SUMMARY

Continued

AREE Number	AREE Description	Environmental Investigation Report Results/Findings					Final Determination
		EnPA	CERFA	SI	RI/FS	Findings	
AOC 32	DRMO Yard	x	x	x	x	Petroleum compounds and PCBs detected in soil.	RI/FS, ROD date - February 1996
SA 33	DEH Entomology Shop	x	x			Limited area of pesticide contamination.	RA complete - NFA, Draft Closure Report, December 1994
SA 34	Former DEH Entomology Shop	x	x			Limited area of pesticide contamination.	RA complete; Draft Final Closure Report issued December 1994, NFA
SA 35	Former DEH, Entomology Shop	x	x			No contamination found.	NFA, Draft, May 1995
SA 36	Former DEH Entomology Shop	x	x			Limited area of pesticide and petroleum contamination.	RA complete; Draft closure report submitted January 1995, NFA
SA 37	Golf Course Entomology Shop	x	x			Limited area of pesticide and petroleum contamination.	Draft Closure Report submitted October 1994, NFA
SA 38	Battery Repair Area	x	x	x		Possible area of lead contamination under battery room floor.	RA complete, NFA Pending
SA 39	Transformer near Former Building 4250	x	x			Soil contaminated with PCBs.	Removal Action May 1995, NFA - Pending
AOC 40	Cold Spring Brook Landfill	x	x		x	Inorganic contamination in sediments.	FS Report - December 1994; Draft OU Proposed Plan - March 1995
AOC 41	Unauthorized Dumping Area, Site A, South Post	x	x		x	Soil, groundwater and sediments contaminated with metals.	RI Report July 1995
SA 42	Popping Furnace (O Range)	x	x			Soil contaminated with metals and explosives.	RA ongoing, SSI pending
AOC 43A	POL Storage Site	x	x		x	Contaminants found.	RI/FS; ROD date February 1996
SA 43B	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43C	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43D	Historic Gas Station	x	x			Contaminants found.	RA complete; Draft Closure Report - November 1994
SA 43E	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43F	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
AOC 43G	Historic Gas Station	x	x	x	x	Contaminants found.	RI/FS; Draft RI Report - July 1995
SA 43H	Historic Gas Station	x	x			Contaminants found.	RA memorandum signed June 1994
SA 43I	Historic Gas Station	x	x			Contaminants found.	RA memorandum signed June 1994
AOC 43J	Historic Gas Station	x	x		x	Contaminants found.	RI/FS; Draft RI Report, July 1995
SA 43K	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43L	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995

TABLE 3-1. PRELIMINARY LOCATION SUMMARY

Continued

AREE Number	AREE Description	Environmental Investigation Report Results/Findings					Final Determination
		EnPA	CERFA	SI	RI/FS	Findings	
SA 43M	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43N	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43O	Historic Gas Station	x	x	x		Contaminants found.	SI
SA 43P	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43Q	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43R	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
SA 43S	Historic Gas Station	x	x			No contaminants found.	NFA, January 1995
AOC 44	Cannibalization Yard	x	x	x	x	Petroleum and PAH contamination above action levels (OU includes AOC 52).	RI; RD submitted December 1994; ROD April 1995
SA 45	Wash Rack at Lake George Street	x	x	x		No evidence of petroleum release.	NFA
SA 46	Training Area 6d, South Post	x	x			No contamination found.	NFA in MEP update, April 1993
SA 47	Buildings 3816 Leaking UST Site - MAAF	x	x	x		No evidence of petroleum release above action levels.	NFA, June 1995
SA 48	Building 202 Leaking UST Site	x	x	x		Petroleum release from UST.	RA complete
SA 49	Building 3602 Leaking UST Site	x	x	x		Petroleum release from UST.	RA complete; Draft Closure Report, October 1994
SA 50	WWII Fuel Points - MAAF	x	x	x		Petroleum release from UST and perchloroethylene release.	Supplemental SI; Phase I Removal complete - Phase II removal ongoing
SA 51	O'Neill Building Spill Site	x	x	x		Possible petroleum release from spill site	Supplemental SI underway, Draft NFA, May 1995
AOC 52	TDA Maintenance Yard	x	x		x	Metals and POL contamination found.	RI; RD submitted December 1994; ROD April 1995
SA 53	POL Spill Area, South Post	x	x			No contamination found.	NFA in MEP update, April 1993
SA 54	Historic Gas Station, Former Building 182					No contamination found. Same as SA43O.	NFA
SA 55	Shirley Housing Area Trailer Park Fuel Tanks	x	x			Possible petroleum releases from USTs.	NFA in MEP update (April 1993); Draft Closure Report 1995
SA 56	Building 2417 Leaking UST Site	x	x	x		Petroleum release from UST.	RA complete; Draft Closure Report January 1995
AOC 57	Building 3713 Fuel Oil Spill Site	x	x		x	Petroleum release - contaminants found.	RI Interim RA completed October 1994, Draft Closure Report, July 1995
SA 58	Building 2648 and 2650 Leaking UST Sites	x	x	x		Petroleum levels below action levels, remediated during UST removal.	NFA pending groundwater sampling
SA 59	Bridge 526	x	x			Lead released from sandblasting, below action levels.	NFA, June 1995

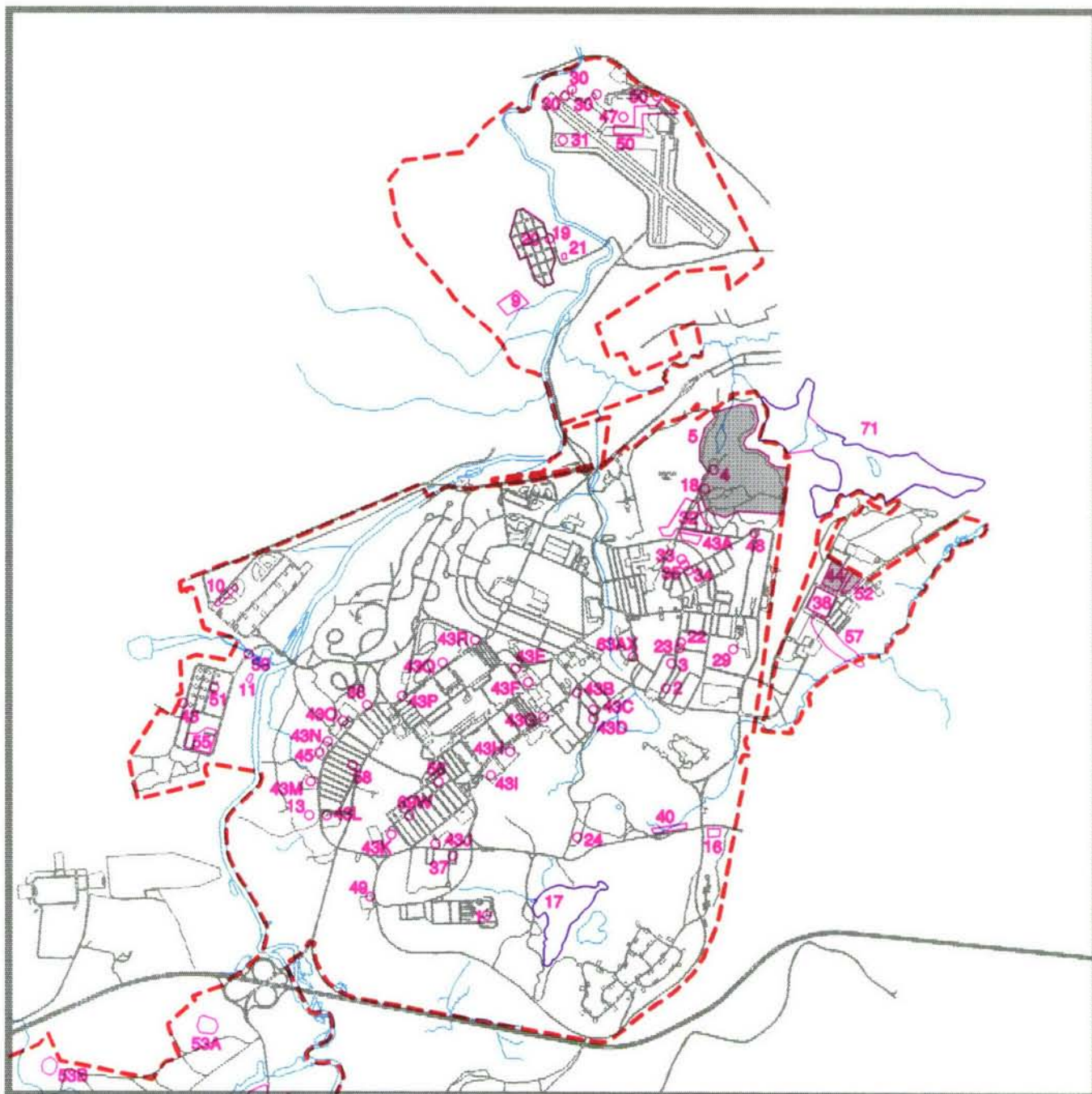
TABLE 3-1. PRELIMINARY LOCATION SUMMARY
Continued

AREE Number	AREE Description	Environmental Investigation Report Results/Findings					Final Determination
		EnPA	CERFA	SI	RI/FS	Findings	
INSTALLATION-WIDE AREES							
60	Training Areas and Ranges	×	×			Training areas and ranges are going to continue to be used.	NFA at this time-training areas and ranges are to remain operation under Reserve Enclave
61	Hazardous Waste Accumulation Areas	×	×			See Table 3-2.	Further action necessary
62	Existing USTs	×	×			See Table 3-8.	Covered under Fort Devens UST Management Program
63	Previously Removed USTs	×	×			See Table 3-2.	Further action necessary
64	ASTs	×	×			See Table 3-9.	Managed by ongoing AST Management Program
65	Asbestos	×	×			See Asbestos Survey.	Follow-on assessment completed December 1994; report March 1995
66	PCB Transformers	×	×			PCB soil contamination at four of the six sites where releases were identified.	NFA
67	Radon	×	×			Radon Report completed July 1994. 2,488 structures required testing; of 1,631 buildings with reliable results, 1,497 are below USEPA action level.	118 buildings were above limit and require mitigation within 5 years, another 16 buildings require mitigation within 1 to 4 years. Supplemental radon survey to be performed on 857 buildings.
68	Lead Paint	×	×			Results of the Lead Paint Survey were not available at this time. 181 dwelling units plus the Chapel have been tested.	Lead paint survey completed in April 1995.
69	Past Spill Sites	×	×			NFA for 20 sites, and 18 sites were included in other studies.	RA complete, NFA Draft Closure Report, November 1994
70	Storm Sewer System			×		55 sites identified.	Further action necessary - Cold Spring Brook sampling to address
NEW SITE-SPECIFIC STUDY AREAS							
71	Rail Road Roundhouse		×	×		No data available at this time.	Supplemental SI

TABLE 3-1. PRELIMINARY LOCATION SUMMARY**Continued**

AREE Number	AREE Description	Environmental Investigation Report Results/Findings					Final Determination
		EnPA	CERFA	SI	RI/FS	Findings	
72	Plow Shop and Grove Ponds		×	×	×	No data available at this time.	RI/FS estimated ROD dated August 1996
73	Lower Cold Spring Brook		×	×		No data available at this time.	Supplemental SI

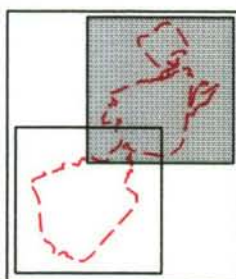
Key: AOC = Area of Contamination
AREE = Area Requiring Environmental Evaluation
CERFA = Community Environmental Response Facilitation Act
EnPA = Enhanced Preliminary Assessment
MEP = Master Environmental Plan
NFA = No Further Action
RI/FS = Remedial Investigation/Feasibility Study
SI = Site Inspection



EXPLANATION

- Installation Boundary
- Site/OU Boundary
- Multiple-site OU

Note: The following sites are also OU's:
9, 11, 32, 40, 41, 43A, 43G, 43J,
57, 63AX, 69W, and 71.



0 1750 3500
FEET

Sites and OUs
Currently Under
Investigation
North and
Main Post

Figure 3-1A

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
SA 1	FTDV-001	11	Cutter Army Hospital Incinerator (Building 3654, Main Post)	Medical/ biological waste	From 1977 to 1992	NFA in MEP update - April 1993	No	CAA	✓ (in MEP update April 1993)	✓
SA 2	FTDV-002	11	Veterinary Clinic Incinerator (Building 1450, Main Post)	Animal carcasses	From 1970 to 1992	NFA in MEP update - April 1993	No	CAA	✓ (in MEP update April 1993)	✓
SA 3	FTDV-003	11	Intelligence School Incinerator (Building 1484, Main Post)	Classified documents	From 1971 to 1976	NFA in MEP update - April 1993	No	CAA	✓ (in MEP update April 1993)	✓
AOC 4 (OU)	FTDV-004	1A	Sanitary Landfill Incinerator (Building 38, Main Post)	Household debris	From 1941 to late 1940s	RI/FS, ROD during Fiscal Year 1995	TBD	CERCLA		
AOC 5 (OU)	FTDV-005	1A	Landfill No. 1, Shepley's Hill, & RR Roundhouse & Plow Shop Pond (Main Post)	Household refuse, construction demolition debris	From 1917 to 1992	RI/FS, ROD during Fiscal Year 1995	TBD	CERCLA		
SA 6	FTDV-006	10	Landfill No. 2, South Post Area 7b (South Post)	Household refuse	From 1850 to 1920	Removal Action Landfill Consolidation Study	TBD	RCRA Subtitle D		
SA 7	FTDV-007	10	Landfill No. 3, South Post Impact Area (South Post)	Household refuse	From 1850 to 1920	NFA in MEP update - April 1993	No	RCRA Subtitle D	✓	✓
SA 8	FTDV-008	10	Landfill No. 4, South Post Area 8a (South Post)	Household refuse and military items	From 1900 to 1930	NFA	No	RCRA Subtitle D	✓	✓
AOC 9	FTDV-009	5	Landfill No. 5, North Post Landfill (WWTP)	Construction/ demolition debris	From 1955 to 1978	RI/FS Work Plan in May 1995	TBD	CERCLA		
SA 10	FTDV-010	9	Landfill No. 6 (Main Post)	Construction/ demolition debris	From 1975 to 1980	NFA, June 1995	No	RCRA Subtitle D	✓	✓
AOC 11	FTDV-011	7	Landfill No. 7 (Main Post)	Construction/ demolition debris	From 1975 to 1980	RI ongoing - Draft RI Report - April 1995	TBD	CERCLA		
SA 12	FTDV-012	7	Landfill No. 8, Combat Pistol Range (South Post)	Construction/ demolition debris	From 1960 to 1992	Removal Action Landfill Consolidation Study	TBD	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
SA 13	FTDV-013	2	Landfill No. 9, Lake George St. Landfill (Main Post)	Construction/ demolition debris	From 1965 to 1970	Landfill Consolidation Study	TBD	CERCLA		
SA 14	FTDV-014	7	Landfill No. 10: Abandoned Quarry (South Post)	Abandoned cars and ordnance	Unknown	NFA, June 1995	No	CERCLA	✓	✓
SA 15	FTDV-015	1B	Landfill No. 11, Helipad (South Post)	Fuel oil burned	From 1963 to 1966	RA Complete, NFA, January 1995	No	CERCLA	Pending	Pending
SA 16	FTDV-016	8	Landfill No. 12, Shoppette Landfill (Main Post)	Household refuse	1985	NFA, January 1995	No	CERCLA	✓	✓
SA 17	FTDV-017	8	Landfill No. 13, Little Mirror Lake (Main Post)	WWII-era grenades	1965	Supplemental SI Report April 1995	TBD	CERCLA		
AOC 18	FTDV-018	1A	Asbestos Cell, Shepley's Hill Landfill, Landfill No. 1 (Main Post)	Asbestos (estimated 6.6 tons)	From March 1982 to November 1985	RI/FS, ROD during Fiscal Year 1995	TBD	CERCLA		
SA 19	FTDV-019	5	Wastewater Treatment Plant	Sanitary wastes	From 1942 to present	NFA, January 1995	No	CERCLA	Pending	Pending
SA 20	FTDV-020	5	Rapid Infiltration Beds, WWTP	Sanitary wastes	From 1942 to present	NFA, January 1995	No	CERCLA	Pending	Pending
SA 21	FTDV-021	5	Sludge Drying Beds, WWTP	Sludge	From 1942 to present	NFA, January 1995	No	CERCLA	Pending	Pending
SA 22	FTDV-022	12	Hazardous Waste Storage Facility (Building 1650, Main Post)	Various hazardous wastes	From 1980 to present	NFA	No	CERCLA	✓ (in MEP update April 1993)	✓
SA 23	FTDV-023	12	Paper Recycling Center (Building 1650, Main Post)	Paper	From April 1984 to 1985	NFA	No	CERCLA	✓ (in MEP update April 1993)	✓
SA 24	FTDV-024	1B	Waste Explosive Storage Bunker (Building 3644, Main Post)	Explosives	From 1979 to present	NFA, March 1993	No	CERCLA	✓	✓
AOC 25	FTDV-025	1B	EOD Range (South Post)	Explosives	From 1979 to present	Final RI Report August 1994, ROD date September 1995	TBD	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
AOC 26	FTDV-026	1B	Zulu I and II Ranges (South Post)	Explosives	From 1942 to present	Final RI Report August 1994, ROD date September 1995	TBD	CERCLA		
AOC 27	FTDV-027	1B	Hotel Range (South Post)	Explosives	From 1942 to present	Final RI Report August 1994, ROD date September 1995	TBD	CERCLA		
SA 28	FTDV-028	1B	Training Area 14 (South Post)	Explosives	From 1942 to present	NFA, June 1994	No	CERCLA	✓	✓
SA 29	FTDV-029	8	Transformer Storage Area (Building 1438, Main Post)	Undrained transformers w/PCBs	From 1980 to present	NFA, January 1995	No	CERCLA	✓	✓
SA 30	FTDV-030	6	Drum Storage Areas	Jet fuel and chemicals	From 1975 to 1990	NFA, January 1995	No	CERCLA	Pending	Pending
SA 31	FTDV-031	6	Fire-Fighting Training Area, MAAF	Fuel and paint thinner	From 1975 to 1986	NFA, January 1995	No	CERCLA	✓	✓
AOC 32	FTDV-032	1B	DRMO Yard (Building 204, Main Post)	Vehicles, batteries, scrap metal, tires	From 1964 to present	RI/FS, ROD date - February 1996	TBD	CERCLA		
SA 33	FTDV-033	4	DEH Entomology Shop (Building 262, Main Post)	Pesticides	From 1982 to present	RA complete - NFA, Draft Closure Report, December 1994	No	CERCLA	Draft NFA	
SA 34	FTDV-034	4	Former DEH Entomology Shop (Building 245, Main Post)	Pesticides	From 1978 to 1982	RA complete; Draft Final Closure Report issued December 1994, NFA	No	CERCLA	Draft NFA	
SA 35	FTDV-035	4	Former DEH Entomology Shop (Building 254, Main Post)	Pesticides	From 1978 to 1982	NFA, Draft, May 1995	No	CERCLA	Draft NFA	
SA 36	FTDV-036	4	Former DEH Entomology Shop (Building 2728, Main Post)	Pesticides	From 1968 to 1978	RA complete; Draft closure report submitted January 1995, NFA	TBD	CERCLA	Draft NFA	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
SA 37	FTDV-037	4	Golf Course Entomology Shop (Building 3622, Main Post)	Pesticides	From 1976 to 1988	Draft Closure Report submitted October 1994, NFA	TBD	CERCLA	Draft NFA	
SA 38	FTDV-038	3	Battery Repair Area (Building 3713, Main Post)	Battery and acid	Prior to 1978	RA complete, NFA Pending	No	CERCLA	Draft NFA - Issued December 1994	
SA 39	FTDV-039	8	Transformer Release (near Former Building 4250, located within the Oxbow National Wildlife Refuge)	PCB-contaminated soil	Building land was deeded to U.S. Dept. of the Interior in 1973. Release discovered in September 1984.	Removal Action May 1995, NFA - Pending	No	CERCLA	NFA Pending	
AOC 40	FTDV-040	1A	Cold Spring Brook Landfill (Main Post)	Debris/fill and drums	From 1965 to 1980	FS Report - December 1994; Draft OU Proposed Plan - March 1995	TBD	CERCLA		
AOC 41	FTDV-041	7	Unauthorized Dumping Area, Site A (South Post)	Military and household debris	Until 1950s	RI Report - July 1995	TBD	CERCLA		
SA 42	FTDV-042	7	Popping Furnace (South Post)	Small arms ammunition	Possibly early 1940 to early 1960s	RA ongoing, Supplemental SI pending	TBD	CERCLA		
AOC 43A	FTDV-043	2, 1B	POL Storage Site (Building F186, Main Post)	Waste oil and possible minor petroleum release	Not Available	RI/FS; ROD date February 1996	TBD	CERCLA		
SA 43B	FTDV-043	2	Historic Gas Station (Building F169, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43C	FTDV-043	2	Historic Gas Station (Building F170, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43D	FTDV-043	2	Historic Gas Station (Building F171, Main Post)	Waste oil and possible minor petroleum release	Not Available	RA complete; Draft Closure Report - November 1994	TBD	CERCLA		
SA 43E	FTDV-043	2	Historic Gas Station (Building F172, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43F	FTDV-043	2	Historic Gas Station (Building F173, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
AOC 43G	FTDV-043	2	Historic Gas Station (Building F174, Main Post)	Waste oil and possible minor petroleum release	Not Available	RI/FS; Draft RI Report - July 1995	TBD	CERCLA		
SA 43H	FTDV-043	2	Historic Gas Station (Building F175 (602), Main Post)	Waste oil and possible minor petroleum release	Not Available	RA memorandum signed June 1994	TBD	CERCLA		
SA 43I	FTDV-043	2	Historic Gas Station (Building F176, Main Post)	Waste oil and possible minor petroleum release	Not Available	RA memorandum signed June 1994	TBD	CERCLA		
AOC 43J	FTDV-043	2	Historic Gas Station (Building F177, Main Post)	Waste oil and possible minor petroleum release	Not Available	RI/FS; Draft RI Report, July 1995	TBD	CERCLA		
SA 43K	FTDV-043	2	Historic Gas Station (Building F178, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43L	FTDV-043	2	Historic Gas Station (Building F179, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43M	FTDV-043	2	Historic Gas Station (Building F180, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43N	FTDV-043	2	Historic Gas Station (Building F181, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43O/SA 54	FTDV-043	2	Historic Gas Station (Building F182, Main Post)	Waste oil and possible minor petroleum release	Not Available	SI	TBD	CERCLA		
SA 43P	FTDV-043	2	Historic Gas Station (Building F183, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43Q	FTDV-043	2	Historic Gas Station (Building F184, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43R	FTDV-043	2	Historic Gas Station (Building F185, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓
SA 43S	FTDV-043	2	Historic Gas Station (Building F203, Main Post)	Waste oil and possible minor petroleum release	Not Available	NFA, January 1995	No	CERCLA	✓	✓

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
AOC 44	FTDV-044	3	Cannibalization Yard (Building 3713, Main Post)	Oil and car fluid	Not Available	RI; RD submitted December 1994; ROD April 1995	TBD	CERCLA		
SA 45	FTDV-045	2	Wash Rack (Main Post)	Oil	Not Available	Not Available	No	CERCLA	✓	
SA 46	FTDV-046	10	Training Area 6d (South Post)	Explosives, tear gas, armored vehicles	Not Available	NFA in MEP update, April 1993	No	CERCLA	✓	✓
SA 47	FTDV-047	6	Leaking UST Site (Building 3816)	Fuel for electric generator	Not Available	NFA, June 1995	No	CERCLA	✓	✓
SA 48	FTDV-048	1B	Leaking UST Site (Building 202, Main Post)	Waste oil	Not Available	RA complete	No	CERCLA	✓	✓
SA 49	FTDV-049	2	Leaking UST Site (Building 3602, Main Post)	Gasoline and diesel	Not Available	RA complete; Draft Closure Report, October 1994	TBD	CERCLA		
SA 50	FTDV-050	6	WWII Fuel Points	Gasoline, MOGAS, and diesel fuel	Not Available	Supplemental SI; Phase I Removal complete - Phase II removal ongoing	No	CERCLA		
SA 51	FTDV-051	9	O'Neil Building Spill Site (Building 3412, Main Post)	Diesel	Not Available	Supplemental SI underway, Draft NFA, May 1995	No	CERCLA		
AOC 52	FTDV-052	4	TDA Maintenance Yard (Main Post)	Oil	Not Available	RI; RD submitted December 1994; ROD April 1995	TBD	CERCLA		
SA 53	FTDV-053	10	POL Spill Area (South Post)	POL	Not Available	NFA in MEP update, April 1993	No	CERCLA	✓	✓
SA 54	FTDV-54	10	Historic Gas Station, Former Building 182	Waste oil and possible releases of petroleum	Not Available	NFA	No	CERCLA	✓	
SA 55	FTDV-055	8	Shirley Housing Area Trailer Park Fuel Tanks (Main Post)	No. 2 fuel oil	Not Available	NFA in MEP update (April 1993); Draft Closure Report 1995	No	CERCLA	✓	✓
SA 56	FTDV-056	2	Leaking UST Site (Building 2417, Main Post)	Oil	Not Available	RA complete; Draft Closure Report January 1995	No	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
AOC 57	FTDV-057	2	Fuel Oil Spill Site (Building 3713, Main Post)	No. 4 fuel oil	1978 fuel spill	RI Interim RA completed October 1994, Draft Closure Report, July 1995	No	CERCLA		
SA 58	FTDV-058	2	Leaking UST Sites (Buildings 2648/ 2650, Main Post)	Heating oil	Not Available	NFA pending groundwater sampling	No	CERCLA		
SA 59	FTDV-059	12	Bridge 526 (Main Post)	Lead paint chips	October 1990	NFA, June 1995	No	CERCLA	✓	✓
INSTALLATION-WIDE AREES										
60 (AREE)	FTDV-060	NA	Training Areas and Ranges (South Post)	Unexploded ordnance	1941 to present	NFA at this time- training areas and ranges are to remain in operation under Reserve Enclave		Other		
61A (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Former Motor Pool (Building 242, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61B (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3774, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61C (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Former Motor Pool (Building 2021, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61D (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool, Satellite Accumulation Area (Building 1677, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61E (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 1401, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61F (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3549, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61G (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 2008, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61H (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Buildings 616-619, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61I (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Buildings 601-608, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61J (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Buildings 612-615, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61K (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3612, Main Post)	Waste oil and fuels	Not available	RA complete, NFA Draft Closure Report, November 1994	TBD	CERCLA		
61L (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building Across from cemetery, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61M (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3606, Main Post)	Waste oil and fuels	Not available	RA complete, NFA Draft Closure Report, November 1994	TBD	CERCLA		
61N (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3605, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61O (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Buildings 2517/2514, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61P (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Buildings 2601/2681, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61Q (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Buildings 2682/2613, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61R (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Between Buildings 2613/2680, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61S (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 2680, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61T (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 622, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61U (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building Across from 694, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61V (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3412, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61W (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Pool (Building 3601, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61X (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, TDA Waste Accumulation Area (Building 3713, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61Y (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Satellite Accumulation Areas (Buildings 3813/ 3816/3818, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61Z (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, (Building 202, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AA (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Commissary Parking Lot (Building 3712, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AB (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, DEH Roads and Railroads Maintenance Shop (Building 219, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AC (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 207, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AD (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 247, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AE (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 1672, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61AF (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 2479 / 2446, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AG (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 3809, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AH (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 1453, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AI (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 3587, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AJ (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 3625, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AK (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 12, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AL (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 3, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA		
61AM (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 3654, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AN (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 2729, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AO (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 1450, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61AP (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 1677, Main Post)	Waste oil and fuels	Not available	Further action necessary	No	CERCLA	✓	
61AQ (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 3545, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AR (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 171, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AS (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area (Building 2020, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AT (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Historic Motor Pool	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AU (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, General Maintenance Facilities (Buildings 3757/3758/3748/ 3759, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61AV (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Maintenance and POL (Building, 1420/1417/1419, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AW (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, General Administrative, Fire Dept. (Building 3591, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61AX (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Park (Building 1410, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61AY (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Maintenance and POL (Building 1405, Main Post)	Waste oil and fuels	Not available	NFA, Not operative	No	CERCLA	✓	
61AZ (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Maintenance and POL (Building 2017, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61BA (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Storage of Hospital Equipment (Building 3574, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61BB (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, O'Neil Building, (Building 3412, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61BC (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Intell School (Building 3413, Main Post)	Waste oil and fuels	Not available	RA complete, NFA Draft Closure Report, February 1995	No	CERCLA	✓	
61BD (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, General Storage and Disposal Area (Building 216, Main Post)	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
61BE (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Motor Park (Building 1677, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	
61BF (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, Intel School, Electronic Equipment Training Site (Building 1457-1466 / 1469-1472, Main Post)	Waste oil and fuels	Not available	NFA	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
61BG (AREE)	FTDV-061	NA	Hazardous Waste Accumulation Area, General Storage and Disposal Area	Waste oil and fuels	Not available	Further action necessary	TBD	CERCLA		
62 (AREE)	FTDV-062	NA	Existing Underground Storage Tanks (USTs)	Petroleum products	Not available	Covered under Fort Devens UST Management Program	TBD	RCRA, Subtitle I		
63A (AREE)	FTDV-063	NA	Previously Removed UST (Building 219, Main Post)	Waste oil	Not available	Further action necessary	TBD	CERCLA		
63B (AREE)	FTDV-063	NA	Previously Removed UST (Building 242, Main Post)	Waste oil	Not available	Further action necessary	TBD	CERCLA		
63C (AREE)	FTDV-063	NA	Previously Removed UST (Building 631, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63D (AREE)	FTDV-063	NA	Previously Removed UST (Building 1419, Main Post)	Kerosene	Not available	NFA, remediated	No	CERCLA	✓	
63E (AREE)	FTDV-063	NA	Previously Removed UST (Building 1404, Main Post)	Diesel	Not available	NFA, remediated	No	CERCLA	✓	
63F (AREE)	FTDV-063	NA	Previously Removed UST (Building 1425, Main Post)	#2 fuel oil	Not available	Further action necessary	TBD	CERCLA		
63G (AREE)	FTDV-063	NA	Previously Removed UST (Building 1429, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63H (AREE)	FTDV-063	NA	Previously Removed UST (Building 2419, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63I (AREE)	FTDV-063	NA	Previously Removed UST (Building 2434, Main Post)	#2 fuel oil	Not available	Further action necessary	TBD	CERCLA		
63J (AREE)	FTDV-063	NA	Previously Removed UST (Building 2452, Main Post)	#2 fuel oil	Not available	NFA, remediated, wells	No	CERCLA	✓	
63K (AREE)	FTDV-063	NA	Previously Removed UST (Building 2461, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
63L (AREE)	FTDV-063	NA	Previously Removed UST (Building 2686, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63M (AREE)	FTDV-063	NA	Previously Removed UST (Building 3774, Main Post)	Waste oil	Not available	NFA, remediated	No	CERCLA	✓	
63N (AREE)	FTDV-063	NA	Previously Removed UST (Building 3774, Main Post)	Waste oil	Not available	NFA, remediated	No	CERCLA	✓	
63O (AREE)	FTDV-063	NA	Previously Removed UST (Building 2623, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63P (AREE)	FTDV-063	NA	Previously Removed UST (Building 2624, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63Q (AREE)	FTDV-063	NA	Previously Removed UST (Building 2626, Main Post)	#2 fuel oil	Not available	Further action necessary	TBD	CERCLA		
63R (AREE)	FTDV-063	NA	Previously Removed UST (Building 2637, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63S (AREE)	FTDV-063	NA	Previously Removed UST (Building 2640, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63T (AREE)	FTDV-063	NA	Previously Removed UST (Building 2643, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63U (AREE)	FTDV-063	NA	Previously Removed UST (Building 2644, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63V (AREE)	FTDV-063	NA	Previously Removed UST (Building 2647, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63W (AREE)	FTDV-063	NA	Previously Removed UST (Building 2649, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63X (AREE)	FTDV-063	NA	Previously Removed UST (Building 2649, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
63Y (AREE)	FTDV-063	NA	Previously Removed UST (Building 2659, Main Post)	#2 fuel oil	Not available	Further action necessary	TBD	CERCLA		
63Z (AREE)	FTDV-063	NA	Previously Removed UST (Building 2660, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AA (AREE)	FTDV-063	NA	Previously Removed UST (Building 2661, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AB (AREE)	FTDV-063	NA	Previously Removed UST (Building 2662, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AC (AREE)	FTDV-063	NA	Previously Removed UST (Building 2602, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AD (AREE)	FTDV-063	NA	Previously Removed UST (Building 2603, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AE (AREE)	FTDV-063	NA	Previously Removed UST (Building 2604, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AF (AREE)	FTDV-063	NA	Previously Removed UST (Building 2605, Main Post)	#2 fuel oil	Not available	NFA, remediated	TBD	CERCLA		
63AG (AREE)	FTDV-063	NA	Previously Removed UST (Building 2606, Main Post)	#2 fuel oil	Not available	Further action necessary	No	CERCLA	✓	
63AH (AREE)	FTDV-063	NA	Previously Removed UST (Building 2608, Main Post)	#2 fuel oil	Not available	NFA, remediated	TBD	CERCLA		
63AI (AREE)	FTDV-063	NA	Previously Removed UST (Building 2618, Main Post)	#2 fuel oil	Not available	Further action necessary	TBD	CERCLA		
63AJ (AREE)	FTDV-063	NA	Previously Removed UST (Building 2619, Main Post)	#2 fuel oil	Not available	Further action necessary	No	CERCLA	✓	
63AK (AREE)	FTDV-063	NA	Previously Removed UST (Building 2621, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ¹⁰	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
63AL (AREE)	FTDV-063	NA	Previously Removed UST (Building 2622, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AM (AREE)	FTDV-063	NA	Previously Removed UST (Building 618, Main Post)	Gasoline	Not available	NFA, remediated	No	CERCLA	✓	
63AN (AREE)	FTDV-063	NA	Previously Removed UST (Building 618 B, Main Post)	Fuel Oil	Not available	NFA, remediated	No	CERCLA	✓	
63AO (AREE)	FTDV-063	NA	Previously Removed UST (Building 618 C, Main Post)	Fuel Oil	Not available	NFA, remediated	No	CERCLA	✓	
63AP (AREE)	FTDV-063	NA	Previously Removed UST (Building 1429, Main Post)	Fuel Oil	Not available	NFA, remediated	No	CERCLA	✓	
63AQ (AREE)	FTDV-063	NA	Previously Removed UST (3809)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AR (AREE)	FTDV-063	NA	Previously Removed UST (Building Shirley Housing, N, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AS (AREE)	FTDV-063	NA	Previously Removed UST (Building Shirley Housing, S, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AT (AREE)	FTDV-063	NA	Previously Removed UST (Building 3500, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AU (AREE)	FTDV-063	NA	Previously Removed UST (Building 3607 A, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AV (AREE)	FTDV-063	NA	Previously Removed UST (Building 3607 B, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63AW (AREE)	FTDV-063	NA	Previously Removed UST (Building 1404, Main Post)	Gasoline	Not available	NFA, remediated	No	CERCLA	✓	
AOC 63AX (AREE)	FTDV-063	NA	Previously Removed UST (Building 2517, Main Post)	Waste oil	Not available	SI for groundwater contamination	TBD	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
63AY (AREE)	FTDV-063	NA	Previously Removed UST (Building 2601, Main Post)	Waste oil	Not available	NFA, remediated	No	CERCLA	✓	
63AZ (AREE)	FTDV-063	NA	Previously Removed UST (Building 2613, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63BA (AREE)	FTDV-063	NA	Previously Removed UST (Building 2613, Main Post)	#2 fuel oil	Not available	NFA, remediated	No	CERCLA	✓	
63BB (AREE)	FTDV-063	NA	14 Former UST Sites (Building 614, Main Post)	Petroleum products	Not available	Supplemental SI	TBD	CERCLA CWA		
63BC (AREE)	FTDV-063	NA	14 Former UST Sites (Building 1435, Main Post)	Petroleum products	Not available	RA complete, NFA Draft Closure Report, February 1995	TBD	CERCLA CWA		
63BD (AREE)	FTDV-063	NA	14 Former UST Sites (Building 1666, Main Post)	Petroleum products	Not available	Supplemental SI	TBD	CERCLA CWA		
63BE (AREE)	FTDV-063	NA	14 Former UST Sites (Building 2290, Main Post)	Petroleum products	Not available	Phase II SI, Draft Closure Report 1995	TBD	CERCLA CWA		
63BF (AREE)	FTDV-063	NA	14 Former UST Sites (Building 2432, Main Post)	Petroleum products	Not available	NFA	No	CERCLA CWA	✓	
63BG (AREE)	FTDV-063	NA	14 Former UST Sites (Building 2447, Main Post)	Petroleum products	Not available	NFA	No	CERCLA CWA	✓	
63BH (AREE)	FTDV-063	NA	14 Former UST Sites (Building 2458, Main Post)	Petroleum products	Not available	NFA	No	CERCLA CWA	✓	
63BI (AREE)	FTDV-063	NA	14 Former UST Sites (Building 2519, Main Post)	Petroleum products	Not available	NFA	No	CERCLA	✓	
63BJ (AREE)	FTDV-063	NA	14 Former UST Sites (Building 3713, Main Post)	Petroleum products	Not available	NFA	No	CERCLA	✓	
63BK (AREE)	FTDV-063	NA	14 Former UST Sites (Building 3713, Main Post)	Petroleum products	Not available	NFA	No	CERCLA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
63BL (AREE)	FTDV-063	NA	14 Former UST Sites (Building 242, Main Post)	Petroleum products	Not available	NFA	No	CERCLA		
63BM (AREE)	FTDV-063	NA	14 Former UST Sites (Building 619, Main Post)	Petroleum products	Not available	Supplemental SI	TBD	CERCLA		
63BN (AREE)	FTDV-063	NA	14 Former UST Sites (Building 1401, Main Post)	Petroleum products	Not available	NFA	No	CERCLA		
63BO (AREE)	FTDV-063	NA	14 Former UST Sites (Building 219, Main Post)	Petroleum products	Not available	NFA	No	CERCLA		
63BP (AREE)	FTDV-063	NA	14 Former UST Sites (Building 3622, Main Post)	Petroleum products	Not available	Supplemental SI	TBD	CERCLA		
64 (AREE)	FTDV-064	NA	Above Ground Storage Tanks (ASTs)	Petroleum products	Not available	Managed by ongoing AST Management Program	No	RCRA		
65 (AREE)	FTDV-065	NA	Asbestos	Asbestos	Not available	Follow-on assessment completed December 1994; Report completed May 1995	No	TSCA CAA		
66A (AREE)	FTDV-066	NA	Transformer #641425 (Building 3752, Main Post)	PCBs	Not available	Further action necessary	TBD	CERCLA TSCA		
66B (AREE)	FTDV-066	NA	Transformer # Not Recorded (Building 1634, Main Post)	PCBs	Not available	Further action necessary	TBD	CERCLA TSCA		
66C (AREE)	FTDV-066	NA	Transformer #7671845, P-3657, Golf Course (Building 3657, Main Post)	PCBs	Not available	RA complete, NFA Draft Closure Report, October 1994	No	CERCLA TSCA	✓	
66D (AREE)	FTDV-066	NA	Transformer #6573226, P-3575, Red Cross (Building 3575, Main Post)	PCBs	Not available	NFA, remediated	No	CERCLA TSCA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
66E (AREE)	FTDV-066	NA	Transformer #70611472 & #3344617 (Main Post)	PCBs	Not available	NFA, assumed rened	No	CERCLA TSCA	✓	
66F (AREE)	FTDV-066	NA	Transformer #6287290, P-2025 (Building 2025, Main Post)	PCBs	Not available	Further action necessary	TBD	CERCLA TSCA		
67 (AREE)	FTDV-067	NA	Radon	Radon	Not available	2488 structures required testing; of 1,631 buildings with reliable results, 1,497 are below USEPA action level, 118 buildings were above limit and require mitigation within 5 years, another 16 buildings require mitigation within 1 to 4 years.	TBD for 857 buildings, yes for 134 buildings, no for 1,497			
68 (AREE)	FTDV-068	NA	Lead Paint	Lead paint	Not available	Lead Paint Survey in Progress - 181 dwelling units plus the Chapel have been tested	TBD	TSCA		
69A (AREE)	FTDV-069	NA	Past Spill Site (Building 3606, ramp 3651, Main Post)	Waste oil	Not available	RA complete, NFA Draft Closure Report, November 1994	No	CERCLA CWA		
69B (AREE)	FTDV-069	NA	Past Spill Site (Building 2602, Main Post)	# 2 fuel oil	Not available	Further action necessary	TBD	CERCLA CWA		
69C (AREE)	FTDV-069	NA	Past Spill Site (Building 2417, Main Post)	# 2 fuel oil	Not available	RA complete, NFA Draft Closure Report, October 1994	No	CERCLA CWA		
69D (AREE)	FTDV-069	NA	Past Spill Site (DRMO Yard, Main Post)	PCBs	Not available	Site included in IB/RI, SA 32	TBD	CERCLA CWA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
69E (AREE)	FTDV-069	NA	Past Spill Site (Bridge 526, Main Post)	Lead	Not available	Site included in SA 59	TBD	CERCLA CWA		
69F (AREE)	FTDV-069	NA	Past Spill Site (Lots 10 & 11 behind Building 3412, Main Post)	Diesel fuel, engine oil	Not available	Site included in SA 51	TBD	CERCLA CWA		
69G (AREE)	FTDV-069	NA	Past Spill Site (South Post)	Diesel fuel	Not available	No further action at this time	TBD	CERCLA CWA		
69H (AREE)	FTDV-069	NA	Past Spill Site (Intel School, Main Post)	Water treatment chemicals	Not available	NFA	No	CERCLA CWA	✓	
69I (AREE)	FTDV-069	NA	Past Spill Site (Building 3809)	JP-4 Fuel	Not available	NFA	No	CERCLA CWA	✓	
69J (AREE)	FTDV-069	NA	Past Spill Site (Building 3818)	Helicopter fuel	Not available	NFA	No	CERCLA CWA	✓	
69K (AREE)	FTDV-069	NA	Past Spill Site (Main Post)	Diesel or synthetic oil	Not available	RA completed, NFA Draft Closure Report, October 1995	TBD	CERCLA CWA		
69L (AREE)	FTDV-069	NA	Past Spill Site (Woods behind Lake George St., Main Post)	Water treatment chemicals	Not available	NFA	No	CERCLA CWA	✓	
69M (AREE)	FTDV-069	NA	Past Spill Site (Building 202, Main Post)	Fuel oil	Not available	See Group 1B SI-SA 48	TBD	CERCLA CWA		
69N (AREE)	FTDV-069	NA	Past Spill Site (Building 3654, Main Post)	12 mercury thermometers	Not available	NFA	No	CERCLA CWA	✓	
69O (AREE)	FTDV-069	NA	Past Spill Site (Building 1401, Main Post)	Asphalt in floor drain	Not available	Included in AREE 61E	TBD	CERCLA CWA		
69P (AREE)	FTDV-069	NA	Past Spill Site (Foxhole near Goddard Memorial, Main Post)	Fuel	Not available	NFA	No	CERCLA CWA	✓	
69Q (AREE)	FTDV-069	NA	Past Spill Site (Building 1405, Main Post)	Fuel oil	Not available	NFA, cleanup in P-1405 Fuel Point reconstructed	No	CERCLA CWA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
69R (AREE)	FTDV-069	NA	Past Spill Site Pole by Building 3575, Main Post)	PCB oil	Not available	Included in AREE 66	TBD	CERCLA CWA		
69S (AREE)	FTDV-069	NA	Past Spill Site (DEH Transformer Storage Area, Main Post)	PCB oil	Not available	Included in SI for SA 29	TBD	CERCLA CWA		
69T (AREE)	FTDV-069	NA	Past Spill Site (Main Post)	Hydraulic oil/gasoline	Not available	NFA	No	CERCLA CWA	✓	
69U (AREE)	FTDV-069	NA	Past Spill Site	Waste JP-5 fuel	Not available	NFA	No	CERCLA CWA	✓	
AOC 69V (AREE)	FTDV-069	NA	Past Spill Site (Building 2517, Main Post)	Diesel fuel	Not available	NFA	No	CERCLA CWA	✓	
69W (AREE)	FTDV-069	NA	Past Spill Site (Building 215, Main Post)	#4 Fuel Oil	Not available	To be investigated	TBD	CERCLA CWA		
69X (AREE)	FTDV-069	NA	Past Spill Site (Building 1404, Main Post)	Diesel Fuel	Not available	Included in AREE 70.6	TBD	CERCLA CWA		
69Y (AREE)	FTDV-069	NA	Past Spill Site (Building 1404, Main Post)	Diesel Fuel	Not available	NFA	No	CERCLA CWA	✓	
69Z (AREE)	FTDV-069	NA	Past Spill Site (Building 1404, Main Post)	Gasoline	Not available	NFA, refer to AREE 63	No	CERCLA CWA	✓	
69AA (AREE)	FTDV-069	NA	Past Spill Site (Building 1404, Main Post)	Diesel fuel	Not available	NFA	No	CERCLA CWA	✓	
69AB (AREE)	FTDV-069	NA	Past Spill Site (Building Warehouse 16, Main Post)	#2 fuel oil	Not available	Included in AREE 70.12	TBD	CERCLA CWA		
69AC (AREE)	FTDV-069	NA	Past Spill Site (Building 1004, Main Post)	#4 fuel oil	Not available	Further action necessary	TBD	CERCLA CWA		
69AD (AREE)	FTDV-069	NA	Past Spill Site (Building 203, Main Post)	Gasoline	Not available	Further action necessary	TBD	CERCLA CWA		
69AE (AREE)	FTDV-069	NA	Past Spill Site (Next to storage shed)	JP-4	Not available	Further action necessary	TBD	CERCLA CWA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
69AF (AREE)	FTDV-069	NA	Past Spill Site (Main Post)	Motor oil	Not available	Further action necessary	TBD	CERCLA CWA		
69AG (AREE)	FTDV-069	NA	Past Spill Site (Building 3713, Main Post)	15-40 wt. hydraulic oil	Not available	NFA	No	CERCLA CWA	✓	
69AH (AREE)	FTDV-069	NA	Past Spill Site (Main Post)	Kerosene	Not available	NFA	No	CERCLA CWA	✓	
69AI (AREE)	FTDV-069	NA	Past Spill Site, (Building 202, Main Post)	Diesel fuel	4/9/88-4/12/88 & 2/6/84-2/7/84	Further action necessary	TBD	CERCLA CWA		
69AJ (AREE)	FTDV-069	NA	Past Spill Site (Building 2734, Main Post)	Heating oil	Not available	NFA	No	CERCLA CWA	✓	
69AK (AREE)	FTDV-069	NA	Past Spill Site (Building 3413, Main Post)	Paint thinner	Not available	Addressed in AREE 70		CERCLA CWA		
69AL (AREE)	FTDV-069	NA	Past Spill Site (Building 264, Main Post)	Diesel fuel	Not available	RA completed, NFA Draft Closure Report, October 1995	TBD	CERCLA CWA		
69AM (AREE)	FTDV-069	NA	Past Spill Site (Building 2601, Main Post)	Fuel oil	Not available	Further action necessary	TBD	CERCLA CWA		
69AN (AREE)	FTDV-069	NA	Past Spill Site (Building 3713, Main Post)	Vehicle oil	Not available	Site included in SA 44 & 52		CERCLA CWA		
69AO (AREE)	FTDV-069	NA	Past Spill Site (Building 6, Main Post)	#2 fuel oil	Not available	NFA	No	CERCLA CWA	✓	
69AP (AREE)	FTDV-069	NA	Past Spill Site (Building 2008, AAFES Gas Station, Main Post)	Waste oil	Not available	Site included in SA 43G		CERCLA CWA		
69AQ (AREE)	FTDV-069	NA	Past Spill Site (Main Post)	Paint thinner	Not available	NFA	No	CERCLA CWA	✓	
69AR (AREE)	FTDV-069	NA	Past Spill Site (Main Post)	Fuel oil	Not available	NFA, see ABB	No	CERCLA CWA	✓	
69AS (AREE)	FTDV-069	NA	Past Spill Site (Building Behind TDA, Main Post)	Gasoline	Not available	See AREE 70, SA 57		CERCLA CWA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
69AT (AREE)	FTDV-069	NA	Past Spill Site (SW corner of 3712, Main Post)	Diesel fuel	Not available	See SA 57, AREE 70	TBD	CERCLA CWA		
69AU (AREE)	FTDV-069	NA	Past Spill Site (TDA Main, Yard, Main Post)	Gasoline	Not available	Included in SA 44 & 52	TBD	CERCLA CWA		
69AV (AREE)	FTDV-069	NA	Past Spill Site (Building 665, Main Post)	Fuel oil	Not available	NFA	No	CERCLA CWA	✓	
70.1 (AREE)	FTDV-070	NA	Storm Sewer System 1 (West of Building 3769)	Fuels and pesticides	From 1942 to present	Further action necessary - Cold Spring Brook Sampling to Address	TBD	CERCLA CWA		
70.2 (AREE)	FTDV-070	NA	Storm Sewer System 2 (East of Building 2258)	Fuels and pesticides	From 1942 to present	Further action necessary - Cold Spring Brook Sampling to Address	TBD	CERCLA CWA		
70.3 (AREE)	FTDV-070	NA	Storm Sewer System 3 (Near Building 259)	Fuels and pesticides	From 1942 to present	Further action necessary - Cold Spring Brook Sampling to Address	TBD	CERCLA CWA		
70.4 (AREE)	FTDV-070	NA	Storm Sewer System 4	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.5 (AREE)	FTDV-070	NA	Storm Sewer System 5	Fuels and pesticides	From 1942 to present	Further action necessary - Cold Spring Brook Sampling to Address	TBD	CERCLA CWA		
70.6 (AREE)	FTDV-070	NA	Storm Sewer System 6	Fuels and pesticides	From 1942 to present	Further action necessary - Cold Spring Brook Sampling to Address	TBD	CERCLA CWA		
70.7 (AREE)	FTDV-070	NA	Storm Sewer System 7	Fuels and pesticides	From 1942 to present	Further action necessary - Cold Spring Brook Sampling to Address	TBD	CERCLA CWA		

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
70.8 (AREE)	FTDV-070	NA	Storm Sewer System 8	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.9 (AREE)	FTDV-070	NA	Storm Sewer System 9	Pesticides consistent with normal runoff	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.10 (AREE)	FTDV-070	NA	Storm Sewer System 10	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.11 (AREE)	FTDV-070	NA	Storm Sewer System 11	Pesticides from surface runoff from grassy area	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.12 (AREE)	FTDV-070	NA	Storm Sewer System 12	Pesticides from fire station, gasoline station, maintenance building	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.13 (AREE)	FTDV-070	NA	Storm Sewer System 13	Fuels and pesticides	From 1942 to present	Actually part of storm system 12		CERCLA CWA		
70.14 (AREE)	FTDV-070	NA	Storm Sewer System 14	Fuels and pesticides	From 1942 to present	Further action necessary - Study Date Undetermined	TBD	CERCLA CWA		
70.15 (AREE)	FTDV-070	NA	Storm Sewer System 15	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.16 (AREE)	FTDV-070	NA	Storm Sewer System 16	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.17 (AREE)	FTDV-070	NA	Storm Sewer System 17	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.18 (AREE)	FTDV-070	NA	Storm Sewer System 18	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.19 (AREE)	FTDV-070	NA	Storm Sewer System 19	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.20 (AREE)	FTDV-070	NA	Storm Sewer System 20	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.21 (AREE)	FTDV-070	NA	Storm Sewer System 21	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.22 (AREE)	FTDV-070	NA	Storm Sewer System 22	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.23 (AREE)	FTDV-070	NA	Storm Sewer System 23	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.24 (AREE)	FTDV-070	NA	Storm Sewer System 24	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
70.25 (AREE)	FTDV-070	NA	Storm Sewer System 25	Fuels and pesticides	From 1942 to present	Further action necessary	TBD	CERCLA CWA		
70.26 (AREE)	FTDV-070	NA	Storm Sewer System 26	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.27 (AREE)	FTDV-070	NA	Storm Sewer System 27	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.28 (AREE)	FTDV-070	NA	Storm Sewer System 28	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.29 (AREE)	FTDV-070	NA	Storm Sewer System 29	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.30 (AREE)	FTDV-070	NA	Storm Sewer System 30	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.31 (AREE)	FTDV-070	NA	Storm Sewer System 31	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.32 (AREE)	FTDV-070	NA	Storm Sewer System 32	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.33 (AREE)	FTDV-070	NA	Storm Sewer System 33	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.34 (AREE)	FTDV-070	NA	Storm Sewer System 34	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.35 (AREE)	FTDV-070	NA	Storm Sewer System 35	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.36 (AREE)	FTDV-070	NA	Storm Sewer System 36	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.37 (AREE)	FTDV-070	NA	Storm Sewer System 37	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.38 (AREE)	FTDV-070	NA	Storm Sewer System 38	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.39 (AREE)	FTDV-070	NA	Storm Sewer System 39	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.40 (AREE)	FTDV-070	NA	Storm Sewer System 40	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.41 (AREE)	FTDV-070	NA	Storm Sewer System 41	JP-4 fuel	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.42 (AREE)	FTDV-070	NA	Storm Sewer System 42	JP-4 fuel	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.43 (AREE)	FTDV-070	NA	Storm Sewer System 43	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	

TABLE 3-2. ENVIRONMENTAL RESTORATION SITE/STUDY AREA SUMMARY

Site Number (Site Class)	DSERTS No.	Group Number ⁽¹⁾	Description	Material of Concern	Dates of Operation	Status	Risk to Human Health and the Environment	Regulatory Mechanism	U.S. Army NFA	USEPA Concurrence
70.44 (AREE)	FTDV-070	NA	Storm Sewer System 44	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.45 (AREE)	FTDV-070	NA	Storm Sewer System 45	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.46 (AREE)	FTDV-070	NA	Storm Sewer System 46	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.47 (AREE)	FTDV-070	NA	Storm Sewer System 47	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.48 (AREE)	FTDV-070	NA	Storm Sewer System 48	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.49 (AREE)	FTDV-070	NA	Storm Sewer System 49	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.50 (AREE)	FTDV-070	NA	Storm Sewer System 50	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.51 (AREE)	FTDV-070	NA	Storm Sewer System 51	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.52 (AREE)	FTDV-070	NA	Storm Sewer System 52	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.53 (AREE)	FTDV-070	NA	Storm Sewer System 53	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.54 (AREE)	FTDV-070	NA	Storm Sewer System 54	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
70.55 (AREE)	FTDV-070	NA	Storm Sewer System 55	Fuels and pesticides	From 1942 to present	NFA	No	CERCLA CWA	✓	
NEW SITE-SPECIFIC STUDY AREAS										
71	FTDV-070	NA	Railroad Roundhouse	Oils	Not available	Supplemental SI	TBD	CERCLA CWA		
72	FTDV-070	NA	Plow Shop Pond and Grove Pond	Groundwater contamination from Shepley's Hill Landfill	Not available	RI/FS estimated ROD dated August 1996	TBD	CERCLA CWA		

Key: NA = Not Applicable
 NFA = No Further Action
 TBD = To Be Determined
 DSERTS = Defense Environmental Response Tracking System

⁽¹⁾ Fort Devens has grouped the SAs and AOCs according to priority of cleanup. The grouping system is dynamic in that the SAs and AOCs move from group to group following investigative studies at the sites.

3.1.1 Restoration Sites

An Initial Assessment of Fort Devens was conducted by the USAEC in 1983 to assess the environmental quality of the facility. In response to the regulatory requirement to investigate solid waste management units (SWMUs), USAEC initiated development of the MEP in 1988. The MEP establishes a phased approach for environmental restoration activities for 58 potentially contaminated sites within Fort Devens. Following site investigations (SIs) for each AREE, the AREEs were identified as SAs or AOCs. Several AREEs were considered "No Further Action" (NFA) sites following the SI or BRAC Environmental Evaluation (EE).

The sites currently identified as AOCs (sites where contamination is known to be present) include Shepley's Hill Landfill (AOC 5), the Sanitary Landfill Incinerator (Building 38, AOC 4), Landfill No. 1 - Asbestos Cell (AOC 18), the Cold Spring Brook Landfill (AOC 40), DRMO Yard (AOC 32), POL Storage Site (AOC 43A), Cannibalization Yard (AOC 44), TDA Maintenance Yard (AOC 52), Landfill No. 7 (AOC 11), Unauthorized Dumping Area, Site A (AOC 41), Historic Gas Station—Former Building 174 (AOC 43G), Historic Gas Station—Former Building 177 (AOC 43J), Landfill No. 5—North Post Landfill (AOC 9), Fuel Oil Spill Site—Building 3713 (AOC 57), Past Spill Site—Building 215 (AOC 69W), the EOD Range (AOC 25), Zulu I and II Ranges (AOC 26), Hotel Range (AOC 27), and previously removed UST—Building 2517 (AOC 63AX). Sites where contamination is not known to be present (SAs) include 13 smaller debris disposal areas, 4 incinerators, the wastewater treatment plant (3 SAs), 10 storage areas, 4 waste handling areas, and 12 spills and leaking UST areas. Table 3-2 summarizes each site.

The EnPA of Fort Devens was initiated by USAEC in September 1991 after identifying Fort Devens as a closure site under BRAC 1991. The objectives of the EnPA included identification and characterization of all AREEs with respect to known or suspected releases of contaminants to the environment, possible impacts of the AREEs on the surrounding environment, and areas with minimal potential for environmental problems so property transfer can take place expeditiously.

A major element in the Fort Devens environmental restoration process is the execution of early actions, including the implementation of immediate removal actions to eliminate "hot spots" while investigations continue. These early actions provide the means of removing contamination sources and reducing risks posed by releases while at the same time providing critical data for the development of comprehensive conceptual models of sources, migration pathways, and receptors. Early actions can also accelerate the availability of property for economic development.

The early actions that have occurred at Fort Devens include soil vapor extraction at SA 50, solid waste closure at several landfills and an unauthorized dumping site, and excavation of contaminated soil at several hazardous waste accumulation areas, PCB transformer sites, historic gas stations, entomology shops, and a fuel oil spill site. The status of these environmental restoration early action projects is summarized in Table 3-3.

TABLE 3-3. ENVIRONMENTAL RESTORATION EARLY ACTION STATUS

Site No.	Action	Purpose	Status
SA 15	Excavation of contaminated soil	Removal of contamination source	Pending NFA - June 1995
SA 48	Excavation of contaminated soil	Removal of contamination source	NFA decision document being reviewed
SA 50	Soil vapor extraction	Removal of contamination source	Under operation
SA 38	Excavation of contaminated soil	Removal of contamination source	Closure report completed
SAs 37, 57, 33, 34, 35, 36, 430, 43H, 43I	Excavation of contaminated soil	Removal of contamination source	RA completed December 1994
AREE 61 - 61K, Former Motor Pool Hazardous Waste Accumulation Areas	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
AREE 61 - 61M, Former Motor Pool Hazardous Waste Accumulation Areas	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
AREE 61 - 61W, Former Motor Pool Hazardous Waste Accumulation Areas	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
AREE 66 - 66C, PCB Transformers	Removal	Removal of contaminant source	Spring 1994
AREE 69 - 69A, Past Spill Sites	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 43O, Historic Gas Station	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 43H, Historic Gas Station	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 43I, Historic Gas Station	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 33, DEH Entomology Shop	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 34, Former DEH Entomology Shop	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 35, Former DEH Entomology Shop	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 36, Former DEH Entomology Shop	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 37, Golf Course Entomology Shop	Excavation of contaminated soil	Removal of contaminant source	Spring 1994

TABLE 3-3. ENVIRONMENTAL RESTORATION EARLY ACTION STATUS**Continued**

Site No.	Action	Purpose	Status
AOC 57, Building 3713 Fuel Oil Spill Site	Excavation of contaminated soil	Removal of contaminant source	Spring 1994
SA 9, North Post Landfill	Solid waste closure	Close in accordance with RCRA Subtitle D	Spring 1994
SA 12, Landfill No. 8	Solid waste closure	Removal of debris	Not available
SA 13, Landfill No. 9	Solid waste closure	Removal of debris	Not available
SA 6, Landfill No. 2	Solid waste closure	Removal of debris	Not available
SA 41, Unauthorized Dumping Area, Site A	Solid waste closure	Removal	Not available

3.1.2 Installation-Wide Source Discovery and Assessment Status

Several installation-wide assessments have been conducted to identify the presence of contamination sources at Fort Devens. These include the Initial Installation Assessment completed in 1983, a RCRA Facility Assessment (RFA) completed in 1985, and the EnPA completed in 1992. The most recent installation investigation conducted at Fort Devens was the CERFA Investigation, which was completed in April 1994. Several other installation-wide surveys related to environmental compliance programs have also been conducted at Fort Devens. These include the BRAC EEs that were conducted for the installation-wide AREEs 61, 63, 65, 66, 67, 68, 69, and 70.

The 10 installation-wide AREEs include AREE 60 (Training Areas and Ranges), AREE 61 (Hazardous Waste Accumulation Areas), AREE 62 (Existing USTs), AREE 63 (Previously Removed USTs), AREE 64 (ASTs), AREE 65 (Asbestos), AREE 66 (Transformers), AREE 67 (Radon), AREE 68 (Lead Paint), and AREE 69 (Past Spill Sites). AREE 70 (Storm Sewer System) was subsequently identified by the installation. AREE 60, which includes 13 ranges, was not included in the assessment because the ranges are currently being managed by the installation under existing compliance programs. The ranges are located on the South Post, which will continue to be used as a training area.

The BRAC EE was initiated as an installation-wide source assessment. It was conducted in three phases. Phase I began in April 1993 to address AREE 61 (Hazardous Waste Accumulation Areas), AREE 62 (Existing USTs), AREE 63 (Previously Removed USTs), AREE 64 (ASTs), AREE 66 (PCB Transformers), and AREE 69 (Past Spill Sites). Phase II of the BRAC EE was initiated during May 1993. It addressed AREE 70 (Storm Sewer Systems). Phase III of the BRAC EE addressed AREE 65 (Asbestos), AREE 67 (Radon), and AREE 68 (Lead Paint). The Radon Report was completed in July 1994. The Asbestos Report was completed in May 1995.

The Lead-Based Paint Report was completed in April 1995. These AREEs are described in Appendix F.

The field investigation phase of the CERFA Investigation was initiated during August 1993 and completed during October 1993 at Fort Devens. The primary objective of the CERFA Investigation was to identify real property offering the greatest opportunity for immediate reuse and development. The final CERFA Report was released in April 1994.

3.2 Compliance Program Status

Compliance activities at Fort Devens are being conducted in coordination with environmental restoration activities being completed under the BRAC IRP. General compliance activities address the management of USTs, hazardous materials, asbestos, radon, polychlorinated biphenyls (PCBs), and water discharges. Compliance-related projects at Fort Devens include removal of USTs, removal of PCB transformers, and remediation of friable asbestos.

The statutory basis for IRP activities at Fort Devens is CERCLA. Compliance-related management and restoration activities are differentiated from CERCLA actions because they are regulated primarily under other statutes. These statutes include RCRA Subtitles C, D, and I, the CWA, CAA, TSCA, and NEPA.

Compliance actions at the installation can be divided into two categories: current mission- and operational-related compliance projects and closure-related compliance projects. Mission- and operational-related projects are those that have been or would be conducted for the normal operation of the installation and are unrelated to activities necessitated by installation closure under BRAC. Conversely, closure-related compliance projects are those conducted specifically as a result of environmental compliance and restoration activities related to BRAC closure and property disposal. The various environmental compliance projects at Fort Devens are identified by mission-related and closure category in Tables 3-4 and 3-5, respectively.

Three compliance-related activities at Fort Devens have been completed as early actions in order to reduce or eliminate potential contamination at the installation. These actions include soil vapor extraction, removal of PCB-contaminated material, and leaking UST removals and are identified in Table 3-6. A more detailed description of the various environmental compliance programs at Fort Devens is provided in the subsections below.

Fort Devens maintains several permits, licenses, notifications, and registrations with Federal, State, and local agencies under the various installation environmental compliance programs. These include notifications for USTs, hazardous waste management, air emissions for the UST heating systems, and an underground wastewater discharge permit for the wastewater treatment plant. The various notifications and permit applications in progress for Fort Devens are summarized by environmental compliance program in Table 3-7.

TABLE 3-4. MISSION/OPERATIONAL-RELATED COMPLIANCE PROJECTS

Project	Status	Regulatory Program
PCB Transformers	All PCB transformers have been removed	Toxic Substances Control Act
Underground Storage Tank Management	Over 200 underground storage tanks have been removed and the remaining USTs are to be removed prior to closure	Massachusetts UST regulations
Aboveground Storage Tank Management	Thirty-eight aboveground storage tanks are operated and maintained.	Massachusetts AST regulations
Hazardous Materials Management	Hazardous materials inventories maintained. Notification and coordination with Cities of Ayer, Shirley, and Harvard.	SARA, Title III, U.S. Coast Guard and Oil Storage Facilities Management Regulations
Hazardous Waste Management	Building 1650 is a RCRA Part B permitted hazardous waste storage facility. Waste Explosives Storage Bunker, P-3644 and the EOD Range are operating under RCRA Part B interim status. Hazardous wastes ultimately disposed of at off-site disposal facility.	RCRA Subtitle C, Massachusetts hazardous waste management regulations, and Army regulation
Asbestos Management	Asbestos survey completed, report completed March 1995. Some abatement has occurred.	Toxic Substances Control Act
Solid Waste Management	Solid waste disposed of at off-site landfill.	RCRA Subtitle D
Pollution Prevention Programs	Aluminum cans, glass, paper, and cardboard are recycled.	AR 200-1, SARA Title III
Air Quality Management	MDEP regulates air emissions. Sources on the installation are registered.	Clean Air Act
Oil/Water Separator Management	Must comply with wastewater regulations.	Clean Water Act
NEPA Compliance	NEPA documentation is completed.	National Environmental Policy Act
Worker Training Various Compliance Programs	Training ongoing or scheduled	Multiple

Key: AR = Army Regulation
RCRA = Resource Conservation and Recovery Act
SARA = Superfund Amendments and Reauthorization Act

TABLE 3-5. CLOSURE-RELATED COMPLIANCE PROJECTS

Project	Status	Regulatory Program
AOC 4, 5, 18 - Shepley's Hill Landfill	Closure of landfill to be completed in 1996.	RCRA, Subtitle D

TABLE 3-6. COMPLIANCE EARLY ACTION STATUS

Site	Site Description	Action	Purpose	Status
SA 50	WWII Fuel Points MAAF	Soil vapor extraction of PCE	Removal of contamination source	Draft recommendation for closure planned for April 1994
AOC 32	DRMO Yard	Removal of PCB- contaminated material	Removal of contamination source	Removal report submitted
Installation-wide	Leaking USTs	Removal	Removal of contamination source	Ongoing quarterly reports

Key: MAAF = Moore Army Airfield
DRMO = Defense Reutilization and Marketing Office

PCB = Polychlorinated Biphenyl

**TABLE 3-7. ENVIRONMENTAL COMPLIANCE PERMITS,
LICENSES, NOTIFICATIONS AND REGISTRATIONS**

Compliance Program	Permit/License/Notification/ Registration No.	Description	Issuing Agency	Issue Date	Expiration Date	Comments
USTs			MADEP			
RCRA Hazardous Waste Management	EPA ID. No. MA7210025154	RCRA-permitted Hazardous Waste Storage Facility (Building 1650)	USEPA/MADEP	1986		Closing fall of 1995
Air Emissions	Permitting in process	Inventory	MADEP	Submittal date September 1995		
Wastewater Discharges			MADEP			MGLB will obtain wastewater discharge permit

Note: Information to complete this table was not available at the time of document completion. The information will be provided in updates to the BCP.

3.2.1 Storage Tanks

USTs and aboveground storage tanks (ASTs) have been utilized for the storage of petroleum products at Fort Devens for heating purposes, motor pool operation, and vehicle fueling. Compliance activities and environmental restoration activities related to these storage tanks are described below.

3.2.1.1 USTs. The USEPA has delegated the management of the UST program to the Commonwealth of Massachusetts. The MADEP has primary enforcement and USEPA's approval effectively suspends the applicability of certain federal regulations in favor of the state program, thereby eliminating duplicative requirements. Therefore, UST investigation and closure activities at Fort Devens are being conducted under MADEP Policies WSC-400-89, WSC-401-91, and 9355.7-03.

A total of 406 former and/or current USTs have been identified by the installation EMO. At this time over 200 USTs have been removed and approximately 200 remain active. The EMO developed the Fort Devens BRAC UST Management Plan in February 1994. The plan addresses compliance issues related to UST registration, retrofit, leak detection, and removal and restoration. Existing USTs are being investigated under AREE 62 (Existing USTs). Previously removed USTs are being investigated under the Phase I BRAC EE for AREE 63 (Previously Removed USTs). An inventory of USTs at Fort Devens is provided in Table 3-8.

The UST Management Plan groups existing USTs into five categories according to their location or the type of building with which they are associated: (1) located within the projected Army Reserve enclave; (2) facilities of masonry construction; (3) wooden buildings currently heated and in use; (4) winterized or unheated wooden buildings; and (5) abandoned buildings. None of the facilities in Groups 3 through 5 have post-closure use identified. The plan also projects compliance deadlines for removal of abandoned and out-of-service USTs in accordance with UST regulations.

Fort Devens, with the assistance of USAEC, developed an UST Removal Protocol during 1993 in order to establish policy and procedures for the removal of USTs at Fort Devens. The protocol provides detailed methods for the removal of USTs as well as field and confirmation sampling. The protocol has been reviewed by the MADEP and the USEPA. Based on the extent of soil contamination determined during removal activities, the UST release is classified as localized or beyond localized. Localized release sites are those that can be completely remediated during the UST removal, and following confirmatory sampling, are classified as meeting the protocol criteria requiring NFA. Beyond localized release sites are those where the extent of contamination is beyond the scope of UST removal activities to address. Currently identified potential beyond localized release sites are the 14 UST sites being investigated by USACE, New England Division. A beyond localized release site can be immediately classified as an AOC in accordance with the FFA, or undergo further evaluation to quantify the nature of contamination and associated risk. After this evaluation, a recommendation of NFA (according to the protocol criteria), contaminated soil removal, or inclusion in the FFA as an AOC is made.

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
146	TBD	Lot #2	Information not available	275	#2 Fuel Oil	Removed (July 7, 1993)	Shirley Trailer Park, backfilled	None
147	TBD	Lot #29	Information not available	275	#2 Fuel Oil	Removed (July 8, 1993)	Shirley Trailer Park, backfilled	None
145	TBD	Lot # 30	Information not available	275	#2 Fuel Oil	Removed (July 7, 1993)	Shirley Trailer Park, backfilled	None
144	TBD	Lot #26	Information not available	275	#2 Fuel Oil	Removed (July 6, 1993)	Shirley Trailer Park, backfilled	None
150	TBD	Lot # 14	Information not available	275	#2 Fuel Oil	Removed (July 9, 1993)	Shirley Trailer Park, backfilled	None
149	TBD	Lot #25	Information not available	275	#2 Fuel Oil	Removed (July 8, 1993)	Shirley Trailer Park, backfilled, recommend installation of monitoring wells	None
148	TBD	Lot #28	Information not available	275	#2 Fuel Oil	Removed (July 8, 1993)	Shirley Trailer Park, backfilled	None
142	TBD	Lot #22	Information not available	275	#2 Fuel Oil	Removed (June 7, 1993)	Shirley Trailer Park, backfilled	None
138	TBD	Lot # 13	Information not available	275	#2 Fuel Oil	Removed (June 4, 1994)	Shirley Trailer Park, backfilled - Soil disposed of for USTs 150, 138, 139, 146	None
137	TBD	Lot # 9	Information not available	275	#2 Fuel Oil	Removed (June 4, 1993)	Shirley Trailer Park, backfilled	None
139	TBD	Lot # 15	Information not available	275	#2 Fuel Oil	Removed (June 4, 1993)	Shirley Trailer Park, backfilled - Soil disposed of for USTs 150, 138, 139, 146	None
140	TBD	Lot #20	Information not available	275	#2 Fuel Oil	Removed (June 7, 1993)	Shirley Trailer Park, backfilled - Soil disposed higher because another site's soil was added	None
151	TBD	Lot # 7	Information not available	275	#2 Fuel Oil	Removed (July 9, 1993)	Shirley Trailer Park, backfilled - Soil disposed of includes soil from other excavations	None
141	TBD	Lot # 17	Information not available	275	#2 Fuel Oil	Removed (June 7, 1993)	Shirley Trailer Park, backfilled	None
143	TBD	Lot #24	Information not available	275	#2 Fuel Oil	Removed (June 7, 1993)	Shirley Trailer Park, backfilled	None
1	TBD	0	Information not available	1,000	#2 Fuel Oil	Removed (October 24, 1990)	Off Hospital Road, Shirley Trailer Park, lined, backfilled - No building number associated with tank, foundation found, across from Perimeter Road in Shirley Housing Area	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	Lot # 5	1966	275	#2 Fuel Oil	Removed (Week of October 5, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 3	1966	275	#2 Fuel Oil	Removed (Week of October 5, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 8	1966	275	#2 Fuel Oil	Removed (Week of October 5, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 12	1966	275	#2 Fuel Oil	Removed (Week of October 5, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	Lot #27	1966	275	#2 Fuel Oil	Removed (Week of November 1, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 16	1966	275	#2 Fuel Oil	Removed (Week of October 5, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 1	1966	275	#2 Fuel Oil	Removed (Week of October 5, 1994)	Shirley Trailer Park, none	None
Not designated	TBD	S-H	Information not available	500	#2 Fuel Oil	Information not available	Information not available	Information not available
Not designated	TBD	Lot # 11	Information not available	275	#2 Fuel Oil	Removed (June 8, 1992)	Shirley Trailer Park, none	None
136	TBD	Lot # 18	Information not available	275	#2 Fuel Oil	Removed (June 3, 4, 1992)	Shirley Trailer Park, backfilled	None
Not designated	TBD	Lot # 19	Information not available	275	#2 Fuel Oil	Removed (June 8, 1992)	Shirley Trailer Park, none	None
Not designated	TBD	Lot #20	Information not available	275	#2 Fuel Oil	Removed	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 6	Information not available	275	#2 Fuel Oil	Removed (June 8, 1992)	Shirley Trailer Park, none	None
Not designated	TBD	Lot # 4	Information not available	275	#2 Fuel Oil	Removed (June 8, 1992)	Shirley Trailer Park, none	None
152	TBD	Lot # 10	Information not available	275	#2 Fuel Oil	Removed (July 8, 1993)	Shirley Trailer Park, backfilled	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	Lot #23	1966	275	#2 Fuel Oil	Removed (Week of November 1, 1994)	Shirley Trailer Park, none	None
NA	TBD	0	Information not available	1,000	#2 Fuel Oil	Previously Removed UST, Shirley Housing Area (November 24, 1990)	Shirley Trailer Park, lined, backfilled. NFA, soil samples below regulations	None
Not designated	TBD	3	1966	10,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	3	1984	1,000	Diesel	Active	None	TBD
Not designated	TBD	4	1966	500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	5	1966	2,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	6	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	8	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	11	1966	5,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	12	1966	10,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	13	1966	10,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	13	1986	500	Diesel	Removed	None	None
Not designated	TBD	14	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	16	1966	8,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	17	1966	10,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	20	1965	6,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	22	1966	3,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	25	1966	5,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	74	1987	4,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	169	Information not available	5,000	Mogas	Information not available	Geophysical survey to determine whether tank was pulled, lab analysis, one more boring will be conducted at west side of former UST	TBD
Not designated	TBD	171	Information not available	5,000	Mogas	Removed (September 8, 1992)	Historic Gas Station, Tanks removed, visual contamination noted, contaminated soil removed until soil below regulation limits. Plume was mandated. Plume not adequately delineated, further action recommended	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	171	Information not available	5,000	Mogas	Removed (September 8, 1992)	Historic Gas Station, Tanks removed, visual contamination noted, contaminated soil removed until soil below regulation limit. Plume was not adequately delineated, so further action is recommended.	None
Not designated	TBD	172	Information not available	5,000	Mogas	Removed (September 3, 1992)	Historic Gas Station, Tank removed, soils below regulations for TPH and VOC, so backfilled with same soil, NFA	None
Not designated	TBD	173	Information not available	5,000	Mogas	Removed (Prior to construction of PX, - 1973)	Historic Gas Station, Past activities on this site do not appear to have affected soils, NFA	None
Not designated	TBD	174	Information not available	5,000	Mogas	Removed (NA)	Historic Gas Station, Recommended SSI to better define soil and groundwater contamination, Terraprobos, soil borings, more monitoring wells, surface water and sediment sampling recommended	Supplemental SI
Not designated	TBD	176	Information not available	5,000	Diesel	Removed (May 1992)	Historic Gas Station, recommended for SSI	Supplemental SI
Not designated	TBD	177	Information not available	5,000	Mogas	Removed (August 26, 1992)	Historic Gas Station, recommended for SSI	Supplemental SI
Not designated	TBD	179	Information not available	5,000	Mogas	Removed (1991)	Historic Gas Station, recommended for NFA	Supplemental SI
Not designated	TBD	179	Information not available	5,000	Fuel Oil (orig Gas)	Removed (1991)	Historic Gas Station, recommended for NFA	Supplemental SI
Not designated	TBD	180	Information not available	5,000	Mogas	Removed (1991)	Historic Gas Station, recommended for NFA	Supplemental SI
Not designated	TBD	180	Information not available	5,000	Mogas	Removed (1991)	Historic Gas Station, recommended for NFA	Supplemental SI
Not designated	TBD	182	Information not available	5,000	Mogas	Removed (1989)	Historic Gas Station, groundwater contamination might be present, and some sub-surface soil contamination, recommended for SSI	Supplemental SI
Not designated	TBD	182	Information not available	5,000	Mogas	Removed (1989)	Historic Gas Station, groundwater contamination might be present, and some subsurface soil contamination, recommended for SSI	Supplemental SI
Not designated	TBD	183	Information not available	5,000	Mogas	Removed (Prior to 1945)	Historic Gas Station, recommended for NFA	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	184	Information not available	5,000	Mogas	Removed	Historic Gas Station, recommended for NFA	None
115	TBD	185	Information not available	5,000	Diesel	Removed (June 26, 1992)	Historic Gas Station, backfilled, covered with 477 ft ³ loam, seeded.	None
Not designated	TBD	186	Information not available	12,000	#2 Fuel Oil	Removed (1989-1990)	POL Storage Site	None
Not designated	TBD	186	Information not available	12,000	#2 Fuel Oil	POL Storage Site (1989-1990)	POL Storage Site	None
Not designated	TBD	186	Information not available	10,000	#2 Fuel Oil	Removed	POL Storage Site	None
Not designated	TBD	186	Information not available	8,000	Mogas	Removed	POL Storage Site	None
Not designated	TBD	186	Information not available	8,000	Mogas	Removed	POL Storage Site	None
Not designated	TBD	186	Information not available	12,000	#2 Fuel Oil	Removed	POL Storage Site	None
Not designated	TBD	186	Information not available	12,600	#2 Fuel Oil	Removed (1989-1990)	POL Storage Site	None
Not designated	TBD	186	Information not available	12,600	#2 Fuel Oil	Removed (1989-1990)	POL Storage Site	None
Not designated	TBD	201	1966	1,000	#2 Fuel Oil	Inactive	None	Removed
Not designated	TBD	202	1966	5,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	202	Information not available	1,000	Waste Oil	Removed (February 13, 14, 1989)	LUST Site, remediated until total organic volume < 10ppm, backfilled	None
Not designated	TBD	203	1966	1,000	#2 Fuel Oil	Inactive	None	None
Not designated	TBD	203	Information not available	5,170	Mogas	Removed	Historic Gas Station	None
13	TBD	204	1966	5,000	Waste Oil	Removed	Groundwater monitoring	Groundwater monitoring
Not designated	TBD	204	Information not available	5,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	208	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	209	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
89	TBD	219	Information not available	5,000	Diesel	Removed	Closed, backfilled, covered with 595 ft ³ loam, seeded, Supplemental SI conducted, NFA	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
14	TBD	219	Information not available	1,000	Waste Oil	Removed (May 22, 1992)	Closed, Shirley Trailer Park, lined, filled, resurfaced with bituminous concrete, SSE conducted, NFA	None
Not designated	TBD	223	1976	10,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	228	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	233	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	234	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	234	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	234	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	235	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	237	1966	1,000	#2 Fuel Oil	Inactive	None	TBD
Not designated	TBD	238	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	239	1966	500	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	242	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
47	TBD	242	Information not available	4,000	Mogas	Removed	Removed, lined, backfilled, paved with 2548 ft ² asphalt, SSE conducted, NFA	None
49	TBD	242	Information not available	4,000	Mogas	Removed	Removed, lined, backfilled, paved with 2548 ft ² asphalt, SSE conducted, NFA	None
15	TBD	242	Information not available	1,000	Waste Oil	Removed (May 21 and June 2, 1992)	Previously removed backfilled, resurfaced with asphalt, SSE conducted, NFA	None
50	TBD	242	Information not available	4,000	Mogas	Removed	Removed, lined, backfilled, paved with 2548 ft ² asphalt, SSE conducted, NFA	None
48	TBD	242	Information not available	4,000	Mogas	Removed	Removed, lined, backfilled, paved with 2548 ft ² asphalt, SSE conducted, NFA	None
Not designated	TBD	245	Information not available	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	247	Information not available	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	250	1990	20,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	250	1990	20,000	#2 Fuel Oil	Inactive	None	Remove
4	TBD	250	Information not available	10,000	#2 Fuel Oil	Removed (November 14, 1989)	Removed, soil removed, backfilled	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
5	TBD	250	Information not available	12,600	#2 Fuel Oil	Removed (November 14, 1989)	Removed, soil removed, backfilled	None
3	TBD	250	Information not available	12,600	#2 Fuel Oil	Removed (April 4, 1990)	Removed, soil removed, backfilled	None
1	TBD	250	Information not available	12,600	#2 Fuel Oil	Removed (April 4, 1990)	Removed, soil removed, backfilled	None
2	TBD	250	Information not available	12,600	#2 Fuel Oil	Removed (April 4, 1990)	Removed, soil removed, backfilled	None
Not designated	TBD	250	1990	20,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	250	1990	20,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	250	1990	20,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	261	1966	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	262	1982	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	601	Information not available	1,000	Waste Oil	Removed	None	None
Not designated	TBD	602	1969	2,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	602	Information not available	10,000	Diesel	Removed (April and May 1992)	Historic Gas Station, recommended for SSI	Supplemental SI
Not designated	TBD	602	Information not available	5,000	Diesel	Removed (April and May 1992)	Historic Gas Station, recommended for SSI	Supplemental SI
Not designated	TBD	602	Information not available	10,000	Diesel	Removed (April and May 1992)	Historic Gas Station, recommended for SSI	Supplemental SI
Not designated	TBD	602	Information not available	1,000	Waste Oil	Removed	Remediated until <10 ppm total organic volume, backfilled with clean soil	None
Not designated	TBD	604	1969	2500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	604	Information not available	1,000	Waste Oil	Removed	Remediated until <10 ppm total organic volume, backfilled	None
16	TBD	605	1969	10,000	Diesel	Removed	Removed, backfilled, 2206 ft ² re-asphalted	None
84	TBD	605	1969	5,000	Diesel	Removed	None	None
89	TBD	605	1969	10,000	Diesel	Removed	None	None
17	TBD	606	Information not available	5,000	Diesel	Removed	Backfilled with original soil	None
159	TBD	606	1969	10,000	Diesel	Removed	Shirley Trailer Park, backfilled	None
160	TBD	606	1969	10,000	Diesel	Removed	Shirley Trailer Park, backfilled	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
51	TBD	612	Information not available	1,000	Waste Oil	Removed	Another monitoring well should be installed, continue groundwater monitoring, contaminated soil was not removed from site	None
Not designated	TBD	613	1969	2,000	#2 Fuel Oil	Active	None	TBD
85	TBD	614	Information not available	10,000	Diesel	Removed	NFA	None
86	TBD	614	Information not available	5,000	Mogas	Removed	NFA	None
18	TBD	614	Information not available	10,000	Diesel	Removed	NFA	None
	TBD	617	1969	2,000	#2 Fuel Oil	Active	None	TBD
NA	TBD	618 C	Information not available	10,000	#2 Fuel Oil	Removed (May 29, 1991)	Previously removed UST, remediated to 10 ppm total organic volume, backfilled	None
NA	TBD	618 B	Information not available	10,000	#2 Fuel Oil	Removed (May 29, 1991)	Previously removed UST, remediated to 10 ppm total organic volume, backfilled	None
NA	TBD	618	Information not available	5,000	Mogas	Removed (May 24, 1991)	Previously removed UST, clean, backfilled	None
52	TBD	619	Information not available	1,000	Waste Oil	Removed	Tank closed, pit lined, and backfilled	None
Not designated	TBD	620	1976	10,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	622	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	623	1990	4,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	624	1976	5,000	#2 Fuel Oil	Active	None	TBD
19	TBD	631	Information not available	1,500	#2 Fuel Oil	Removed (January 30, 1992)	Previously removed UST, backfilled with sand then loam, and seeded	None
Not designated	TBD	637	1965	15,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	641	1976	10,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	642	1976	10,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	644	1976	10,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	649	1966	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	650	1966	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	657	1966	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	665	1966	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	667	1976	2,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	668	1976	1,500	#2 Fuel Oil	Active	None	TBD

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	669	1976	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	670	1976	2,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	671	1976	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	675	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	676	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	680	1966	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	681	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	683	1966	1,500	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	688	1984	500	Diesel	Removed	None	None
Not designated	TBD	694	1970	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	696	1970	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	952	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1004	1966	5,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1004	1966	5,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1014	1966	5,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1014	1966	5,000	#4 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1400	1964	8,000	#4 Fuel Oil	Active	None	TBD
53	TBD	1401	Information not available	1,000	Waste Oil	Removed	Periodic monitoring, lined and backfilled, pave with 494 ft ² asphalt, SSE conducted, NFA	Ground-water monitoring
Not designated	TBD	1401	1966	6,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	1404	1992	10,000	JP-8	Active	None	TBD
4	TBD	1404	Information not available	10,000	Diesel	Removed (November 13, 1989)	Previously removed UST, closed, contaminated soil removed, and pit backfilled	None
2	TBD	1404	Information not available	10,000	Diesel	Removed (November 14, 1989)	Previously removed UST, closed, contaminated soil removed, backfilled	None
3	TBD	1404	Information not available	10,000	Mogas	Removed (November 13, 1989)	Previously removed UST, closed, contaminated soil removed, backfilled	None
Not designated	TBD	1404	1992	10,000	Diesel	Active	None	TBD
Not designated	TBD	1404	1992	10,000	Mogas	Active	None	TBD
20	TBD	1404	Information not available	5,000	Diesel	Removed (May 8, 12, 13, 1992)	Previously removed UST, closed, pit-lined, backfilled, loam spread and seeded	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	1411	1966	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1413	1966	1,000	#2 Fuel Oil	Active	None	TBD
21	TBD	1419	Information not available	4,000	Kerosene	Removed (April 22, 1992)	Previously removed UST, closed, backfilled, repaved with 1,350 ft ² asphalt	None
Not designated	TBD	1421	1966	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	1423	1966	1,000	#2 Fuel Oil	Active	None	TBD
102	TBD	1425	Information not available	10,000	# 4 Fuel Oil	Removed (June 9, 10, 1992)	Previously removed UST, closed, backfilled, paved with 1,000 ft ² asphalt	None
22	TBD	1427	Information not available	1,000	#2 Fuel Oil	Removed	Backfilled then 68 ft ² loam spread and seeded	None
Not designated	TBD	1427	1981	500	Diesel	Removed	None	None
NA	TBD	1429	1988	1,500	Mogas	Removed (1988)	Previously removed UST	None
NA	TBD	1429	1988	1,500	Mogas	Removed (1988)	Previously removed UST	None
23	TBD	1429	Information not available	1,000	#2 Fuel Oil	Removed (January 8, 1992)	Previously removed UST, closed, backfilled, then added 232.5 ft ² loam and seeded	None
NA	TBD	1429	1988	1,500	Mogas	Removed (1988)	Previously removed UST	None
NA	TBD	1429	1988	2,500	Mogas	Removed (1988)	Previously removed UST	None
Not designated	TBD	1431	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1434	1966	2,500	#2 Fuel Oil	Active	None	TBD
24	TBD	1435	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 196 ft ² loam, SSE conducted, Groundwater = 300 ppb TPH, recommend further soil removal	None
Not designated	TBD	1436	1966	275	#2 Fuel Oil	Removed	Converted to AST, 1994	None
Not designated	TBD	1437	1966	275	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1456	1966	250	Diesel	Active	None	TBD
Not designated	TBD	1468	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1601	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1602	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1603	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1604	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
25	TBD	1605	Information not available	1,000	#2 Fuel Oil	Removed	Removed, lined, backfilled, covered with 32 ft ² loam, seeded	None
Not designated	TBD	1606	1966	1,000	#2 Fuel Oil	Active	None	TBD

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	1607	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1608	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1609	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1610	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1611	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1612	1982	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1616	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1633	1977	5,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1652	1962	5,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1653	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1654	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1655	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1656	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1657	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1658	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1659	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1660	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1661	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1662	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1663	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1664	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1665	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
26	TBD	1666	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 149.8 ft ³ loam, SSE conducted, high TPH 15-20-25 ft soils, xylenes, BEHP in groundwater, TPH ND in groundwater, NFA	None
Not designated	TBD	1667	1962	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1668	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1669	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1670	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1671	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1672	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1673	1962	1,000	#2 Fuel Oil	Inactive	None	Remove

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	1674	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1675	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1676	1962	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	1677	1990	6,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	1693	1964	5,000	#2 Fuel Oil	Active	None	TBD
111	TBD	2000	Information not available	5,000	Mogas	Removed	Closed, lined, backfilled, paved with 448 ft ² bituminous concrete	None
Not designated	TBD	2002	1988	6,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2005	1966	500	#2 Fuel Oil	Inactive	None	Remove
1	TBD	2008	Information not available	9,000	Mogas	Removed	Remediation and groundwater monitoring wells are recommended	Remediate contaminated soil and install groundwater monitoring wells
Not designated	TBD	2008	1991	10,000	Mogas	Active	None	TBD
4	TBD	2008	Information not available	10,000	Mogas	Removed	Most contamination near fill pipe. Remediation and groundwater monitoring wells are recommended	Remediate contaminated soil and install groundwater monitoring wells
Not designated	TBD	2008	1991	10,000	Mogas	Active	None	TBD
Not designated	TBD	2008	1966	800	#2 Fuel Oil	Inactive	None	Remove
5	TBD	2008	Information not available	10,000	Mogas	Removed	Most contamination near fill pipe. Remediation and groundwater monitoring wells are recommended	Remediate contaminated soil and install groundwater monitoring wells
3	TBD	2008	Information not available	10,000	Mogas	Removed	Most contamination near fill pipe. Remediation and groundwater monitoring wells are recommended	Remediate contaminated soil and install groundwater monitoring wells
2	TBD	2008	Information not available	9,000	Mogas	Removed	Most contamination near fill pipe. Remediation and groundwater monitoring wells are recommended	Remediate contaminated soil and install groundwater monitoring wells
Not designated	TBD	2008	1991	15,000	Mogas	Active	None	TBD

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
54	TBD	2008	Information not available	500	Waste Oil	Removed	Closed, backfilled, covered with loam, seeded	None
Not designated	TBD	2012	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2013	Information not available	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2013	Information not available	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2014	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2015	1966	2,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	2020	1981	5,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2025	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2026	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2200	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2201	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2202	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2205	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2206	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2207	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2281	1966	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	2282	1966	1,000	#2 Fuel Oil	Inactive	None	Removed
Not designated	TBD	2283	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2284	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2287	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2288	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2289	1966	1,000	#2 Fuel Oil	Active	None	TBD
28	TBD	2290	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 338 ft ² loam, seeded, SSE conducted, petroleum contaminated soil at water table - affecting water quality, RA	None
Not designated	TBD	2291	1966	1,000	#2 Fuel Oil	Active	None	TBD
29	TBD	2296	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 212.5 ft ² loam	None
Not designated	TBD	2299	1966	1,000	#2 Fuel Oil	Active	None	TBD
30	TBD	2401	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 124 ft ² loam, seeded	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	2411	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
2	TBD	2417	Information not available	1,000	Heating oil	Removed (October 24, 1990)	LUST Site, lined hole, left for further investigation	TBD
Not designated	TBD	2418	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
31	TBD	2419	Information not available	1,000	#2 Fuel Oil	Removed (January 15, 1992)	Previously removed UST, closed, lined, backfilled, covered with 980 ft ² loam, seeded	None
Not designated	TBD	2422	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
32	TBD	2432	Information not available	1,000	#2 Fuel Oil	Removed	Periodic sampling of groundwater wells, lined, backfill, covered with 325 ft ² loam, seeded, SSE conducted, NFA	Groundwater monitoring
33	TBD	2434	Information not available	1,000	#2 Fuel Oil	Removed (January 13, 1992)	Periodic sampling of monitoring well, lined, backfilled, covered with 170 ft ² loam, seeded	None
112	TBD	2446	Information not available	5,000	Mogas	Removed	Periodic monitoring, lined, backfilled, paved with 504 ft ² bituminous concrete	Groundwater monitoring
55	TBD	2446	Information not available	1,000	Waste Oil	Removed	Closed, lined, backfilled, paved with 663 ft ² bituminous concrete	None
34	TBD	2447	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 264 ft ² loam, seeded. SSE conducted, no existing or potential groundwater contamination, residual soil contaminated, NFA	None
35	TBD	2452	Information not available	1,000	#2 Fuel Oil	Removed (January 7, 1992)	Previously removed UST, periodic sampling of monitoring wells, lined, backfilled, covered with 396 ft ² loam, seeded	Groundwater monitoring
36	TBD	2458	Information not available	1,000	#2 Fuel Oil	Removed	Groundwater samples should be collected quarterly, lined, backfilled, covered with 140 ft ² loam, seeded, SSE conducted, NFA	Groundwater monitoring
37	TBD	2461	Information not available	1,000	#2 Fuel Oil	Removed (January 7, 1992)	Previously removed UST, closed, lined, backfilled, covered with 175 ft ² loam, seeded	None
Not designated	TBD	2474	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2500	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2501	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2504	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2505	1966	1,000	#2 Fuel Oil	Inactive	None	Remove

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	2506	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2514	Information not available	5,000	Mogas	Removed (September 3, 1992)	Historic Gas Station, closed, lined, backfilled, covered with 1120 ft ² loam, seeded. Recommended for NFA	None
NA	TBD	2517	Information not available	1,000	Waste Oil	Removed (February 13, 14, 1992)	Previously removed UST, Remediated, backfilled	None
Not designated	TBD	2518	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
38	TBD	2519	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 144 ft ² loam. SSE conducted, NFA	None
39	TBD	2520	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 72 ft ² loam	None
Not designated	TBD	2527	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2537	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2538	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2539	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2542	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2543	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2544	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
13	TBD	2601	Information not available	1,000	Waste Oil	Removed (December 5, 1989)	Previously removed UST, removed soil until TPH = 80ppm or lower, clean and contaminated soil removed from hole = 17.8 cubic yards, backfilled	None
Not designated	TBD	2601	1966	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	2602	1989	12,000	#2 Fuel Oil	Active	None	TBD
5	TBD	2602	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Previously removed UST, excavation on contaminated soils, final TPH > 500 ppm, but is at corner of new building 2602, NFA - Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None
Not designated	TBD	2602	1989	1,000	#2 Fuel Oil	Active	None	TBD
6	TBD	2603	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Previously removed UST, clean, backfilled - Total 700-800 cubic yard contaminated soil removed from Zecco's 10 tank pulls	None
7	TBD	2604	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Clean, backfilled - Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
9	TBD	2605	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Plume in this area from tank 8, backfilled with clean soil - Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None
8	TBD	2606	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Contaminated soil removed except near water main, backfilled ? - Contaminated soil not removed near water main. Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None
10	TBD	2608	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	High TOV thought to be from fill pipe, no other contaminated, backfilled with clean soil - Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None
11	TBD	2613	Information not available	1,000	Waste Oil	Removed (December 5, 1987)	Removed soil until TPH = ND, clean and contaminated soil removed from hole = 31.16 cubic yards, backfilled - Soil disposed of is from 16 tanks pulled by Franklin in 1991 report	None
12	TBD	2613	Information not available	1,000	#2 Fuel Oil	Removed (December 5, 1987)	Removed soil until TPH = ND, clean and contaminated soil removed from hole = 21.02 cubic yards, backfilled - Soil disposed of is from 16 tanks pulled by Franklin in 1991 report	None
4	TBD	2618	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	After all petro contaminated soil removed, excavation backfilled with clean soil - Tests indicate presence of phthate - type oil. Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None
3	TBD	2619	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Trenched soils, removed contaminated soil, groundwater pumped out of excavation, backfilled with clean soil. Water main in vicinity of excavation, could not remediate there. Total 700-800 cubic yards contaminated soil removed	None
2	TBD	2621	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Previously removed UST, considered clean, backfilled. Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
1	TBD	2622	Information not available	1,000	#2 Fuel Oil	Removed (December 29, 1987)	Previously removed UST, considered clean, backfilled. - Total 700-800 cubic yards contaminated soil removed from Zecco's 10 tank pulls	None
2	TBD	2623	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
3	TBD	2624	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
4	TBD	2626	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
Not designated	TBD	2627	1966	1,000	#2 Fuel Oil	Inactive	Tank exists, building demolished	Remove
135	TBD	2636	1966	1,000	#2 Fuel Oil	Removed	Backfilled, monitoring well installation recommended - Some of the disposed soil may have been from other sites	Groundwater monitoring
Not designated	TBD	2636	Information not available	1,000	#2 Fuel Oil	Active	None	TBD
5	TBD	2637	Information not available	5,000	#2 Fuel Oil	Removed (November 29, 1989)	Clean and contaminated soil removed	None
1	TBD	2640	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
6	TBD	2643	Information not available	5,000	Mogas	Removed (November 30, 1989)	Clean and contaminated soil removed = 98.64 cubic yards for tanks 5 and 6, backfilled - Soil disposed of is from 16 tanks pulled by Franklin in 1991 report. ADL Report says 1,000 gallon tank, but Franklin says tank is 7	None
12	TBD	2644	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
11	TBD	2647	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
10	TBD	2649	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously removed UST	None
9	TBD	2650	Information not available	1,000	#2 Fuel Oil	Removed	Previously removed UST	None
Not designated	TBD	2651	1966	1,000	#2 Fuel Oil	Removed	None	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
114	TBD	2656	Information not available	5,000	Diesel	Removed (June 23 and 24, 1992)	Historic Gas Station, closed, lined, backfilled, paved with 540 ft ² asphalt. Recommended for SSI to determine extent of contamination in saturation zone	TBD
Not designated	TBD	2656	Information not available	5,000	Mogas	Removed (June 23 and 24, 1992)	Historic Gas Station, recommended for SSI to determine extent of contamination in saturation zone	TBD
13	TBD	2659	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously Removed UST	None
14	TBD	2660	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously Removed UST	None
15	TBD	2661	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously Removed UST	None
16	TBD	2662	Information not available	1,000	#2 Fuel Oil	Removed (1990)	Previously Removed UST	None
133	TBD	2669	Information not available	1,000	#2 Fuel Oil	Removed	Shirley Trailer Park, backfilled	None
134	TBD	2679	Information not available	1,000	#2 Fuel Oil	Removed	Shirley Trailer Park, backfilled	None
Not designated	TBD	2680	1988	2,000	#2 Fuel Oil	Active	None	TBD
10	TBD	2680	Information not available	5,000	Mogas	Removed	Clean and contaminated soil removed = 98.64 cubic yards, significant petroleum contaminated in soil and possibly groundwater, conducted more tests	TBD
9	TBD	2680	Information not available	5,000	Mogas	Removed	Clean and contaminated soil removed = 98.64 cubic yards, significant petroleum contaminated in soil and possibly groundwater, conducted more tests	TBD
Not designated	TBD	2681	Information not available	5,000	Mogas	Removed	None	None
Not designated	TBD	2681	Information not available	5,000	Mogas	Removed	None	None
7	TBD	2682	Information not available	5,000	#2 Fuel Oil	Removed	Clean and contaminated soil removed = 98.64 cubic yards, backfilled	None
8	TBD	2682	Information not available	5,000	#2 Fuel Oil	Removed	Clean and contaminated soil removed = 98.64 cubic yards, backfilled	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
40	TBD	2686	Information not available	1,000	#2 Fuel Oil	Removed (January 23-24, 1992)	Previously Removed UST, bedrock well recommended, lined, backfilled, covered with 348 ft ² loam	None
Not designated	TBD	2687	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2688	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2728	1966	1,000	#2 Fuel Oil	Active	None	None
Not designated	TBD	2729	1965	2,000	#2 Fuel Oil	Active	None	None
Not designated	TBD	2730	1966	5,000	#2 Fuel Oil	Inactive	None	Removed
Not designated	TBD	2730	Information not available	1,000	#2 Fuel Oil	Inactive	None	Removed
41	TBD	2732	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 110.3 ft ² loam	None
Not designated	TBD	2734	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2735	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	2736	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	2809	Information not available	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	3411	1984	500	Diesel	Active	None	TBD
Not designated	TBD	3411	1984	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3412	1984	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3413	1989	8,000	#2 Fuel Oil	Active	None	TBD
2	TBD	3500	Information not available	500	#2 Fuel Oil	Removed (November 27, 1989)	Previously removed UST, closed, clean and contaminated soil removed from hole = 36.33 cu ft, backfilled	None
42	TBD	3525	Information not available	1,000	#2 Fuel Oil	Removed	Closed, lined, backfilled, covered with 221.5 ft ² loam	None
Not designated	TBD	3544	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3546	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3548	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3549	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3549	Information not available	5,000	Mogas	Removed (August 27, 1992)	Historic Gas Station, tank removed, backfilled, covered with 390 ft ² gravel, NFA - On Patch Road, mistakenly some reports call this Building 3459	None
Not designated	TBD	3553	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3572	1966	1,000	#2 Fuel Oil	Active	None	TBD

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
43	TBD	3573	Information not available	1,000	#2 Fuel Oil	Removed	Closed, line, backfilled, covered with 266 ft ² loam	None
Not designated	TBD	3574	1983	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3575	Information not available	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3577	1959	10,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3578	1988	2,000	#2 Fuel Oil	Active	None	TBD
56	TBD	3587	Information not available	1,000	Waste Oil	Removed	Closed, lined, backfilled, covered with 154 ft ² loam, seeded	None
Not designated	TBD	3596	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3601	1966	1,000	#2 Fuel Oil	Inactive	None	Removed
Not designated	TBD	3602	Information not available	5,000	Mogas	Removed	None	None
Not designated	TBD	3602	Information not available	5,000	Diesel	Removed	None	None
15	TBD	3602	Information not available	5,000	#2 Fuel Oil	Removed	Clean and contaminated soil removed = 98.64 cubic yards, significant petroleum contaminated in soil and possibly groundwater	None
14	TBD	3602	Information not available	5,000	#2 Fuel Oil	Removed	Clean and contaminated soil removed = 98.64 cubic yards, significant petroleum contaminated in soil and possibly groundwater	None
Not designated	TBD	3605	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3606	1966	1,000	#2 Fuel Oil	Active	None	TBD
3	TBD	3607 A	Information not available	5,000	#2 Fuel Oil	Removed (November 28, 1989)	Clean and contaminated soil removed = 98.64 cubic yards	None
4	TBD	3607 B	Information not available	5,000	#2 Fuel Oil	Removed (November 28, 1989)	Previously removed UST, clean and contaminated soil removed = 98.64 cubic yards	None
Not designated	TBD	3615	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3616	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3617	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3618	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3619	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3620	1966	1,000	#2 Fuel Oil	Inactive	None	Remove

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
16	TBD	3622	Information not available	500	#2 Fuel Oil	Removed	Clean and contaminated soil removed = 23.53 cubic yards, significant petroleum contaminated in soil, subsurface investigation recommended, SSE conducted NFA	None
Not designated	TBD	3624	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3628	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3654	1971	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	3654	1971	12,600	#2 Fuel Oil	Removed	None	Remove
Not designated	TBD	3654	1971	12,600	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3655	1971	1,000	Diesel	Removed	None	None
Not designated	TBD	3701	1966	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3713	1974	30,000	#4 Fuel Oil	Active	None	TBD
44	TBD	3713	Information not available	5,000	Diesel	Removed	Shirley Trailer Park, lined, backfilled, paved with 145.2 ft ³ bituminous concrete, SSE conducted, NFA	None
57	TBD	3713	Information not available	10,000	Mogas	Removed	Shirley Trailer Park, lined, backfilled, paved with 1840 ft ³ bituminous concrete, SSE conducted, NFA	None
Not designated	TBD	3713	1974	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3713	1974	30,000	#4 Fuel Oil	Inactive	None	Remove
58	TBD	3713	Information not available	1,000	Waste Oil	Removed	Closed, lined, backfilled, covered with 322.5 ft ³ loam, seeded	None
59	TBD	3748	Information not available	5,000	Waste Oil	Active	Closed, backfilled, covered with 128.3 ft ³ loam, seeded	TBD
Not designated	TBD	3749	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3750	1966	1,000	#2 Fuel Oil	Inactive	None	TBD
Not designated	TBD	3751	1966	1,000	#2 Fuel Oil	Active	None	TBD
161	TBD	3751	Information not available	10,100	#2 Fuel Oil	Abandoned	Closed, backfilled. Abandoned near Building 3751	None
Not designated	TBD	3752	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3753	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3754	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3755	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3756	1966	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	3757	1966	5,000	#2 Fuel Oil	Active	None	TBD

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
Not designated	TBD	3759	1963	5,000	Diesel	Active	None	TBD
Not designated	TBD	3759	1966	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	3759	1981	3,000	Mogas	Removed	None	None
Not designated	TBD	3770	1963	1,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	3773	1984	10,000	#2 Fuel Oil	Active	None	TBD
60	TBD	3774	Information not available	500	Waste Oil	Removed (January 27, 1992)	Previously removed UST, closed, backfilled, covered with 93.5 ft ² loam, seeded	None
125	TBD	3774	Information not available	1,000	Waste Oil	Removed (October 23, 1992)	Previously removed UST, closed, backfilled, covered with 237 ft ² sand and gravel	None
Not designated	TBD	3800	1966	500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3801	1942	25,000	Avgas	Removed	None	None
Not designated	TBD	3801	1942	25,000	Avgas	Removed	None	None
Not designated	TBD	3801	1942	25,000	Avgas	Removed	None	None
Not designated	TBD	3803	1966	1,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3806	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3807	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3810	1980	500	Diesel	Active	None	TBD
1	TBD	3809	Information not available	1,000	#2 Fuel Oil	Removed (November 27, 1989)	Previously removed UST, clean and contaminated soil removed from hole = 33.85 cubic yards	None
45	TBD	3812	Information not available	1,000	Diesel	Removed	Closed, lined, backfilled, covered with 144.5 ft ² turf	None
Not designated	TBD	3813	Information not available	25,000	Aviation Gas	Removed	Closed soil removed, backfilled - High contamination for soil and groundwater	None
Not designated	TBD	3813	Information not available	25,000	Aviation Gas	Removed	Closed, soil removed, backfilled - High contamination for soil and groundwater	None
Not designated	TBD	3813	Information not available	25,000	Aviation Gas	Removed	Closed soil removed, backfilled - High contamination for soil and groundwater	None
Not designated	TBD	3814	1969	12,000	#4 Fuel Oil	Active	None	TBD
Not designated	TBD	3816	1989	500	Diesel	Active	None	TBD
Not designated	TBD	3816	1970	500	#2 Fuel Oil	Removed (January 10, 1989)	Not all contaminated soil removed or flight tower would collapse, most contaminated directly under tank, tank replaced, backfilled, not paved	None

TABLE 3-8. UNDERGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location (Building)	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
61	TBD	3818	Information not available	1,000	Waste Oil	Removed	Closed, backfilled, covered with 192.5 ft ² of loam, seeded	None
Not designated	TBD	3818	1978	5,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3820	1959	500	Mogas	Active	None	TBD
Not designated	TBD	3820	1966	500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3822	1966	2,500	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	3825	1972	10,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	3826	1972	10,000	#2 Fuel Oil	Removed	None	None
Not designated	TBD	3827	1974	5,000	#2 Fuel Oil	Removed	None	None
46	TBD	3828	1972	5,000	Aviation Gas	Removed	Backfilled, covered with 240 ft ² loam, seeded	None
Not designated	TBD	3829	1972	25,000	JP4 - Jet Fuel	Removed	Removal as part of RA for 2/17/94 spill at MAAF	None
Not designated	TBD	3830	1972	25,000	JP4 - Jet Fuel	Removed	Removal as part of RA for 2/17/94 spill at MAAF	None
Not designated	TBD	3840	1972	1,000	#2 Fuel Oil	Inactive	None	Remove
Not designated	TBD	4202	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	4203	1966	1,000	#2 Fuel Oil	Active	None	TBD
Not designated	TBD	4322	1984	1,500	#2 Fuel Oil	Active	None	TBD

Key: TBD = To Be Determined
NA = Not Available

3.2.1.2 ASTs. AST compliance programs at Fort Devens are conducted under Army Regulation (AR) 200-1, the federal requirements including 40 Code of Federal Regulation (CFR) Parts 110, 112, and 116, and applicable state regulations. Twenty-nine ASTs are currently present at Fort Devens and all are active. The majority of the tanks store waste oil, heating fuel, and diesel fuel. The EMO will develop an AST Management Plan that will include a current inventory of all existing ASTs at Fort Devens and related compliance issues. An inventory of ASTs at Fort Devens is provided in Table 3-9.

3.2.2 Hazardous Substance Management

Hazardous substances present at Fort Devens are managed in compliance with federal requirements outlined in the Emergency Planning and Community Right-to-Know Act, Executive Order 12385, the Spill Prevention Control and Countermeasure (SPCC) requirements in 40 CFR Parts 110 and 112, MADEP regulations, AR 200-1, and other applicable federal, state, and local regulations.

Hazardous materials surveys of the installation were completed during the EnPA and CERFA investigations. No extremely hazardous substances as specified in the SARA, Title II, Section 302 are believed to be present at the installation. Fort Devens does not maintain or use sufficient quantities of hazardous chemicals to require reporting under SARA Title III, Section 312 (Tier reporting), or SARA Title III, Section 313 (Toxic Chemical Release Form R reporting).

Fort Devens maintains material safety data sheets (MSDSs) as required by the Occupational Safety and Health Administration (OSHA) for all hazardous chemicals on the installation. Spill response equipment is present at Fort Devens.

Historically, activities at Fort Devens have involved the management of various hazardous substances, including solvents and petroleum products utilized at the motor pool, pesticides and herbicides, paints, and solvents used in paint shops. Small amounts of other miscellaneous hazardous substances such as boiler treatment chemicals, groundskeeping chemicals, and janitorial supplies have also been used at the installation.

Pesticide storage and handling at Fort Devens is conducted in compliance with TSCA regulations. Pesticides are stored in facilities with secondary containment, and washwaters are collected and properly disposed off-site by a contractor.

Use and storage of hazardous materials is decreasing as the installation prepares for closure, and as mission operations and tenant activities are discontinued. Fort Devens has an ongoing close-out survey program established for facilities being vacated by Army components and tenants. Hazardous materials found abandoned during these close-out surveys are identified and arrangements are made for the proper disposal of the materials in compliance with regulatory requirements.

TABLE 3-9. ABOVEGROUND STORAGE TANK INVENTORY

Tank No.	Reuse Parcel	Location	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
A202-1	TBD	Building 202	Information not available	300	Waste Oil	Active	None	TBD
A219-1	TBD	Building 219	Information not available	500	Waste Oil	Active	None	TBD
A219-2	TBD	Building 219	Information not available	10,000	Unleaded Gas	Active	None	TBD
A601-1	TBD	Building 601	Information not available	300	Waste Oil	Active	None	TBD
A602-1	TBD	Building 602	Information not available	300	Waste Oil	Active	None	TBD
A603-1	TBD	Building 603	Information not available	300	Waste Oil	Active	None	TBD
A604-1	TBD	Building 604	Information not available	300	Waste Oil	Active	None	TBD
A612-1	TBD	Building 612	Information not available	250	Waste Oil	Active	None	TBD
A619-1	TBD	Building 619	Information not available	250	Waste Oil	Active	None	TBD
A1401-1	TBD	Building 1401	Information not available	250	Waste Oil	Active	None	TBD
A1416	TBD	Building 1416	Information not available	275	#2 Fuel Oil	Active	None	TBD
A1421	TBD	Building 1421	Information not available	275	#2 Fuel Oil	Active	None	TBD
A1427-1	TBD	Building 1427	Information not available	275	Heating Oil	Active	None	TBD
A1650-1	TBD	Building 1650	Information not available	250	Waste Oil	Active	None	TBD
A2008-1	TBD	Building 2008	Information not available	500	Waste Oil	Active	None	TBD
A2446-1	TBD	Building 2446	Information not available	250	Waste Oil	Active	None	TBD
A2291	TBD	Building 2291	Information not available	275	#2 Fuel Oil	Active	None	TBD
A3587-1	TBD	Building 3587	Information not available	500	Waste Oil	Active	None	TBD
A3628	TBD	Building 3628	Information not available	275	#2 Fuel Oil	Active	None	TBD

TABLE 3-9. ABOVEGROUND STORAGE TANK INVENTORY

Continued								
Tank No.	Reuse Parcel	Location	Year Installed	Capacity (Gallons)	Substance Stored	Status	Comments	Future Actions
A3713-1	TBD	Building 3713	Information not available	600	Waste Oil	Active	None	TBD
A3713-2	TBD	Building 3713	Information not available	600	Waste Oil	Active	None	TBD
A3713-3	TBD	Building 3713	Information not available	300	Waste Oil	Active	None	TBD
A3770-1	TBD	Building 3770	Information not available	275	Diesel Fuel	Active	None	TBD
A3770-2	TBD	Building 3770	Information not available	275	#2 Fuel Oil	Active	None	TBD
A3774-1	TBD	Building 3774	Information not available	550	Waste Oil	Active	None	TBD
A3774-2	TBD	Building 3774	Information not available	550	Waste Oil	Active	None	TBD
A3810-1	TBD	Building 3810	Information not available	250	Diesel Fuel	Active	None	TBD
A3818-1	TBD	Building 3818	Information not available	250	Waste Oil	Active	None	TBD
A3840	TBD	Building 3840	Information not available	275	#2 Fuel Oil	Active	None	TBD

Key: TBD = To Be Determined

3.2.3 Hazardous Waste Management

Hazardous waste compliance programs at Fort Devens are conducted under AR 200-1, and the federal requirements found in 40 CFR 260 through 269, 40 CFR 117, 49 CFR 171 et seq., Department of Transportation regulations, and Commonwealth of Massachusetts hazardous waste management regulations.

The installation is currently classified as a large quantity generator of hazardous waste (producer of 1,000 kilograms or more of hazardous waste or more than 1 kilogram of acutely hazardous waste per month). The installation operates under USEPA identification number MA 7210025154 and has a Massachusetts hazardous waste license number pursuant to Massachusetts General Law Chapter 21C and 310 CMR 30.00. In practice, Fort Devens currently generates significantly less than that amount of hazardous waste and could be classified as a small quantity generator (producer of 100 to 1,000 kilograms of hazardous waste per month). The volume of waste generated at the installation is anticipated to continue to decrease as the installation approaches closure and mission and tenant operations decline.

Fort Devens has one RCRA-permitted treatment, storage, or disposal facility, Building 1650, which has been operational since 1980. Building 1650 became a RCRA-permitted TSD facility in 1986. The building has 3,000 square feet of storage space. Satellite accumulation points and 90-day storage areas are managed and inspected by the EMO. All hazardous wastes are manifested and transported by a certified contractor for disposal at a permitted off-site disposal facility.

Prior to closure of Fort Devens, the hazardous waste storage areas and the RCRA Part B Permit will be transferred to the reserve enclave or the hazardous waste storage facility will be closed in accordance with the permit closure plan.

3.2.4 Solid Waste Management

Solid waste management compliance programs at Fort Devens are conducted under AR 200-1 and 420-47, the federal requirements found in 40 CFR 240-246 and 40 CFR 257-258, Department of Transportation regulations, and the Massachusetts solid waste management regulations.

Solid wastes currently generated at Fort Devens are managed in accordance with all applicable state and federal regulations. The waste is currently collected by a licensed solid waste hauler and transported to a local landfill.

Historically, solid waste has been disposed of on-site. Fifteen locations were identified as landfills in the MEP and the EnPA. Two of these sites have been combined. Two other solid waste disposal locations were identified as unauthorized dumping areas (Site A, AOC 41) and Training Area 6d - South Post (SA 46). The sites that were identified as landfills are listed below:

- ▶ Shepley's Hill Landfill No. 1 (AOC 5). Also included in this landfill are Landfill No. 1 - Asbestos Cell (AOC 18), and the Sanitary Landfill Incinerator - Building 38 (AOC 4).
- ▶ Landfill No. 2 - South Post Area 7b (SA 6)
- ▶ Landfill No. 3 - South Post Impact Area (SA 7)
- ▶ Landfill No. 4 - South Post Area 8a (SA 8)
- ▶ Landfill No. 5 - North Post Landfill (AOC 9)
- ▶ Landfill No. 6 - Near Shirley Gate (SA 10)
- ▶ Landfill No. 7 - Near Lovell Street (AOC 11) (also known as Lovell Street Landfill OU)
- ▶ Landfill No. 8 - South Post Combat Pistol Range 12)
- ▶ Landfill No. 9 - Near Lake George Street (SA 13)
- ▶ Landfill No. 10 - South Post near Dixie Road (SA 14)
- ▶ Landfill No. 11 - South Post near Helipad (SA 15)
- ▶ Landfill No. 12 - Main Post near Shoppette (SA 16)
- ▶ Landfill No. 13 - Little Mirror Lake (SA 17)
- ▶ Cold Spring Brook Landfill (AOC 40).

Table 3-1 identifies the findings and final determination for each landfill, and Table 3-2 identifies the material disposed, the date of operation, the environmental status, the risk to human health and the environment, and the regulatory mechanism requiring clean-up of the site.

Shepley's Hill Landfill is the only landfill that was permitted to accept sanitary or household waste. Landfill No. 2 (SA 6) is believed to be an old town dump that was used prior to the site's incorporation into Fort Devens. Landfill No. 2 is being considered for a removal action.

The exact location of Landfill No. 3 (SA 7) and Landfill No. 4 (SA 8) have not been located. These SAs are considered NFA sites with regulatory concurrence. These landfills are believed to be old estate or farm dumps that were used prior to the land being incorporated into Fort Devens. Landfill No. 1 (AOCs 4, 5, and 18), Landfill No. 7 (AOC 11), and the Cold Spring Brook Landfill (AOC 40) are in different phases of the RI/FS and have been designated OUs for the purpose of RAs.

The Army has proposed NFA for the following landfills: No. 6 (SA 10), No. 10 (SA 14), No. 12 (SA 16), No. 11 (SA 15, NFA is pending), and No. 13 (SA 17, NFA is pending following Supplemental SI results). Landfill No. 8 (SA 12), Landfill No. 9 (SA 13), and the Unauthorized Dumping Area (Site A, AOC 41) are all to undergo removal actions. Landfill No. 5 (AOC 9) requires solid waste closure under the state-delegated RCRA Subpart C program. A removal action is planned for Landfill No. 5.

Several debris disposal areas, erroneously identified as landfills, are not being investigated as landfills because they did not receive sanitary wastes. Landfill No. 5 (AOC 9) was used to dispose of tree stumps and construction demolition debris. Landfill No. 6 (SA 10) was also reportedly utilized to dispose of building demolition debris. Landfill No. 7 (AOC 11) is a small gully that was used to dispose of tree limbs and other landscaping debris. Landfill No. 8 (SA 12) is where unauthorized dumping of scrap metal and wood debris occurred. Landfill No. 9

(SA 13) is where construction debris, tree trunks, stumps, and possibly waste oil were disposed. Landfill No. 10 (SA 14) is not a landfill, but an abandoned quarry where old automobiles and ordnance have been disposed. Landfill No. 11 (SA 15) is a series of pits where fuel oil was burned. Landfill No. 12 (SA 16) received construction debris for approximately 3 weeks in 1985. Landfill No. 13 (SA 17) is Mirror Lake, located on the Main Post, where World War II-era grenades were disposed.

Cold Spring Brook Landfill (AOC 40) is an area approximately 10 to 20 acres that received drums, concrete slabs, wire, tanks, rebar, timber, and other debris found at depths of 10 to 25 feet. Unauthorized Dumping Area (Site A, AOC 41) received household and nonexplosive military debris scattered over a hill slope. The debris is approximately 10 feet deep.

3.2.5 Polychlorinated Biphenyls (PCBs)

PCB management compliance programs at Fort Devens are conducted under AR 200-1, the federal requirements found in 40 CFR 761, Department of Transportation regulations, and MADEP guidelines.

An installation-wide transformer study was completed at Fort Devens in 1982 by the Facility Engineering Support Activity. Each transformer was inspected for leaks and was labeled as either PCB-containing or non-PCB-containing. Nine hundred transformers were inspected and approximately 100 transformers were identified as containing PCBs.

After 1990, Fort Devens' policy required the replacement of all PCB transformers containing oil that exceeded 500 ppm of PCBs. The last PCB transformer was replaced during the summer of 1993, and 1993 records indicate that no transformers containing PCB oil in excess of 500 ppm are present at Fort Devens.

In 1993, under the BRAC EE, AREE 66 (Transformers) was investigated. The purpose of this study was to identify locations where transformers containing PCB oil may have leaked onto the soil on the Main and North Posts of Fort Devens. Nine locations were identified where leaking transformers were removed. At six of the nine locations, PCB-contaminated oil had contacted soil. Soil samples were collected at each of the six locations and analyzed for PCB contamination. Based on the results of the laboratory analysis, RA was recommended for four of the six locations. At this time, the Army has recommended NFA at one of the four sites that was recommended for RA. RAs have occurred for the other three sites. Prior to being moved off-site, PCB transformers were stored in Building 1650 or Building 1484. Information was not available as to where hazardous wastes were stored prior to Building 1650 and Building 1484 being used as storage areas.

Fort Devens conducts quarterly inspections of all transformers containing PCBs. The EMO is initiating a program to replace all PCB-contaminated transformers (PCBs between 50 and 500 ppm) on the installation.

3.2.6 Asbestos

Asbestos-containing material (ACM) is regulated by USEPA, OSHA, and the Commonwealth of Massachusetts. Asbestos at Fort Devens is managed in compliance with the DA policy, "Asbestos, Lead Paint, and Radon Policies at BRAC Properties," 31 October 1994.

Because of the era during which many of the buildings were constructed at Fort Devens, ACM is assumed to have been used in construction. An Asbestos Materials Survey Analysis and Assessment was conducted by Fort Devens in 1987. Though the study does not distinguish between friable and nonfriable asbestos, Fort Devens uses the report for screening purposes.

An installation-wide survey for ACM is required by Federal Property Management Regulations disclosure law prior to installation disposal. As a result, a comprehensive asbestos survey was initiated in March 1994. Non-residential structures were surveyed first and residential structures were surveyed as the buildings became vacant. For sampling purposes, the buildings were grouped by year of construction and structural similarities. The report for this survey, including the sampling results, was completed in May 1995. Removal or encapsulation will continue according to the results of the survey.

3.2.7 Radon

The radon reduction program at Fort Devens is conducted under AR 200-1, Chapter 11, Army Radon Reduction Program. In 1994, under the BRAC EE, AREE 67 (Radon) was investigated to evaluate Fort Devens radon reduction program as part of the BRAC activities. The evaluation focused on reviewing the efforts that have occurred at Fort Devens to comply with the requirements of AR 200-1, Chapter 11 and identify any gaps that might exist. The evaluation also focused on reviewing mitigation activities that Fort Devens has taken and provided recommendations for further testing and mitigation.

All structures at Fort Devens were assigned a Priority 1, 2, or 3 identification. Priority 1 structures are day care centers, hospitals, schools, and housing units. Priority 2 structures are those buildings having 24-hour operations, such as operation centers and routine diagnostic training equipment facilities. Priority 3 structures are all other routinely occupied buildings.

AR 200-1, Chapter 11 methodology emphasizes initial screening of structures to identify those having radon concentrations that pose the highest risk to Army personnel and their families. This methodology requires measuring Priority 1 buildings first, using a short-term (90-day) test. If any Priority 1 structure has a radon concentration exceeding 20 pCi/L, remedial action is required within 90 days to comply with the mitigation time frame specified in the Army radon policy. If any Priority 1 structure has a radon concentration exceeding 4 pCi/L, all Priority 2 and 3 structures are to be measured as well to determine the average annual radon concentration.

Fort Devens did not conduct short-term tests of Priority 1 structures. Instead, in 1989, the EMO requested and received approval from FORSCOM to by-pass the 90-day testing and conduct long-term (1-year) measurements of radon in Priority 1 structures. The results of the measurements identified that some structures had radon concentrations exceeding 4 pCi/L. As

a result, efforts were undertaken in 1990 to measure radon concentrations in the Priority 2 and 3 structures. Data on the structures and the radon concentrations measured were entered into a data base maintained by the EMO.

There are a total of 2,488 Army-owned structures and living units at Fort Devens that require radon testing under AR 200-1. Of the 2,488 structures, 1,631 have results that are considered reliable. A total of 857 Priority 1 structures were not evaluated during the original radon testing program and require testing.

In April and June 1993, radon mitigation efforts were attempted for 12 structures. The efforts included sealing cracks and vents in structure foundations. Retesting of the radon concentration in the structures to verify success of the mitigation efforts was not conducted.

Of the structures that were tested for radon, 16 structures with radon concentrations in the 8 to 20 pCi/L range will require mitigation within 1 to 4 years and 118 structures with radon concentrations in the 4 to 8 pCi/L range will require mitigation within 5 years.

3.2.8 RCRA Facilities

SWMUs were identified under the FFA as IRP SAs or AOCs when the installation was placed on the NPL. The RCRA integration clause of the FFA addresses CERCLA/RCRA integration. Fort Devens has a RCRA-permitted hazardous waste storage facility at Building 1650. The facility was permitted in 1986 and will continue to operate until the Main Post closes or the facility and permit will be transferred to the Reserve Enclave.

In 1980, Fort Devens filed a RCRA Part A application that placed the Explosive Ordnance Disposal (EOD) Range under interim status as a hazardous waste thermal treatment facility. In 1988, a RCRA Part B permit application for the EOD Range was submitted. The EOD Range, which is located in the South Post, remains active under RCRA interim status.

The waste explosives storage bunker (Building 3644) (SA 24) was identified as a RCRA storage area for explosives designated for destruction at the EOD Range in the Solid Waste Management Unit Report in 1985. At this time, the storage bunker continues to operate under RCRA interim status. NFA, with USEPA approval, has been recommended for the explosive storage bunker.

All RCRA permitted facilities and thermal treatment units will be closed following RCRA closure procedures or the permit and interim status will be transferred to the Reserve Enclave.

3.2.9 Wastewater Discharges

Fort Devens does not hold a National Pollutant Discharge Elimination System (NPDES) permit under the Clean Water Act. The wastewater treatment plant at Fort Devens is designed to discharge to rapid infiltration sand beds, which allow the treated water to recharge to the groundwater. If necessary in the future, the need for a NPDES permit will be the responsibility of the MGLB. Fort Devens is participating in a study to obtain a Army "group" NPDES permit. Further strategy will be developed as the status of the permit process is clarified.

3.2.10 Oil/Water Separators

Oil/water separators at Fort Devens are managed under the installation's SPCC program, in accordance with applicable federal regulations including Section 313(a) of the Clean Water Act and 40 CFR Parts 110, 112, and 122, DOD Directives, and AR 200-1.

Oil water separators were investigated under the IRP SIs, and RI/FSs, or under the BRAC EE Phase I and II (AREEs 61 and 70). One IRP site, Lake George Street Washrack (SA 45), had an oil/water separator that was recommended for closure. The closure design is under review. Additional oil water separators were identified from construction drawing reviews conducted during IRP SIs, RIs, and the BRAC EE. Recommendations for management of these additional oil/water separators were made during these investigations. One focus of the AREE 61 study was to account for oil/water separators not covered under IRP studies. Twenty-two oil/water separators were identified in this study, although according to installation personnel, there are more than 22 oil/water separators on the installation.

3.2.11 Pollution Prevention

Pollution prevention at Fort Devens is managed through the installation hazardous waste management program in accordance with AR 200-1, Chapter 6, and applicable federal and state regulatory requirements.

The pollution prevention program at Fort Devens includes participation in a recycling program. Installation photographic laboratory equipment are equipped with silver recovery systems. Aluminum cans, cardboard, and white paper are also recycled.

3.2.12 NRC Licensing

Activities at the former Cutler Army Hospital did not require an NRC materials license. Storage and use of such radioactive materials as compasses, rifle sights, watches, and sources for test and calibration equipment at Fort Devens are under NRC licenses held by the Army Armament Material Readiness Command at Rock Island Arsenal, Rock Island, Illinois, and the Army Communications and Electronics Command, Fort Monmouth, New Jersey. A radiation closeout survey is being conducted to delist Fort Devens from the two Army-wide NRC licenses. The Phase I radiation survey began in February 1995 and was completed in July 1995.

3.2.13 Mixed Waste

No mixed waste is generated at Fort Devens.

3.2.14 Radiation

No radioactive waste is generated at Fort Devens.

3.2.15 Lead-based Paint

The Fort Devens lead-based paint management program is conducted in accordance with U.S. Department of Housing and Urban Development guidelines for lead-based paint protection and the DA policy, "Asbestos, Lead Paint, and Radon Policies at BRAC Properties," 31 October 1994.

A lead-based paint survey was initiated in November 1994. One hundred eighty-two units were surveyed for the presence of lead-based paint. One hundred thirty-one of these units are historical district structures which are all residential units. The remaining 51 units are 50 residential units in the Buena Vista housing development on the Main Post and the chapel located adjacent to the Buena Vista housing development. Most buildings in the survey are expected to contain lead, because the buildings were constructed prior to 1978. The final report for this survey was completed in June 1995.

3.2.16 Medical Waste

Cutler Army Hospital opened in the early 1950s and was redesignated a health clinic in July 1993, when all in-patient care ceased. In July 1994, the health clinic was closed. The remaining physicians and support staff were relocated to the Vail Dental Clinic on Fort Devens, which became the Vail Troop Medical Clinic.

From 1977 to 1993, the Cutler Army Hospital incinerator was used to incinerate pharmaceutical wastes and infectious wastes. This incinerator was dismantled in 1993. From 1993 to the present, all medical wastes generated at Fort Devens are transported and incinerated off-post by a licensed contractor.

3.2.17 Unexploded Ordnance

Unexploded ordnance (UXO) at Fort Devens is currently stored in the waste explosive storage bunker (Building 3644, SA 24), prior to being detonated on the Fort Devens EOD Range (AOC 25). This bunker and the EOD Range continue to operate under RCRA interim status.

World War II grenades were placed in Landfill No. 13 - Mirror Lake (SA 17). The 14th EOD Detachment Station at Fort Devens conducted a removal action of these World War II grenades in 1965. An underwater metal survey was conducted to determine if the removal action was complete. The Supplemental SI Data Package submitted in March 1995 indicated that there was no explosive contamination in the water or sediment of Mirror Lake.

At this time, a UXO survey is underway for Fort Devens. A preliminary map and list of possible locations has been prepared. A preliminary survey started in April 1995 and is scheduled to be completed in March 1996.

3.2.18 National Environmental Policy Act (NEPA)

A Draft Disposal and Reuse EIS for Fort Devens was completed September 1994. The Final Disposal and Reuse EIS was completed July 1995.

The proposed action outlined in the EIS is the retention of a Reserve Enclave and disposal of approximately 4,140 acres (of the total 9,300 acres) of excess property made available by the closure of Fort Devens. The Army will retain the entire 4,880 acres on the South Post, and approximately 280 acres on the Main Post.

In addition to the generation of NEPA documents, Fort Devens has a program in place to ensure that all significant and applicable Army actions conducted at Fort Devens are properly evaluated in compliance with NEPA requirements.

3.2.19 Air Emissions

The MADEP requires significant air pollution sources to be permitted. A Clean Air Act Title V air permit for Fort Devens is currently being prepared by a contractor. The sources of air emissions at Fort Devens include USTs, ASTs, and painting operations.

3.3 Status of Natural and Cultural Resources Programs

This section describes the current status of the natural and cultural resource program established at Fort Devens including identification and management of vegetation, wildlife, wetlands, and other preservation areas; rare, threatened and endangered species; and cultural resources. Natural and cultural resources at Fort Devens are managed in accordance with AR 200-3 and 420-40, DOD Directive 4700.4 and 4710.1, and applicable federal and state regulations and statutes.

3.3.1 Vegetation

Much of the area now occupied by Fort Devens was formerly farmland, with an interspersed of pasture, woodlots, orchards, and some cropped fields. Much of the installation is composed of old fields and woodlots. These areas are now in various stages of regrowth. Plant communities have been modified and altered by vehicles and equipment, fires caused by marksmanship practice, and in some areas, intentional mowing or burning. These activities have maintained a great diversity of vegetation types.

The majority of the land in the Main and North Posts are developed or urban cover types, with developed land, golf course, airfield, and filter beds comprising 56 percent of land types. Forested types occupy 36 percent of the land surface, with early-successional black cherry-aspen-hardwoods covering 2 percent, mixed oak-red maple-hardwoods covering 20 percent, white pine-hardwood mixes covering 11 percent, and white, red, and pitch pine occupying 2 percent. Shrub and herbaceous types each cover less than 2 percent of the land area within the BRAC property.

The vegetation of the South Post is described as mixed coniferous deciduous. The varied topography, soils, and drainage in combination with human interference, have resulted in a patchwork of forest, marsh, grassland, and open water. Managed forest accounts for approximately 70 percent of land cover. The forest vegetation is dominated by oak and white pine in the drier areas and maple and ash in the wetter areas.

Vegetation management plans at Fort Devens are consistent with AR 420-74 regarding natural resources. Forests are managed on a sustained yield basis; that is, they are harvested for forest products at a rate equal to overall production in the forest. Forestry management emphasizes improvement of the quality of forest stocks on the installation while also enhancing wildlife habitat and military training sites. In the impact areas on South Post, prescribed burns are used to reduce levels of highly ignitable or flash fuels. This practice of fuel reduction is an accepted method of reducing fire hazard in areas in high wildfire potential. In the absence of periodic prescribed burning, flash fuels, such as shrubby undergrowth and dry forest litter, could accumulate to a level that would foster uncontrollable wildfires with the potential to damage property beyond the installation boundaries.

3.3.2 Wildlife

The USFWS completed a Survey and Evaluation of Wetlands and Wildlife Habitat at Fort Devens to evaluate the potential of installation lands for possible inclusion in the adjacent Oxbow National Wildlife Refuge.

The importance of Fort Devens to a wide variety of wildlife species is due to the installation's diverse of habitat in various successional stages, its location adjacent to the Nashua River, and the amount and distribution of wetlands present. Wildlife values have been well documented by the installation's Natural Resources Office. Undeveloped lands of the installation are known to support migratory birds including waterfowl, wading birds, raptors, shorebirds, passerines, resident mammals, reptiles, amphibians, and invertebrates. Installation lands support breeding activity for at least six state-listed rare species, and provide migration, feeding, and resting habitats for two federally listed endangered species and at least 10 species of concern at both the state and federal government. Additional rare species may be present. Wetlands along the Nashua River and the Slaterock, Ponakin, and Cranberry Brook drainages, have been identified on the Massachusetts Natural Heritage and Endangered Species Program's "Estimated Habitat Map of State-listed Rare Wetlands Wildlife."

Although Fort Devens has a Natural Resources Office, there is an existing Cooperative Agreement between the Army, the Massachusetts Division of Fisheries and Wildlife, and the USFWS concerned with the protection, development, and management of fish and wildlife resources on the installation. The agreement allows for research and management activities and provides for technical assistance by other federal and state fish and wildlife experts.

3.3.3 Wetlands and Flood Plains

The USFWS analyzed existing information from the Survey and Evaluation of Wetlands and Wildlife Habitat to evaluate the potential of including installation wetlands in the adjacent Oxbow

National Wildlife Refuge. An ongoing wetlands survey is being conducted by the USACE to further define and accurately map the wetlands of Fort Devens.

The extensive wetlands occurring along the Nashua River flood plain, including associated wetland tributary drainages and headwaters, have been listed as a priority for protection under both the North American Waterfowl Management Plan and the Emergency Wetlands Resources Act of 1986. The Nashua River is a direct tributary of the Merrimack River system, and as such is also included in the USEPA's Priority Wetlands of New England listing (1987).

The majority of wetlands occurring on Fort Devens lands are classified within the palustrine system, with some open water acreage in the riverine and lacustrine systems. Forested, shrub, and emergent wetlands on the east side of the Nashua River flood plain, within the Oxbow National Wildlife Refuge, total slightly over 500 acres. There are an additional 190 acres of flood plain wetlands on the west side of the Nashua River, within the South Post of Fort Devens, which are an integral part of the same system and exhibit an equally high degree of interspersed and diversity in the form of flooded oxbows and meander scars, emergent marsh, and mixed patches of shrub and forested wetland.

The important Nashua River flood plain wetlands extend north of Route 2 into the Main and North Posts, and, although mainly forested (294 acres), include similar high diversity in the form of small flooded oxbows, emergent marsh-dominated meander scars (20 acres), and shrub wetland (54 acres). Flood plain wetlands occurring along the Nashua River along the western boundary of the Main Post total 191 acres. Wetlands in this area drain directly south into the Oxbow National Wildlife Refuge, and are hydrologically connected under Route 2. Small isolated pockets of wetlands occur on the east side of the cantonment area, and include forest, shrub, and emergent dominated wetland. Two ponds, smaller than 10 acres each, and the 25-acre Mirror Lake (102 acres total) are also identified as wetland areas. Total acreage for wetlands occurring within the Main Post and North Post is 143 acres, the majority being forested (109 acres). Much of this forested and mixed forested-shrub wetland is either associated with the Nashua River or occurs along its immediate tributary, Nonacoicus Brook.

The South Post consists of troop training ranges and the South Post Impact Area. The topography of the South Post is generally rolling and irregular. There are several water bodies located on the South Post: Spectacle Brook drains to the west to the North Nashua River; Oak Hill Pond is located in the northwest corner of the post; Slate Rock Brook and State Rock Pond drain into the Nashua River, which borders the South Post in the northeast; New Cranberry Pond and an unnamed stream are located adjacent to Harvard Road in the southeastern portion of the South Post; Cranberry Pond is in the center of the post; and Ponakin Brook is located to the southwest and Heron Pond to the southeast in the most southern portion of South Post. There are several wetlands in the northeast corner of the South Post where the Nashua River borders the installation. Wetlands are also found along Slate Rock Brook, west of Slate Rock Pond, along the unnamed stream, and Heron Pond in the southeastern part of the South Post and around Ponakin Brook in the southernmost part of South Post. Water levels on South Post are managed for the prevention of roadway flooding by beaver ponds and for enhancement of wildlife habitat in and near wetland areas. Open water and deep marsh waterfowl feeding and brood rearing habitat has been maintained on South Post by managing water levels in ponds

along the Slate Rock Pond System. Release of water from the ponds within the Slate Rock Pond system benefits the composition of downstream systems by preventing establishment of non-wetland species. Controlled alteration of water levels in wetlands at 5-year intervals has been recommended as an effective method of wildlife habitat management.

The water bodies on the South, North, and Main Posts are within the Nashua River watershed. The watershed has been designated a Class B watershed by the Commonwealth of Massachusetts, which means waters are to be maintained as suitable habitat for fish and other aquatic life, as primary and secondary contact recreation, and as public water supply (where designated for this use) if the water undergoes appropriate treatment.

3.3.4 Designated Preservation Areas

There are currently no designated preservation areas located on Fort Devens. The ongoing survey of the natural resources at Fort Devens has tentatively identified two or three areas with rare plant species that may become designated preservation areas in the future.

3.3.5 Rare, Threatened and Endangered Species

According to a Biological and Endangered Species Baseline Study prepared in August 1993 by USACE, no federally listed or proposed endangered species are known to occur in the Fort Devens area, with the exception of occasional transient endangered bald eagles or peregrine falcons. No federally threatened species are known to occur at the installation. The blazing star (*Liatris borealis*) is a Class II federal candidate for rare plant species. The northern goshawk (*Accipiter gentilis*) and Blanding's turtle (*Emydoidea blandingi*) are Class II federal candidates for rare animal species.

The only state endangered animal species documented at Fort Devens is the upland sandpiper (*Bartramia longicauda*). Four plant species have been identified as state endangered species: spike rush (*Eleocharis ovata*); Houghton's flatsedge (*Cyperus houghtonii*); wild senna (*Cassia hebecarpa*); and small bur-reed (*Sparganium minimum*). The cattail sedge (*Carex typhina*) is a state threatened species.

Six animal species of special state concern have been documented at Fort Devens: blue-spotted salamander (*Ambystoma laterale*); grasshopper sparrow (*Ammodramus saviarum*); spotted turtle (*Clemmys guttata*); wood turtle (*Clemmys insculpta*); water shrew (*Sorex palustris*); and eastern box turtle (*Terrapene carolina*).

Although no unique and rare communities have been identified at Fort Devens, the presence and distribution of several species of rare and endangered flora and fauna at the installation may result in the state assigning Significant Habitat status to certain regions of Fort Devens. Of the numerous habitat types at Fort Devens, portions of the pitch pine/scrub oak habitat, black spruce bogs, grasslands within the Turner Drop Zone, portions of the Nashua River flood plain communities, and several disturbed sandy areas at Fort Devens may be classified as Significant Habitat.

3.3.6 Cultural Resources

Fort Devens has one historic property which is listed in the National Register of Historic Places, the 1930s Permanent Cantonment Area.

The Historic Inventory Survey Report, released in May 1993, identified 80 buildings, one site, and one object that are 50 years or older. The survey excluded all buildings previously surveyed as part of the Fort Devens Historic District and those building types included in the DOD World War II temporary buildings documentation program. The 80 buildings, one site, and one object were evaluated with reference to the Army System Classification and the National Register of Historic Places criteria of eligibility. No Category I (properties of major importance) or II (properties of importance) properties were identified. Fifty-one buildings, one site, and one object were identified as Category III (properties of minor importance) properties, including three individual buildings, one site, one object, and 48 buildings within two historic districts. The site is the installation cemetery and the object is a Sniper Tree. All 53 Category III properties were determined to meet the criteria of eligibility for inclusion on the National Register of Historic Places with one exception. Twenty-nine Category IV (properties of little or no importance) properties were identified, and no Category V (properties detrimental to the significance of adjacent historic properties) properties were identified. At this time, the nomination of the Category III properties to the National Register of Historic Properties has not been completed.

The final Archeological Inventory Survey was completed in November 1993. Twenty-nine historical archaeological sites were identified on the Main Post and North Post as a result of the archaeological survey. On the main post, 22 historic sites were visually identified and recorded; 19 of these were field tested due to their location on property to be disposed and reused. On the North Post, seven historic sites were visually identified, recorded, and field tested due to their location on property to be disposed and reused.

Eighteen of the identified historic archaeological sites on property to be disposed and reused are assessed as having fair to very good and excellent integrity. National Register eligibility of these sites has yet to be determined.

3.4 Environmental Condition of Property

In October 1992, Public Law 102-426, the CERFA amended Section 120(h) of the CERCLA and established new requirements with respect to contamination assessment, cleanup, and regulatory agency notification/concurrence for federal facility closures. CERFA requires the federal government, before termination of federal activities on real property owned, to identify property where no hazardous substances were stored, released, or disposed of on the federal property. These requirements retroactively affect the Army BRAC 88 and BRAC 91 environmental restoration activities, and are being implemented at BRAC 93 sites concurrently with their EnPAs. The primary CERFA objective is for federal agencies to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. Although CERFA does not mandate the Army transfer real property so identified, the first step in satisfying the objective is the requirement to identify real property where no

CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed.

The Army has completed an investigation to identify the environmental condition of Fort Devens property in compliance with CERFA. The final report was released in April 1994. CERFA investigations included the following assessment procedures:

- ▶ Review of installation records;
- ▶ Interviews with current and past installation employees; and
- ▶ A visual site inspection of the installation.

During the CERFA investigation process, evidence was gathered that screened installation property into four categories, or parcel types. These categories are CERFA Parcels, CERFA Parcels with Qualifiers, CERFA Disqualified Parcels, and CERFA Excluded Parcels. An environmental condition of property map provided as Figure 3-2 identifies property at the installation according to these four parcel categories. The parcels are delineated using a 1-acre square grid for boundary definition. Where CERFA Disqualified Parcels and CERFA Parcels with Qualifiers have coincided, the overlapped area has been designated CERFA disqualified.

The following subsections provide a detailed description of each of the four categories used to classify property in the environmental condition of property map.

3.4.1 CERFA Parcels

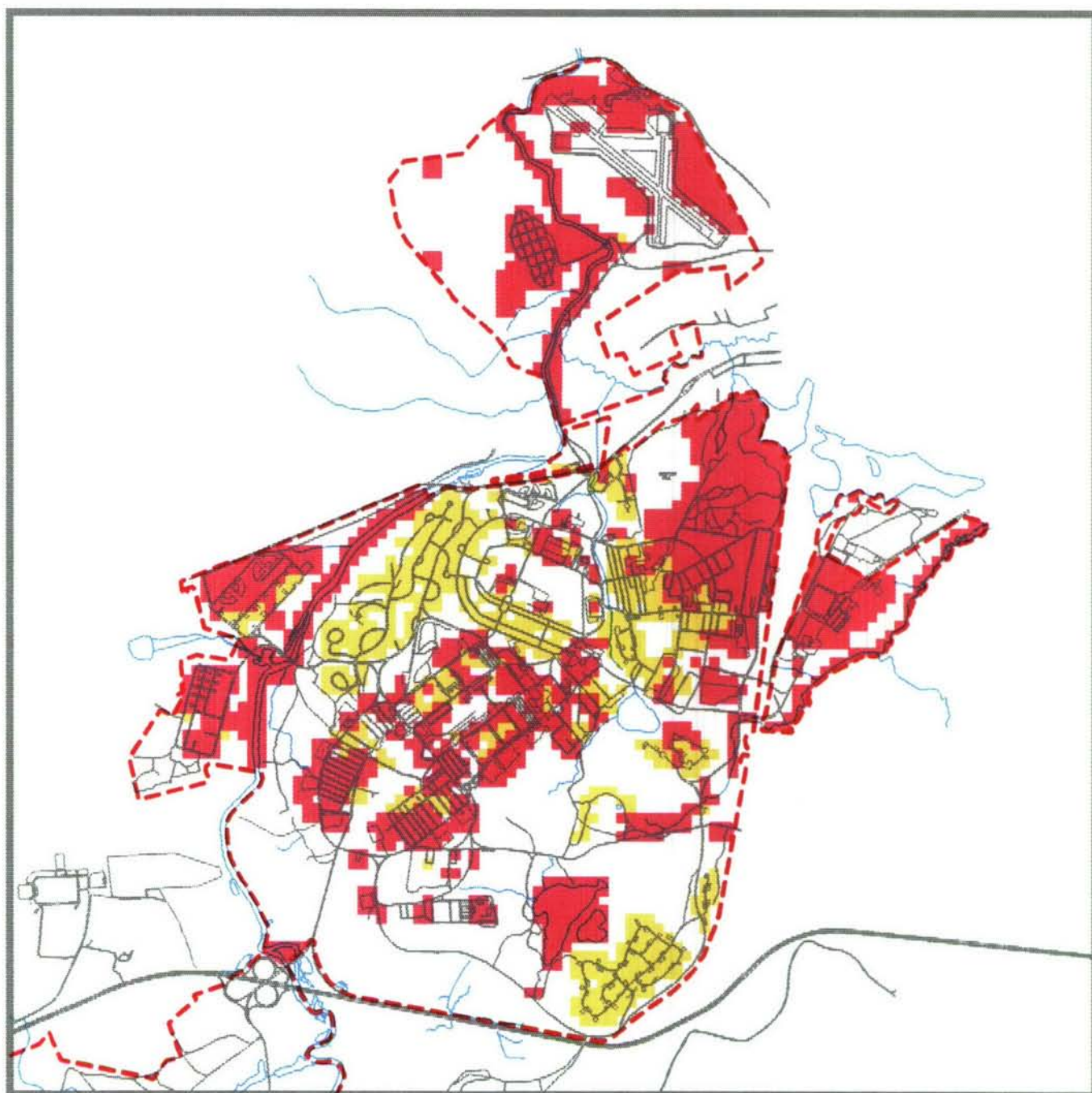
CERFA Parcels are those portions of the installation real property for which investigation reveals no evidence of storage for 1 year or more, release, or disposal of CERCLA hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. CERFA Parcels also include any portion of the installation which once contained safety-related hazards, including asbestos, UXO, lead-based paint, and radionuclides, but has since been fully remediated.

3.4.2 CERFA Parcels with Qualifiers

CERFA Parcels with Qualifiers are those portions of the installation real property for which investigation reveals no evidence of storage for 1 year or more, release, or disposal of CERCLA hazardous substances, petroleum, or petroleum derivatives and no evidence of being threatened by migration of such substances. Parcels with Qualifiers do, however, contain safety-related hazards including the presence of asbestos, UXO, lead-based paint, radionuclides, radon, or stored (not in use) PCB-containing equipment.

3.4.3 CERFA Disqualified Parcels

CERFA Disqualified Parcels are those portions of the installation real property for which there is evidence of a CERCLA hazardous substance, petroleum, or petroleum derivative storage for 1 year, release or disposal, or threatened by such release or disposal. CERFA Disqualified Parcels also include any portion of the installation containing a PCB release or disposal, any



EXPLANATION

- Installation Boundary
- CERFA Parcel
- CERFA Parcel with Qualifier(s)
- CERFA Disqualified Parcel
- CERFA Excluded Parcel



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FEET

Environmental
Condition
of Property

Figure 3-2

explosive ordnance disposal locations, any storage sites of chemical ordnance, and any areas in which CERCLA hazardous substances or petroleum products have been released or disposed and subsequently fully remediated.

3.4.4 CERFA Excluded Parcels

CERFA Excluded Parcels are those portions of the installation real property retained by the DOD, and therefore not explicitly investigated for CERFA. CERFA Excluded Parcels also include any portion of the installation that has already been transferred by deed to a party outside the federal government, or by transfer assembly to another federal agency.

3.4.5 Suitability of Installation Property for Transfer by Deed

SARA Title I, Section 120 to CERCLA addresses the transfer of federal property on which any hazardous substance was stored during any 1 year period, or was released or disposed. Section 120 also requires any deed for the transfer of this property to contain, to the extent such information is available from a complete search of agency files, the following information:

- ▶ A notice of the type and quantity of any hazardous substance storage, release, or disposal,
- ▶ Notice of the time at which such storage, release, or disposal took place,
- ▶ A description of the RA taken, if any, and
- ▶ A covenant warranting that appropriate RA will be taken.

The Army has begun the identification of property suitable for transfer under CERCLA through the CERFA identification process (see Section 3.4.5). Those properties, designated CERFA Parcels and CERFA Parcels with Qualifiers, have had no activities that could potentially preclude them from transfer under SARA Title I, Section 120 to CERCLA. CERFA Disqualified Parcels are those that have experienced CERCLA hazardous substance storage, and/or POL storage and/or release.

The U.S. Army is currently in the process of refining the classification of those properties that are CERFA disqualified to better identify those suitable for transfer under CERCLA. Through this refinement process, properties are being defined as one of the following seven categories:

- ▶ **Category 1:** Areas where no storage, release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
- ▶ **Category 2:** Areas where only storage of hazardous substances or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred).

- ▶ **Category 3:** Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action.
- ▶ **Category 4:** Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken.
- ▶ **Category 5:** Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, removal and/or remedial actions are under way, but all required remedial actions have not yet been taken.
- ▶ **Category 6:** Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but all required response actions have not yet been implemented.
- ▶ **Category 7:** Areas that are unevaluated or require additional evaluation.

Figure 3-3 identifies property at Fort Devens according to the DOD seven parcel categorization. Under SARA Title I, Section 120 to CERCLA, those parcels that are Category 1, 2, 3, 4 and 5 (if the remedy in place has been approved by the Administrator), meet the CERCLA criteria of suitability for transfer. The categorization process also provides valuable information regarding which property is available for unrestricted reuse because it has no environmental restrictions (Category 1-4) and which property is undergoing RA and may therefore have property reuse restrictions (Category 5). Category 6 and 7 properties that involve releases of hazardous substances as defined in CERCLA cannot be transferred under CERCLA until environmental restoration is initiated.

The USEPA Region I has reviewed the CERFA Report, and without any independent investigation or verification of the information, has concurred with the results of the Army's identification of the following parcels as clean (CERFA Parcels) pursuant to the provisions of CERCLA 12(h)(4)(A):

Parcel 5P	Parcel 154P	Parcel 49P	Parcel 188P
Parcel 14P	Parcel 162P	Parcel 56P	Parcel 191P
Parcel 21P	Parcel 169P	Parcel 67P	Parcel 196P
Parcel 29P	Parcel 179P	Parcel 84P	Parcel 200P
Parcel 36P	Parcel 187P	Parcel 89P	Parcel 214P
Parcel 42P	Parcel 190P	Parcel 98P	Parcel 13P
Parcel 50P	Parcel 194P	Parcel 107P	Parcel 18P
Parcel 64P	Parcel 198P	Parcel 117P	Parcel 28P
Parcel 82P	Parcel 212P	Parcel 134P	Parcel 35P
Parcel 88P	Parcel 12P	Parcel 137P	Parcel 41P
Parcel 105P	Parcel 15P	Parcel 158P	Parcel 50P
Parcel 114P	Parcel 24P	Parcel 165P	Parcel 58P
Parcel 129P	Parcel 30P	Parcel 172P	Parcel 71P
Parcel 136P	Parcel 37P	Parcel 180P	

Parcel 86P	Parcel 121P	Parcel 166P	Parcel 192P
Parcel 91P	Parcel 135P	Parcel 175P	Parcel 197P
Parcel 104P	Parcel 138P	Parcel 186P	Parcel 201.
Parcel 112P	Parcel 160P	Parcel 189P	

In concurring with the identification of CERFA Parcels, USEPA noted that the Army identified the following parcels as uncontaminated, although pesticides and herbicides containing hazardous substances may have been applied along the installation boundary fence line:

Parcel 1P	Parcel 36P	Parcel 98P	Parcel 172P
Parcel 4P	Parcel 64P	Parcel 121P	Parcel 175P
Parcel 5P	Parcel 82P	Parcel 158P	Parcel 180P
Parcel 14P	Parcel 84P	Parcel 160P	Parcel 186P
Parcel 15P	Parcel 88P	Parcel 166P	Parcel 187P
Parcel 18P	Parcel 91P	Parcel 169P	Parcel 209P.

USEPA has concurred that these parcels can be considered uncontaminated under CERCLA Section 120(h)(4) because there is no information in the above-referenced documents indicating that the residual levels of pesticides or herbicides, if any, pose a threat to human health or the environment.

However, USEPA's concurrence is contingent upon additional information to be provided by Fort Devens, prior to transfer of these parcels. The information will contain the nature and quantities of pesticides applied or the results of confirmatory sampling to ensure that residual levels of pesticides and herbicides do not pose a threat to human health or the environment.

The Army has identified the following parcels as uncontaminated, although petroleum products or their derivatives may have been released or disposed of, as evidenced by stains on paved areas, parking lots, and runways:

Parcel 35P	Parcel 56P
Parcel 162P	Parcel 169P
Parcel 175P	Parcel 197P
Parcel 198P	Parcel 214P.

USEPA has concurred that these parcels can be considered uncontaminated under CERCLA Section 120(h)(4) because there is no information in the above-referenced documents indicating that the residual levels, if any, of petroleum products or their derivatives on these parcels pose a threat to human health or the environment.

The Army may request USEPA's concurrence on CERFA Parcels with Qualifiers pursuant to Section 120(h)(4) of CERCLA, 42 U.S.C. Section 9620(h)(4). The CERFA Parcels with Qualifiers are identified in the Fort Devens CERFA Report. The USEPA Region I did not have sufficient time to make a determination of concurrence or nonconcurrence regarding these parcels.

3.5 Status of Community Involvement

Community relations activities that have taken place at Fort Devens include the following:

- ▶ Three organizations have been granted formal Cooperating Agency status by the Army: the MGLB, the USFWS, and the four host communities of Ayer, Harvard, Lancaster, and Shirley. The Army entered into a Memorandum of Agreement with the three Cooperating Agencies. The agreement outlines the roles and responsibilities of each member and formulates a Fort Devens Disposal and Reuse EIS Primary Coordination Team, composed of one or more representatives from each agency.
- ▶ The Federal Bureau of Prisons began discussions with the Office of Economic Adjustment, the MGLB, and the communities in January 1992 regarding the siting of a federal prison complex at Fort Devens. During 1992, numerous meetings were held with local and state officials, the MGLB, the Fort Devens Reuse Committee, local residents, the USACE, and the JBOS for the four communities surrounding Fort Devens.
- ▶ On 2 July 1993, the Federal Bureau of Prisons published an Intent to Proceed with the project in the Federal Register. On July 20, 1993, a scoping session was held. The project has been delayed because the USEPA has questioned the Federal Bureau of Prisons's right to proceed in a NEPA process separate from that of the rest of the base. The decision as to whether the Federal Bureau of Prisons must participate in the installation-wide NEPA process or proceed with a separate EIS has not been made.
- ▶ On 30 June 1992, the MGLB submitted an Environmental Notification Form to the Massachusetts Executive Office of Environmental Affairs, Massachusetts Environmental Policy Act (MEPA) Unit for the redevelopment of Fort Devens. In the notification, the MGLB requested that the project be designated as a "Major and Complicated Project." This designation will allow coordination of the MEPA process with the NEPA process, incorporation of additional parcels if they are surplus by the DOD, formation of a Citizen's Advisory Committee, and early review of certain reuse activities. The Environmental Notification Form was published in the Environmental Monitor on 8 July 1992, including the announcement of a comment period ending 29 July 1992. On 26 August 1992, the Massachusetts Secretary of Environmental Affairs (the Secretary) issued a certificate designating Fort Devens as a Major and Complicated Project.
- ▶ On 8 February 1993, the Secretary issued a certificate announcing that Fort Devens closure and reuse programs will require the preparation of an Environmental Impact Report (EIR). The EIR must include an installation reuse plan, an evaluation of existing conditions on the property, an assessment of

potential impacts from the project to existing resources, and mitigation of those impacts.

- ▶ The Draft and Final NEPA EIS's prepared under the Federal NEPA process was submitted to the Secretary as Draft and Final MEPA EIRs for the project. These documents referred to by the Secretary as the Draft and Final Master EIRs. The Fort Devens Redevelopment Citizen's Advisory Committee was formed to provide input to the environmental review of the project.
- ▶ A reuse planning partnership was created between the JBOS of Ayer, Harvard, Lancaster and Shirley, and the MGLB. A series of public meetings have been held by this partnership to develop a reuse plan for Fort Devens, which will be incorporated into the Draft and Final versions of the EIS/EIR.
- ▶ Legislation was passed on 5 January 1994, by the Massachusetts Legislature creating a "Devens Enterprise Commission," which serves as a one-stop permitting board for developers beginning in 1995 on the former Fort Devens Army Base.
- ▶ As part of the Environmental Notification Form for the redevelopment of Fort Devens, the MGLB requested early approval for the reuse of the existing railroad facilities. The public comment period for this project ran concurrently with the comment period for the Environmental Notification Form as a whole. A letter from the Secretary dated 8 February 1993, required that impacts from this proposed intermodal facility be addressed as part of the EIR.
- ▶ Community Relations Plan (CRP). A CRP was prepared for Fort Devens as required by CERCLA, the DOD's IRP, and the FFA. The CRP has the following specific objectives:
 - Ensure the public understands that personal and community health and interests are of paramount concern to the Army.
 - Inform and educate local residents, on-post employees, and local officials of the RD/RA process.
 - Provide local residents, on-post employees, and federal, state, city, and local regulatory officials an opportunity to review and comment on the studies at Fort Devens and on suggested RA alternatives and decisions.
 - Keep the Army sensitive to and informed about changes in community concerns, attitudes, information needs, and activities regarding Fort Devens and use their concerns as factors in evaluating modifications of the CRP as necessary to address these changes.

- Effectively serve the community's information needs and address citizen inquiries through prompt release of factual information through the media and other information dissemination techniques.
 - Effectively respond to the needs of the media by providing timely response to inquiries and requests for interviews and briefings, thereby resulting in accurate reporting of activities at Fort Devens.
 - Create and maintain, through an active public affairs program, a climate of understanding and trust with the aim of providing information and opportunities for comments and discussion.
 - Ensure that appropriate federal, state, city, and local elected officials are informed of results of the investigations and recommended RAs.
 - Provide a single entity for dissemination of information for matters regarding the progress of the contamination assessments, RAs, and other decisions at Fort Devens.
 - Identify issues and potential areas of concern and develop and implement objective means to avoid or resolve conflict.
- ▶ Fact Sheets. Fact sheets are distributed during public meetings and to anyone requesting information.
 - ▶ Public Notification. At certain key events during the restoration process and reuse planning process at Fort Devens, public notices are placed in local newspapers and public service announcements are made available to local radio and television stations.
 - ▶ Information Repositories. Information repositories were established in the main town libraries of the four towns surrounding Fort Devens: Ayer, Lancaster, Harvard and Shirley. An additional repository was established at the Davis Library on Fort Devens. All reports received at the MADEP office from the Army are also available for public review by appointment.
 - ▶ Administrative Record. An administrative record file is kept by the Fort Devens EMO in accordance with CERCLA requirements. Administrative record files are also kept by the USEPA at the USEPA Region I Records Center in Boston, and by the MADEP in the central regional office. An administrative record file index will be drafted during the coming year and copies will be maintained at Fort Devens, MADEP, and USEPA. The index will be updated as needed.
 - ▶ Mailing List. Mailing lists have been developed by the Army, USEPA, and MADEP consisting of parties interested in and involved with the Fort Devens cleanup. These lists are updated as needed.

- ▶ Public Information Meetings. Public information meetings are planned and scheduled to solicit input into the restoration and reuse planning programs occurring at Fort Devens.
- ▶ Formal Public Comment Periods. Thirty-day formal public comment periods are held by the Army for all proposed RA plans. Responsiveness summaries are prepared by the Army following comment periods. The responsiveness summaries address and respond to the comments received during the comment periods. In addition to the formal comment periods held for proposed plans, informal comment periods are held on all primary documents issued during the study and cleanup phases of the process. These comment periods are held for 20 days, during which time both written and oral comments are accepted.
- ▶ Public Hearings. Public hearings are held by the Army during the formal comment periods to record oral comments. A copy of the transcript of the public hearing is made available in the information repositories.
- ▶ Restoration Advisory Board (RAB). A RAB was created in February 1994. Meetings are held monthly and are open to the public. Meetings are announced in the local newspapers and topics of discussion are planned prior to the meetings.

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CHAPTER 4

► INSTALLATION-WIDE STRATEGY FOR ENVIRONMENTAL RESTORATION ◀

This chapter describes the installation-wide environmental restoration and compliance strategy for Fort Devens.

Prior to the official announcement of closure in December 1991, restoration projects were underway to identify, characterize, and remediate environmental contamination at Fort Devens. The restoration strategy implemented during this period focused on protection of human health and the environment at the installation with consideration of the ongoing and continued use of the installation by the Army. With the closure announcement, the installation's strategy shifted from supporting an active Army mission to responding to disposal and reuse considerations. In March 1992, USAEC was assigned the responsibility for managing the BRAC IRP. The Fort Devens environmental restoration strategy was modified to address the new issues of closure and reuse. This strategy has included the completion of an installation-wide RI/FS under the direction of the USAEC, preparation of BRAC EEs, preparation of RDs, and implementation of RAs.

Fort Devens was well advanced in the environmental restoration process prior to the initiation of the BCP. Upon formation of the BCT, a Bottom-Up review of the restoration strategy for Fort Devens was completed to verify that the appropriate restoration actions and regulatory programs applicable to the areas of environmental contamination have been considered and that all possible fast-track cleanup opportunities have been taken in the Fort Devens environmental restoration program.

The overall environmental restoration and compliance strategy for Fort Devens is currently reviewed by the BCT and the Project Team (see Section 1.3). The USAEC continues to provide assistance in the area of site investigation support at the installation. The USACE, New England Division is providing support in areas including RD, RA, compliance program management, and natural and cultural resource management. Fort Devens's strategy is designed to ensure that all regulatory requirements are met and that adequate and cost-effective restorations are implemented as quickly as possible to provide for the expedited disposal and reuse of Fort Devens in compliance with Army and community goals. The installation is scheduled to close July 1997. The current strategy provides for the completion of all site restoration activities by June 1999 with the exception of possible groundwater remediation.

The following sections define various elements of the Fort Devens environmental restoration strategy including the designation of zones and OUs, sequencing of OU restoration actions, early action programs, the remedy selection approach process, and integrated environmental compliance planning. Schedules for the implementation of this strategy are described in Chapter 5.

4.1 Zone/OU Designation and Strategy

The designation of zones and OUs as part of the environmental restoration process has been found to be valuable in evaluating sites and developing cleanup strategies at installations. Zones define an installation's investigative strategy. They are tools for organizing and defining areas of investigation. OUs define an installation's remedial strategy. They are derived from an evaluation of hydrogeologic and chemical analytical data within an investigative zone, or by comparing data between zones. OU types may be based on geographic area, common media (soil, groundwater, surface water, other), common treatment technology, priorities, or schedules.

The strategies for designating zones and OUs at Fort Devens are described in the following subsections.

4.1.1 Zone Designations

Fort Devens' Main and North Posts were originally divided into five zones for investigative studies. The zones were the North Post Zone, the Industrial Zone, the Willow Brook Zone, the Mirror Lake Zone, and the Nashua River Zone. Since the identification of reuse parcels and districts, these zone designations are no longer used to identify specific areas on the installation.

4.1.2 OU Designations

Fifteen OUs were designated during the RI as sources of contamination at Fort Devens. Factors considered in the OU designation process at Fort Devens included:

- ▶ Geographic location;
- ▶ Common contaminants or contamination source;
- ▶ Common contaminated media/pathways; and
- ▶ Common treatment technology.

The following is a summary of the 15 OUs that are located on the Main, North, and South Posts of Fort Devens:

- ▶ **Shepley's Hill Landfill Groundwater OU:** This OU is defined by the contaminated groundwater that flows beneath Shepley's Hill Landfill (AOC 5). The sanitary landfill incinerator (Building 38, AOC 4) and Landfill No. 1 Asbestos Cell (AOC 18) are also included in this OU.
- ▶ **Plow Shop/Grove Ponds OU:** The Plow Shop Pond and Grove Pond (AOC 72) are not located on Fort Devens, but are located directly northeast and adjacent to Shepley's Hill Landfill. Plow Shop Pond and Grove Pond have received contaminated groundwater from Shepley's Hill Landfill over the years.
- ▶ **Cold Spring Brook Landfill OU:** Construction/demolition debris and five unmarked empty drums were disposed in Cold Spring Brook Landfill (AOC 40).

Sediments, soils and groundwater surrounding the landfill are contaminated with arsenic, mercury, and chromium.

- ▶ **Barnum Road Maintenance Yard OU:** This OU is composed of the Cannibalization Yard (AOC 44) and the TDA Maintenance Yard (AOC 52). The soil at this OU is contaminated with petroleum products and organic chemicals.
- ▶ **DRMO Yard OU:** The DRMO Yard (AOC 32) is located at Building P-204. The yard stores vehicles, batteries, scrap metal, and old tires. The soil at the DRMO Yard is contaminated with petroleum products, solvents, and metals. The groundwater beneath the former waste oil UST (UST No. 13) is contaminated with petroleum products and solvents.
- ▶ **POL Storage Area OU:** The POL Storage Area, located in former Building 186, is also known as AOC 43A. Four 12,600-gallon USTs and one 10,000-gallon UST were removed from the site in 1992. The tanks were structurally sound, so soil contamination is believed to be from loose piping or overfilling. Groundwater of the site contained no detectable concentrations of total petroleum hydrocarbons.
- ▶ **Lovell Street Landfill OU:** Lovell Street Landfill (AOC 11) was active from 1975 to 1980. The landfill is approximately 2 acres in extent. The landfill was covered and graded after closure. This is a multimedia OU that includes the groundwater, soil, sediments, and surface water in and around AOC 11.
- ▶ **South Post Groundwater OU:** The AOCs that are contributing to this OU are AOCs 25, 26, and 27. Explosives have been found in the groundwater in the vicinity of these sites. AOC 41 may also be contributing to the groundwater contamination.
- ▶ **Harvard Road Dump Site OU:** This site (AOC 41) is located in the southeastern portion of the South Post along a small feeder creek of the Nashua River. The appearance of the rubbish suggests household debris was disposed there. This is a multimedia OU that includes groundwater, soils, sediments, and surface water in the area surrounding the AOC.
- ▶ **AAFES Gas Station OU:** This former gas station was originally located in Building 174 and had a single 5,170-gallon UST. The site is also known as AOC 43G. The soil and groundwater at this site are contaminated with petroleum products and organic chemicals.
- ▶ **Headquarters 10th Special Forces OU:** This former gas station was originally located in Building 177 and had a single 5,170-gallon UST. The site is also known as AOC 43J. The soil and groundwater at this site are contaminated with petroleum products and organic chemicals.

- ▶ **North Post Landfill OU:** The North Post Landfill is also known as Landfill No. 5 and AOC 9. Construction debris, demolished buildings, and tree stumps were placed in this landfill. Access to the landfill was not controlled during the period of operation so the extent of unauthorized dumping is not known. A portion of the landfill also contains abandoned cars. An RI for this site is planned.
- ▶ **Barnum Road Spill OU:** This spill site (AOC 57) is located at Building 3713. In 1978, a major spill of several thousand gallons of No. 4 fuel oil occurred. The spill was caused by the accidental overfilling of a 30,000-gallon UST. The fuel oil was intercepted by storm drains that discharge to Cold Spring Brook.
- ▶ **Building 215 Spill Site OU:** This spill site is also known as AOC 69W. It is believed No. 4 fuel oil spilled during a tank filling event.
- ▶ **Building 2517 Waste Oil UST OU:** This waste oil UST (AOC 63AX) was removed and discovered to be leaking. The soil is contaminated with petroleum products and heavy metals.

At this time, SIs and RIs at Fort Devens have not been completed for all sites. It is probable that additional OUs will be identified in the future, and it is likely that additional OUs will be site-specific. Each of the OUs designated at Fort Devens are depicted in Figure 3-1. The relationship between OUs, sites, and reuse parcels is presented in Table 4-1.

4.1.3 Sequence of OUs

A comprehensive environmental restoration strategy has been developed by the Fort Devens BCT. This strategy consolidates AREEs identified in the EnPA into OUs for investigation in the RI/FS (see Section 4.1.2), and then defines a logical sequence of OU RA to address all past releases associated with these sites. The following sections outline this sequencing strategy.

4.1.3.1 Sequencing Strategy. The Fort Devens BCT has developed an approach to identify the logical sequence of OU site investigation and restoration activities. The 15 OUs at Fort Devens were assessed at different times and included in several investigations. The sequencing of OUs was determined from the following criteria:

- ▶ Expedited completion of early actions to mitigate existing environmental hazards.
- ▶ Consideration of time constraints and compliance hammer dates.
- ▶ Consideration of community reuse planning priorities in sequencing decisions.
- ▶ Completion of site restoration at locations where environmental condition directly impacts reuse in advance of long-term site restoration activities that may not affect site reusability.

TABLE 4-1. RELATIONSHIP BETWEEN OUs, SITES, AND REUSE PARCELS

Operable Unit	Site	Reuse Parcel
Shepley's Hill Landfill Groundwater OU	AOC 4, 5, 18	Q
Plow Shop/Grove Pond OU	AOC 71	Off the installation
Cold Spring Brook Landfill OU	AOC 40	Z
Barnum Road Maintenance Yard OU	AOC 44, 52	R, S
DRMO Yard OU	AOC 32	Q
POL Storage Area OU	AOC 43A	Q
Lovell Street Landfill OU	AOC 11	Z
South Post Groundwater OU	AOC 25, 26, 27	South Post
Havard Road Dump Site OU	AOC 41	South Post
AAFES Gas Station OU	AOC 43G	H
Headquarters 10th Special Forces OU	AOC 43J	H
North Post Landfill OU	AOC 9	X
Barnum Road Spill OU	AOC 57	R, S, Z
Building 215 Spill Site OU	AOC 69W	O
Building 2517 Waste Oil UST OU	AOC 63AX	D

- ▶ Identification of OUs/sites with significant unresolved issues through the OU designation process.
- ▶ Scheduling of RIs and RAs for sites off-line of the primary Fort Devens schedule in order to prevent delays on sites with limited unresolved issues.

The strategy for OU development has been developed by the Fort Devens BCT. The OUs associated with Shepley's Hill Landfill and Cold Spring Brook Landfill (AOCs 4, 5, 18, and 40) were identified in the MEP as the highest priority (Priority 1A) for remediation. As such, these sites proceeded directly to an RI without an SI. All other OUs have been identified through the SI process. As described in Chapter 3, the SI Data Package identified sites recommended for RI/FS. The SIs were also done on a priority basis; therefore, the OUs resulting from these follow the same general sequence as that outlined in the MEP. The exception to this is the Barnum Road Maintenance Yard OU, which was accelerated from the SI stage and is expected to have the first ROD signed.

The following general strategy is applied to the sequence of investigation/study of all OUs:

- ▶ If applicable, removal actions for source control will be implemented as early as possible. One example of this is at the DRMO Yard, where PCB-contaminated scrap was removed before the start of the RI.
- ▶ With multi-media OUs, where there is a single source, remediation strategies are developed for the primary pathway before the secondary pathway. For example, at Shepley's Hill Landfill, the landfill is thought to be contaminating groundwater, which in turn is contaminating nearby Plow Shop Pond and Grove Pond. In this case, the groundwater OU is sequenced before the pond OU, to ensure source control is accomplished before the receiving water body is remediated.

The sequence of OUs are shown in Table 4-2. The sequence is based on the most current date of the Proposed Plans and RODs submitted for each OU. For example, the first Proposed Plan and ROD is expected for the AOC 44 and AOC 52 OU, and the second Proposed Plan and ROD is expected for the Shepley's Hill and Cold Spring Brook Landfills OUs.

4.1.3.2 Remediation Timelines and Documents. Several environmental studies have been completed at this installation in an effort to identify sites, determine degree and extent of contamination, evaluate risk, and identify and implement RAs. Figure 4-1 identifies the timeline for the completion of those documents. The schedule was developed using a critical path analysis method with the following components:

- ▶ **Critical.** Critical jobs are those in which any extension in their duration will cause an equivalent delay in the project. This is often referred to as the critical path.
- ▶ **Noncritical.** Noncritical jobs are usually subtasks required to accomplish the critical job. The start and end dates may be varied within the project parameters.

TABLE 4-2. CLEANUP SEQUENCE

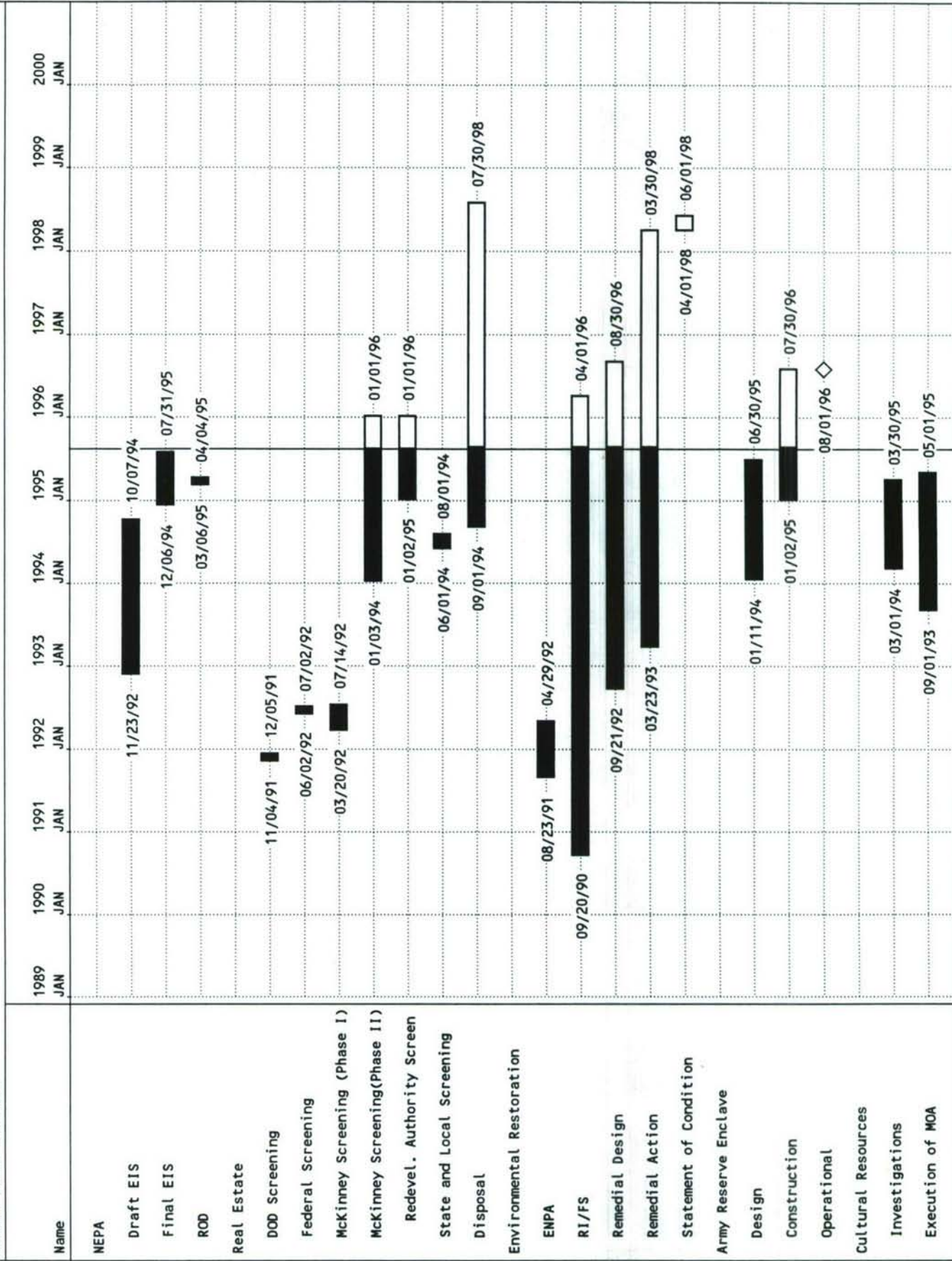
Reuse Parcel	OU	Environmental Risk	Proposed Reuse	Priority	Cleanup Sequence	Reconcile Comments
R, S	Barnum Road Maintenance Yard	None after remediation	Industrial and Rail Related Use	1	1	TBD
Q	Shepley's Hill Landfill Groundwater	Groundwater contamination	Industrial and Rail Related Use	2	2	TBD
Off the installation	Plow Shop and Grove Ponds	Groundwater contamination	Not applicable	TBD	TBD	TBD
Z	Cold Spring Brook Landfill	Groundwater contamination	Open Space/ Recreation	TBD	2	TBD
Q	DRMO Yard	None after remediation	Industrial and Rail Related Use	TBD	3	TBD
Q	POL Storage Area	None after remediation	Industrial and Rail Related Use	TBD	4	TBD
South Post	South Post Groundwater	Groundwater contamination	Reserve Enclave	TBD	TBD	TBD
South Post	Harvard Road Dump Site	Groundwater contamination	Reserve Enclave South Post Training Area	TBD	TBD	Groundwater monitoring by Army
H	AAFES Gas Station	Groundwater contamination	Business/Community Services	TBD	TBD	TBD
H	Headquarters 10th Special Forces	None after remediation	Transitioned Use: Army Reserve Enclave	TBD	TBD	TBD
X	North Post Landfill	None after remediation	Environmental Business	TBD	TBD	TBD
R, S	Barnum Road Spill Site	Groundwater remediation	Reserve Enclave South Post Training Area	TBD	TBD	TBD
O	Building 215 Spill Site	None after remediation		TBD	TBD	TBD
D	Building 2517 Waste Oil UST	None after remediation	Innovation and Technology Business	TBD	TBD	TBD
Z	Lovell Street Landfill	Groundwater contamination	Open Space/ Recreation	TBD	5	TBD

Key: TBD = To Be Determined

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PROJECT: Fort Devens
 MANAGER: James Chambers
 CURRENT DATE: 08/14/95

Fig 4-1 Primary Schedule



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- ▶ **Baseline.** A set of "original" schedule dates that can be compared with the current schedule to determine if the project has slipped.
- ▶ **Completed Duration.** A measure in time periods of the portion of a job that is completed.
- ▶ **Milestone.** A project event that represents a checkpoint, a major accomplishment, or a deliverable result.
- ▶ **Total Float.** The total length of time that a noncritical job can be delayed before it causes the project or a critical job to slip or causes a job to not meet its target date.
- ▶ **Free Float.** The length of time a noncritical job can be delayed without affecting another job.
- ▶ **Delay.** A waiting period that prevents the job from starting at its earliest possible start time.
- ▶ **Conflict.** The amount of time a job overruns its target date. This is also called "negative float."

4.1.4 Environmental Restoration Early Actions Strategy

The SI Data Package concept was developed to accelerate the early action decision making process. The purpose of the SI Data Package is to evaluate the absence or presence of contamination, and, if present, the potential pathways of contaminant migration and potential risks to human and ecological receptors at each SA. The SI Data Package provide tabulated chemical data, field observations, and interpreted data for a preliminary site evaluation. Based on the results of the preliminary site evaluation, one of the following recommendations will be made:

- ▶ **No Further Action:** Once an SA has been identified as requiring no further action, an NFA decision document will be prepared and submitted for the BCT's approval and signature.
- ▶ **Initiate an Immediate Removal or Interim Action:** Once an SA has been identified as requiring an immediate removal or interim action, USACE, New England Division will be notified by Fort Devens to start the removal action. Once the removal action has been completed and if the SA has no significant residual contamination, an NFA document will be prepared and submitted for BCT approval.
- ▶ **Perform a Supplemental SI or RI/FS:** In some cases, supplemental SI work may be recommended for a particular SA to fill data gaps. The results of the supplemental SI will be used to determine if preparation of an NFA document, a removal/interim action, or an RI/FS is needed.

The SI Data Package is usually submitted 30 to 45 days after the chemical data is available in the Installation Restoration Data Management Information System.

The early actions currently planned as part of the Fort Devens compliance program to remove contamination sources and reduce risk posed by releases or potential releases were not available at the time this version of the BCP was to be finalized. Planned early actions will be identified in Table 4-3 in the future.

TABLE 4-3. ENVIRONMENTAL RESTORATION PLANNED EARLY ACTIONS

Site	Action	Objective	Time Frame
	Planned early actions at Fort Devens were not available at the time of document completion. This table is provided for future updates to the BCP.		

4.1.5 Remedy Selection Approach

SIs at Fort Devens have been completed at this time. Supplemental SIs are currently being conducted at several sites. Remedies for each of the OUs will be selected in accordance with statutory and NCP criteria and CERCLA as described below.

Particular attention will be given to the following during the evaluation of alternatives:

- ▶ **Applicable or Relevant and Appropriate Requirements (ARARs):** Applicable requirements for anticipated RAs will be identified by the Project Team for each OU separately. The effectiveness of alternatives in reducing concentrations of contaminants to chemical-specific ARARs will be evaluated. Chemical-specific ARARs set health- or risk-based concentration limits or discharge limitations in various environmental media for specific hazardous substances, pollutants, or contaminants.
- ▶ **Land Use/Risk Assessment:** The reuse of any parcel of land defines the required level of remediation. Risk assessment exposure scenarios that were consistent with the reuse of the installation as proposed in the CRP were developed during the RI process.
- ▶ **Applicable Remedies:** Focused FSs will be utilized to accelerate remedy selection at sites where contaminants are restricted to a single media. Additionally, the generic remedy approach will also be used, where applicable. At complex and/or multimedia sites, the standard evaluation of remedial alternatives through a detailed FS approach will occur.

As defined in the FFA, this process involves two secondary documents and one primary document. First, an Initial Screening of Alternatives will be published. This document describes alternatives considered for remediation of the site and describes those that may be feasible at the OU. Under the Fort Devens Acceleration Plan, this document is published at the same time as the draft RI report. Next, a Detailed Screening of Alternatives is published. This document reviews the alternatives retained for further evaluation after the initial screening and selects those that may be appropriate for the site and should be considered in the FS report. This document is published before the FS report. The FS report considers the retained alternatives and identifies preferred remedial alternatives. Selection of the remedial alternative occurs in the Proposed Plan.

- ▶ **Soil Remedies:** Fort Devens has developed General Management Procedures for Excavated Waste Site Soils. These procedures were developed to address management of petroleum-contaminated soils at Fort Devens. The procedures focus upon the reuse of soil waste generated during remediation. Soil is classified into four general categories:
 - Category A - Soils may be reused anywhere at Fort Devens and contain contaminant concentrations at or below background levels.
 - Category B - Soils may be reused at Fort Devens for industrial purposes.
 - Category C - Soils can only be placed under the final cover of an approved solid waste landfill.
 - Category D - Soils cannot be reused at Fort Devens under any circumstances without treatment.

The General Management Procedures for Excavated Waste Site Soils provide only general guidance for the reuse of soils. For individual sites, treatment and characterization requirements are determined using the site-specific Excavated Soils Management Plan. This plan will specify sampling requirements to characterize soils. After characterization, the soil may be immediately reused following the General Management Procedures or undergo treatment prior to reuse. For example, after excavation and characterization, if a soil pile is determined to be Category C, the Excavated Soils Management Plan may direct the placement of soils under the final cover of an approved solid waste landfill.

4.2 Compliance Strategy

This section describes the strategies for addressing compliance-related environmental issues at Fort Devens prior to installation closure and/or property transfer. These environmental compliance strategies have been developed to ensure that installations are compliant with federal and state regulatory programs, DOD, and Army directives and regulations throughout the BRAC process.

Early actions that are planned as part of the Fort Devens compliance program to remove contamination sources and reduce risk posed by releases or potential release are UST removals as outlined in the Fort Devens UST Management Program. The USTs are scheduled to be removed in Fiscal Year 1995 and are listed in Table 4-4.

A description of strategies and schedules for individual compliance programs is provided in the following sections.

4.2.1 Storage Tanks

The following strategies have been developed to manage USTs and ASTs at Fort Devens.

4.2.1.1 USTs. The UST program compliance activities at Fort Devens will continue. A BRAC UST management plan has been developed to evaluate AREE 62 - Existing USTs. The management strategy for the installation's USTs was developed to meet two requirements: accommodate the installation's mission, which includes the provision of heat and fuel to the buildings at Fort Devens while the installation is still active, and closure of UST systems not needed prior to closure and transfer of property. Fort Devens will have an active mission until July 1997. Approximately half of the installation's over 400 USTs have been removed at this time. UST systems are removed in compliance with MADEP regulatory requirements for tank closure. Table 3-8 lists the former and active USTs at Fort Devens.

4.2.1.2 ASTs. The 29 ASTs at Fort Devens will remain active and in compliance until the installation's closure date of July 1997. There are currently no plans to remove these tanks. Table 3-9 lists the ASTs at Fort Devens.

4.2.2 Hazardous Substances Management

Hazardous substances at Fort Devens will continue to be managed in compliance with federal requirements outlined in the SARA Title III and SPCC requirements in 40 CFR 110 and 112, MADEP regulations, AR 200-1 and other applicable federal, state, and local regulations.

Hazardous substance inventories and MSDSs will continue to be maintained at the installation until closure. Spill response coordination with installation and local emergency response agencies will continue. Fort Devens will continue to follow the guidance set forth in the Fort Devens Pesticide Management Plan when dealing with pesticides. Tenants have been instructed that all hazardous substances currently sited at their locations must be managed properly in accordance with applicable regulations. As a precaution, the installation will be conducting a close-out survey of each tenant activity to ensure that no hazardous substances are left after the tenants vacate the property.

4.2.3 Hazardous Waste Management

Hazardous waste generated at Fort Devens will continue to be managed in compliance with federal, state, and Army regulations. Wastes generated at the installation will be properly stored at Building 1650 before being transported off-site for disposal by a licensed hazardous waste

TABLE 4-4. ENVIRONMENTAL COMPLIANCE PLANNED EARLY ACTIONS

Building No.	Action	Objective	Time Frame
3	Remove UST	Compliance	Fiscal Year 1995
1456	Remove UST	Compliance	Fiscal Year 1995
250	Remove UST	Compliance	Fiscal Year 1995
250	Remove UST	Compliance	Fiscal Year 1995
250	Remove UST	Compliance	Fiscal Year 1995
250	Remove UST	Compliance	Fiscal Year 1995
250	Remove UST	Compliance	Fiscal Year 1995
250	Remove UST	Compliance	Fiscal Year 1995
1004	Remove UST	Compliance	Fiscal Year 1995
1004	Remove UST	Compliance	Fiscal Year 1995
1014	Remove UST	Compliance	Fiscal Year 1995
1014	Remove UST	Compliance	Fiscal Year 1995
1404	Remove UST	Compliance	Fiscal Year 1995
1404	Remove UST	Compliance	Fiscal Year 1995
2500	Remove UST	Compliance	Fiscal Year 1995
2501	Remove UST	Compliance	Fiscal Year 1995
2504	Remove UST	Compliance	Fiscal Year 1995
2506	Remove UST	Compliance	Fiscal Year 1995
2518	Remove UST	Compliance	Fiscal Year 1995
2527	Remove UST	Compliance	Fiscal Year 1995
2538	Remove UST	Compliance	Fiscal Year 1995
2539	Remove UST	Compliance	Fiscal Year 1995
2542	Remove UST	Compliance	Fiscal Year 1995
2544	Remove UST	Compliance	Fiscal Year 1995
3810	Replace UST with Propane AST	Compliance	Fiscal Year 1995

hauler. The tenant close-out surveys for hazardous materials to be conducted after tenants vacate will include hazardous waste.

The installation's hazardous waste storage facility currently operates under a RCRA Part B permit. This facility will require closure under an approved closure plan prior to closure of the installation. Satellite accumulation points and 90-day storage areas monitored by the EMO will be surveyed prior to closure to ensure that no hazardous wastes are left on BRAC property.

4.2.4 Solid Waste Management

The installation's permitted solid waste municipal landfill, Shepley's Hill Landfill, has closed under an approved closure plan. Currently, the installation has contracted solid waste pick-up and disposal to an outside contractor. It is anticipated that this will be the continued method of solid waste management in the Reserve Enclave after closure. In addition, tenant agencies have been instructed that, until they vacate, all solid wastes currently sited at their locations must be managed properly in accordance with applicable regulations.

4.2.5 Polychlorinated Biphenyls

The installation has removed all PCB transformers with greater than 500 ppm PCB from service. The installation is currently undergoing a program to systematically replace all PCB-contaminated transformers (containing 50 to 500 ppm PCB) prior to closure. Remediation is planned for four sites where PCB-contaminated oil was released to the soil.

4.2.6 Asbestos

Asbestos at Fort Devens will continue to be managed in compliance with the DA policy "Asbestos, Lead Paint, and Radon Policy at BRAC Properties," 31 October 1994. The Army policy on asbestos is to manage in place. The BRAC EE for AREE 65 will include an installation-wide assessment for asbestos. Testing of the buildings suspected to contain asbestos was completed February 1995 and the report was issued in May 1995. Removal or encapsulation of ACM will continue according to the results of the survey.

4.2.7 Radon

Fort Devens has an ongoing radon management and mitigation program which will continue until installation closure. In April and June 1993, radon mitigation efforts were attempted for 12 structures. The efforts included sealing cracks and vents in structure foundations. Retesting of the radon concentration in the structures to verify the success of mitigation efforts was not conducted.

4.2.8 RCRA Facilities

The hazardous waste storage facility at Building 1650, the waste explosive storage bunker (Building 3644), and the EOD range are all operational. A closure plan for Building 1650 has been developed. These three facilities will be closed in accordance with RCRA requirements

prior to the installation's closure or the permit and interim status will be transferred to the Reserve Enclave.

4.2.9 Wastewater Discharges

Fort Devens is participating in a study to obtain a Army "group" NPDES permit. Further strategy will be developed as the status of the permit process is clarified.

4.2.10 Oil/Water Separators

Oil/water separators will continue to undergo routine maintenance by the installation. Following closure of the North and Main Posts, maintenance of the oil/water separators will be the responsibility of the Reserve Enclave.

4.2.11 Pollution Prevention

Fort Devens will continue to maintain their pollution prevention program at the installation until closure. The possibility of recycling any materials during remedial activities will be considered during the design phase.

4.2.12 NRC Licensing

A radiation survey is being conducted to delist Fort Devens from the two Army-wide NRC licenses. These NRC licenses were for use of radioactive materials such as compasses, rifle sights, watches, and sources for test and calibration equipment. The licenses were held by the U.S. Army Armament Material Readiness Command at Rock Island Arsenal, Rock Island, Illinois, and the U.S. Army Communications and Electronics Command, Fort Monmouth, New Jersey.

4.2.13 Mixed Waste

No mixed waste is generated at Fort Devens; therefore, there are no compliance requirements or strategies under this program for the installation.

4.2.14 Radiation

No radioactive wastes are generated at Fort Devens; therefore, there are no compliance requirements or strategies under the program for the installation.

4.2.15 Lead-Based Paint

The Fort Devens lead-based paint management program will continue to be conducted in accordance with U.S. Department of Housing and Urban Development guidelines for lead-based paint protection and the DA policy "Asbestos, Lead Paint, and Radon Policies at BRAC Properties," 31 October 1994. A total of 181 housing units and the chapel have been sampled for lead paint. The report for the findings was completed in June 1995. Based upon the results,

recommendations for operations and maintenance as well as property disposal will be made. Any future actions will incorporate both Army guidance and the MADEP regulations addressing lead-based paint. Should an existing building be used as a homeless shelter, the Army will evaluate the impacts of lead-based paint within that building.

4.2.16 Medical Waste

All medical waste will continue to be incinerated off-post by a licensed contractor until closure. The installation hospital is closed, but the Vail Troop Medical Clinic continues to see active military personnel for medical and dental needs.

4.2.17 Unexploded Ordnance

A UXO report and site survey for the Main and North Posts is scheduled to be completed during 1995-1996. The archive study report was completed March 1995 and a preliminary site survey was initiated in April 1995. The survey is scheduled to be completed in March 1996. The survey is being conducted by the USACE, Huntsville Division.

4.2.18 National Environmental Policy Act

A Disposal and Reuse EIS has been completed for Fort Devens. Currently, Fort Devens does not have plans to produce additional NEPA documentation. Fort Devens will continue to evaluate all applicable Army actions at the installation in compliance with NEPA requirements.

4.2.19 Air Emissions

There is an air emission permitting program administered by the MADEP. An air emission source inventory is currently being conducted.

4.3 Natural and Cultural Resources Strategy(ies)

This section describes the strategies for natural and cultural resource programs at Fort Devens developed to manage these resources throughout the BRAC cleanup and installation closure process.

4.3.1 Vegetation

Fort Devens will continue to manage the existing forests according to AR 420-74 regarding Natural Resources. Forests are managed on a sustained yield basis and prescribed burns are practiced on the South Post in the impact areas to control shrubby undergrowth and dry forest litter.

4.3.2 Wildlife

The Survey and Evaluation of Wetlands and Wildlife Habitat identified Fort Devens as containing wildlife habitats recognized as a priority for protection at both the federal and state

levels. The area includes diverse habitats and unique communities and supports many federal and state species of concern. Fort Devens will continue to maintain the existing wildlife habitats until closure. A large portion of the North and Main Posts will be transferred to the Oxbow National Wildlife Refuge as a "greenway" along the Nashua River.

4.3.3 Wetlands and Flood Plains

Fort Devens has extensive wetlands that would be subject to permitting through Section 404 of the Clean Water Act if dredging or filling activities were required. The Army will continue to comply with wetland regulations through disposal of the property. The USACE wetlands survey is still ongoing.

4.3.4 Designated Preservation Areas

There are currently no designated preservation areas identified at Fort Devens. The installation will integrate into the reuse plan any areas that may be identified as designated preservation areas.

4.3.5 Rare, Threatened and Endangered Species

Fort Devens will continue to maintain the existing ecosystems that support rare, threatened, and endangered plant and animal species until closure.

4.3.6 Cultural Resources

The Historic Inventory Survey recommends further study and evaluation to prepare National Register of Historic Places documentation for two individual properties: the Red Cross Building and the Garage; for one site, the Cemetery (individually or as part of the Fort Devens Historic District); for the one object, the Sniper Tree; and for the two historic areas, the Quartermaster Area and the Civilian Military Training Camp Area. Additional research has been recommended to establish a national context for the Quartermaster Area and the Civilian Military Training Camp Area. The Willard Farm was evaluated as potentially eligible for National Register listing as a farmhouse with an associated archaeological site component, pending the results of ongoing archaeological investigations.

Modern buildings, sites, structures, and objects should be reevaluated as they reach 50 years of age. Further study and evaluation activities will be determined by the USACE, the State Historic Preservation Officer, and the Advisory Council for Historic Preservation.

The Archaeological Inventory Survey recommends further research to assess site eligibility for the National Register of Historic Places of the 11 identified prehistoric sites and 18 historic sites on BRAC property. Avoidance and preservation in place is recommended for these sites. Further study and evaluation activities for these sites will be determined by the Army, the USACE, the State Historic Preservation Officer, and the Advisory Council for Historic Preservation.

4.4 Community Involvement/Strategy

Fort Devens has adopted the following strategy to support a proactive community relations program:

- ▶ The completed Final EIS was released July 1995.
- ▶ The CRP was approved during December 1994.
- ▶ Coordination with the Cooperating Agency in determining the future land uses of Fort Devens will continue.

Fort Devens will continue to implement the CRP by ensuring the following:

- ▶ Continue to update the existing CRP.
- ▶ Maintain the administrative record, mailing lists, and information repositories. The locations of the five information repositories for Fort Devens are as follows:

1. Fort Devens
Davis Library
Building 2001
MacArthur Avenue
Fort Devens, MA 01433
(508) 796-2431

3. Lancaster Public Library
Main Street
Lancaster, MA 01523
(508) 368-8928

2. Hazen Memorial Library
Number 6, Lancaster Road
Shirley, MA 01464
(508) 425-9645

4. Harvard Public Library
Fairbank Street
Harvard, MA 01451
(508) 456-4114

5. Ayer Public Library
26 East Main Street
Ayer, MA 01432
(508) 722-2257

- ▶ Continue to provide information and support in the development of fact sheets, public notifications, public information meetings, and public hearings.
- ▶ Continue to conduct monthly RAB meetings.

CHAPTER 5

► ENVIRONMENTAL PROGRAM MASTER SCHEDULES ◀

The environmental program master schedules for Fort Devens are updated on a quarterly basis and presented in the Fort Devens Quarterly Report. To obtain a copy of the most recent Quarterly Report for Fort Devens, the Fort Devens BRAC Office may be contacted at (508) 796-3814, extension 308. Each of the schedules in the Quarterly Report displays the critical path analysis for the respective installation program. Components in each analysis include critical and noncritical path, baseline, completed duration, milestones, float, delay and conflict. These components are defined in Section 4.1.3.

5.1 Environmental Restoration Program

This section presents response schedules and outlines fiscal year requirements for Fort Devens environmental restoration program.

5.1.1 Response Schedules

The installation's ability to meet the milestones shown in the Quarterly Report hinges on (1) the preparation of draft RI reports and baseline risk assessments, (2) the review of these documents by the MADEP and USEPA Region I, and (3) the discovery of additional sources. The schedules in the Quarterly Report are based on the following general time periods between documents:

- ▶ Comments on all primary and secondary documents are submitted within 45 days of publication of a document. Comment response packages are submitted either within 45 days of receipt of comments or concurrently with the final version of a document.
- ▶ The SI Data Package (which replaces the draft SI Report, a primary document) is published no later than 60 days after the collection of the second round of groundwater samples.
- ▶ The final SI report (a primary document) is published 90 days after regulatory comments are received on the data package.
- ▶ The Risk Assessment Approach Plan (a secondary document) is published no later than 90 days prior to the draft RI report.
- ▶ The draft RI Report (a primary document) is published no later than 150 days after the collection of the second round of groundwater samples.

- ▶ The final RI Report (a primary document) is published no later than 90 days after receipt of comments on the draft RI report.
- ▶ The Initial Screening of Alternatives (a secondary document) is published no later than 60 days after publication of the final RI report.
- ▶ The Detailed Screening of Alternatives (a secondary document) is published no later than 60 days after receipt of comments on the Initial Screening of Alternatives document.
- ▶ The draft FS Report (a primary document) is published no later than 90 days after receipt of comments on the Detailed Screening of Alternatives Report.
- ▶ The final FS Report (a primary document) is published no later than 90 days after receipt of comments on the draft FS report.
- ▶ The draft Proposed Plan (a primary document) is published concurrently with the final FS report.
- ▶ The final Proposed Plan (a primary document) is published no later than 30 days after receipt of comments on the draft PP (this is also the start of the 30-day public comment period).
- ▶ The draft ROD (a primary document) is published no later than 60 days after the end of the public comment period.
- ▶ The final ROD (a primary document) is published no later than 30 days after the draft ROD.
- ▶ The Remedial Design/Remedial Action (RD/RA) phase schedules are currently under revision, as described in Section 6.9. The following primary documents, as specified by the FFA, are included in the RD/RA phase: RD/RA Work Plan, RD, final RD, and project close-out report. The following secondary documents are included in the RD/RA phase: pre-remedial design, construction quality assurance/quality control (QA/QC) plan, pre-final RD, and Contingency Plan.

The schedules detailed in the Quarterly Report include the following information:

- ▶ **NEPA**
 - Draft EIS 11/23/92 - 10/7/94
 - Final EIS 12/6/94 - 4/3/95
 - ROD 3/4/95 - 9/4/95
- ▶ **Real Estate**
 - DOD Screening 11/4/91 - 12/5/91
 - McKinney Screening Phase I 3/20/92 - 7/14/92

Mckinney Screening Phase II	4/93 - 5/93
Federal Screening	6/12/92 - 7/2/92
State and Local Screening	6/94 - 7/94
Disposal	9/94 - 7/98
▶ Environmental Restoration	
Enhanced Preliminary Assessment	8/23/91 - 4/29/92
RI/FS	9/2/90 - 3/96
Remedial Design	9/21/92 - 8/96
Remedial Action	3/23/93 - 3/98
Statement of Condition	4/98 - 5/98
▶ Enclave Design and Construction	
Design	1/11/94 - 6/95
Construction	1/95 - 7/96
ROD	7/1/96

5.1.2 Requirements by Fiscal Year

The detailed requirements information by fiscal year was provided by the BCT and is incorporated into this document by reference. The tables in Appendix A to this document provide summary information on funding requirements.

5.2 Compliance Programs

This section presents master compliance schedules and outlines fiscal year requirements for Fort Devens' environmental compliance programs. Mission-related and closure-related programs are scheduled separately.

5.2.1 Master Compliance Schedules

The compliance schedule for mission/operation-related compliance programs and closure-related compliance programs for Fort Devens are also provided in the Quarterly Report.

5.2.2 Requirements by Fiscal Year

The detailed requirements information by fiscal year was provided by the BCT and is incorporated into this document by reference. The tables in Appendix A to this document provide summary information on funding requirements.

5.3 Natural and Cultural Resources

Master natural and cultural resources activity schedules are provided in the Quarterly Report.

5.3.1 Natural and Cultural Resources Schedule(s)

The natural and cultural resources schedule for past projects at Fort Devens is provided in the Quarterly Report.

5.3.2 Requirements by Fiscal Year

The detailed requirements information by fiscal year was provided by the BCT and is incorporated into this document by reference. The tables in Appendix A to this document provide summary information on funding requirements.

5.4 Meeting Schedule

Meetings are scheduled to promote an expedited restoration schedule for Fort Devens. The BCT meets twice each month, and the RAB meets monthly. Topics of discussion are determined prior to these meetings.

CHAPTER 6

► TECHNICAL AND OTHER ISSUES TO BE RESOLVED ◄

This chapter summarizes technical and other issues that are yet to be resolved. These issues include information management; usability of historical data; data gaps; natural (background) levels of elements and compounds in soil, groundwater, surface water, and sediments; risk assessment; state cleanup standards; and program initiatives to complete cleanup requirements as required to meet property transfer schedules.

6.1 Information Management

This section summarizes unresolved issues pertaining to information management in the installation environmental restoration program.

6.1.1 BCT Action Items

Open issues exist in the areas of Geographic Information System (GIS) input and system responsibility. Currently, a large portion of the data generated by the various agencies studying Fort Devens is entered into the GIS system, maintained by the MADEP in their Central Region Office in Worcester. The BCT needs to develop the following issues.

Long-Term GIS System Responsibility. A long-term strategy for data entry, maintenance, and use of the consolidated GIS system is needed. This will be particularly important as projects move from the study phase into the remediation and reuse phases. The potential for application of the GIS system will increase, as will the number of users.

GIS Data Standards, Input, and Data Request Procedures. Standards for data quality need to be developed for input into the GIS system. Additionally, administrative protocols for data input and data retrieval need to be created.

One-Time GIS Update from IRDMIS. The GIS system needs to be updated with data that is in the Army's IRDMIS system. While the MADEP can access the data base through a modem, a one-time transfer via magnetic medium would be less time consuming.

60-Day and 90-Day Data Submittal Standardization. A standard format for the 60-day and 90-day submittals that the Army is required to prepare under the FFA needs to be developed. Currently, the Army's contractors submit data in different formats, which makes translation into the GIS system difficult.

6.1.2 Rationale

Long-Term GIS System Responsibility. Current GIS system responsibility lies with the Commonwealth of Massachusetts, Executive Office of Environmental Affairs and the MADEP. This is the result of the regulatory agencies' initiative to establish a GIS system on Fort Devens for their own use in project management of cleanup and reuse goals, including document review, preparation for meetings, and decision making. It is anticipated that as reuse and remediation activities continue, inputs into and requests from the system will increase. The BCT, along with the Project Team, need to identify an agency that will have the responsibility and resources to support the long-term maintenance of the GIS system.

GIS Data Standards, Input, and Data Request Procedures. Currently, multiple agencies are inputting and requesting data from the joint regulatory agency GIS system. The MADEP has developed a draft data dictionary that describes data input requirements. For the long- and short-term, the data protocols as well as administrative procedures for inputting and requesting data need to be developed to ensure data uniformity, quality, and application.

One-Time GIS Update from IRDMIS. The IRDMIS portion of the current joint regulatory agency GIS system was created through a series of small translations and input into the system. The IRDMIS system has a much larger amount of data and a more current data set that should be transferred to the GIS system through a one-time "data dump."

60-Day and 90-Day Data Submittal Standardization. The MADEP views the GIS system as a tool to assist in document review. As such, the 60- and 90-day interim data submission required by the FFA allows the MADEP to enter data into the GIS system for use while reviewing documents that discuss that data. Currently, data comes in differing formats from Army contractors, making translation into the GIS system difficult.

6.1.3 Status/Strategy

Long-Term GIS System Responsibility. The BEC is currently considering the feasibility of maintaining the GIS system at Fort Devens. GIS hardware, software, and personnel have been obtained at this time; however, long-term responsibility could become very costly. The BEC is also considering joint responsibility, shared by the BCT and the Devens Reuse Center. The BEC will continue these investigations, and with support from the rest of the BCT, determine the best agency and management system for the long-term GIS system.

GIS Data Standards, Input, and Data Request Procedures. The MADEP will publish their draft data dictionary and request all inputters and data receivers to review and comment. Along with the request for data review, the MADEP will publish short-term administrative procedures for input into, and data requests from, the GIS system. This will serve as the short-term strategy. Long-term strategies will be developed in conjunction with the issue of long-term GIS responsibility.

One-Time GIS Update from IRDMIS. The USAEC will contact the MADEP to determine exactly what data files and formats are needed. After these are identified, the USAEC will request, from its IRDMIS contractor, a "data dump" in the format specified by the MADEP.

60-Day and 90-Day Data Submittal Standardization. The USAEC will contact the MADEP to determine which format is preferable, or develop a new, preferred format. The USAEC will then produce a custom report in this format, and require all future 60- and 90-day data submittals to be presented in this format.

6.2 Data Usability

This section identifies issues that need to be resolved with regard to the quality and comparability of data gathered and used in the installation environmental restoration and compliance programs.

6.2.1 BCT Action Items

No BCT action items have been identified at Fort Devens at this time.

6.2.2 Rationale

As the number of agencies and contractors associated with the Fort Devens disposal and environmental restoration program increases, it is important that all parties generate data of similar quality to ensure all data can be compared and used to make remediation decisions.

6.2.3 Status/Strategy

A summary of the current status of data usability relative to BRAC cleanup activities at Fort Devens, and strategies that have been developed to address data usability requirements, is provided below.

Data quality objectives have been developed for Fort Devens to ensure that data collected during the field investigations and RAs will be of sufficient quality to support subsequent decision-making during the SI/RI/RA process. The BCT will continue to utilize the existing QA/QC programs, and assess new QA/QC programs when identified, to ensure all data collected are of adequate quality and usability.

6.3 Data Gaps

This section summarizes unresolved issues pertaining to the identification of data needs and collection of data to complete the Fort Devens environmental restoration program.

6.3.1 BCT Action Items

The BCT will continue to monitor the progress and results of ongoing environmental restoration activities to ensure all data necessary to support remedy selection and remediation efforts is collected.

6.3.2 Rationale

Effective identification and filling of data gaps will permit the development of comprehensive conceptual zone or site models for site characterization and risk assessment. It is necessary to develop conceptual models and evaluate risk to select appropriate remedies and to identify areas requiring no further action.

6.3.3 Status/Strategy

The Fort Devens BCT takes extensive measures to minimize data gaps. Data gaps identified after the review of a document can significantly slow the restoration process, as additional scoping, procurement, data collection, and data analysis are required to fill the data gap. To avoid these delays, the BCT makes every attempt to identify potential data gaps prior to the initiation of field efforts.

The Army involves various technical disciplines in scope development and attempts to consider specific data requirements early in the process. Examples of this are consideration of risk assessment requirements during RI scope development and consideration of engineering requirements during FS scope development.

The BCT performs joint review of scopes of work, where the Army has provided scopes of work for various phase studies for regulatory comment prior to procuring the contract, delivery order, or modification for that phase of work.

The BCT performs joint review of work plans prior to the initiation of field work. This allows the Army and regulatory agencies to review the work proposed at a site, and at that time identify data gaps, which can be incorporated into contract modifications, allowing the work to continue on or near schedule.

Prior to the initiation of field activities, the BCT performs pre-drilling site visits. At these visits, the Army shows the regulatory agencies, in the field, actual locations where samples are proposed to be taken. These locations may include variances to the draft work plan, depending upon Army and regulatory comments. These comments, as well as agreements made during the pre-drilling site visit, are incorporated in the final work plan for a site.

6.4 Background Levels

This section summarizes unresolved issues pertaining to documenting background levels for Fort Devens environmental restoration program.

Fort Devens has used a variety of background levels for the evaluation of analytical results. The first, for soil only, was presented in the draft Group IA RI report and received numerous negative comments from the regulatory agencies. The comments dealt primarily with the inclusion of possible "outliers" in the background data set as well as the general statistical treatment. The background intervals presented in the Groups 3, 5, and 6 SI Report involved the removal of outliers from the soil sediment data set through visual identification, followed by the calculation of a background "interval," identified as the mean of the data set plus or minus one standard deviation. The groundwater background data set was also presented. This set of background values has subsequently been used in numerous reports and resulted in many review comments, including those describing background as an "open issue." To further address these comments and implement additional USEPA guidance, the Army presented a new, proposed background data set in the Group IB RI Report, which is continuing to undergo review.

6.4.1 BCT Action Items

The BCT will review the proposed installation-wide background levels presented in the Group IB RI Report with the understanding that if it is approved, or approved with minor modifications, it will be adopted in its approved form.

6.4.2 Rationale

Agreement on the background data set is critical to many environmental decisions at Fort Devens. While the use of "interim, semi-approved" background numbers has not prevented progress in key areas, it has resulted in numerous review comments. The Group IB RI proposed background ranges are the result of numerous comments, guidance, and the collection of additional background sample data.

6.4.3 Status/Strategy

The BCT will review the proposed background levels presented in the Group IB RI in developing the approved, installation-wide background levels for Fort Devens. After review, the BCT will hold a special meeting to discuss their review of the proposed levels and either approve as presented, or make suggestions for improvement. After review and/or change and approval, the background ranges will be incorporated into the evaluation of data in all future reports. Old reports, however, will not be re-evaluated to assess the impact of the "new" background numbers. Additionally, ongoing studies will not change background ranges between draft and final versions.

6.5 Risk Assessments

This section summarizes unresolved issues pertaining to risk assessments required to complete the Fort Devens environmental restoration and compliance programs.

6.5.1 BCT Action Items

There are no issues with regard to risk assessment that need to be resolved at this time.

6.5.2 Rationale

The BCT developed a risk assessment protocol early in the cleanup process. Conformance to the protocol, as well as other issues, are reviewed early in the cleanup process through the publication of the Risk Assessment Approach Plan.

6.5.3 Status/Strategy

The need for risk assessment protocols was recognized early on in the Fort Devens restoration program, and a special meeting was held on November 14, 1991, to develop the protocols. The protocol agreements are detailed in the meeting memorandum. Further agreement and confirmation of compliance with agreed-to protocols is accomplished through the use of the Risk Assessment Approach Plan, which is a secondary document prepared prior to a draft RI report. The plan describes the conceptual site model, including present and future pathways and receptors, and describes the protocols to be used. Items such as the selection of chemicals of concern are further discussed in the plan. No new risk assessment strategies are required at this time.

6.6 Installation-wide Remedial Action Strategy

An installation-wide RA strategy has been developed for Fort Devens. This section of the BCP describes issues of this strategy that need to be addressed.

6.6.1 BCT Action Items

Fort Devens currently has three installation-wide RA strategies which are presented below.

Use of Commonwealth of Massachusetts Designated Licensed Site Professionals. The Commonwealth of Massachusetts has a program in which environmental engineering professionals are registered and given permission to make certain remedial decisions at certain sites. For those sites (SAs and AOCs) listed in the FFA, use of licensed site professionals should not be an issue, because they are regulated and overseen directly by the MADEP under the Massachusetts Hazardous Waste Site Cleanup Regulations (21E). For AREE sites and compliance sites not listed under the FFA and not subject to the direct MADEP oversight, use of licensed site professionals is questionable. The specific issue is whether or not the Army should include contracting for licensed site professional review and approval of remediation plans at these sites. The Army will coordinate with MADEP prior to deciding on the status of licensed site professional use of other sites.

Development/Use of Groundwater Zones. Early in the process, "Evaluation Zones" were developed to allow for geographical grouping of the sites at Fort Devens. The need to modify the existing "Evaluation Zones" into "Groundwater Zones" should be evaluated. The MADEP proposes these groundwater zones be based upon flow regimes and used to identify where releases from multiple sites into the same flow regime may result in additional risks from contaminants at down-gradient exposure points. This was the intent behind the original evaluation zones.

training areas and ranges. In the EnPA, training areas and ranges were identified as installation-wide AREE 60. Subsequent to the EnPA, it was decided at the 1992 Fort Devens Interagency Conference in Lennox, Massachusetts, that AREE 60 did not effect the areas to be reused, and was better addressed under normal operation and maintenance. The MADEP proposes that issues with regard to historic training ranges on the North Post (which is a reuse area) have not been adequately addressed.

6.6.2 Rationale

Use of Commonwealth of Massachusetts Designated Licensed Site Professionals. Use of licensed site professionals may allow for increased MADEP regulatory focus on the more complex FFA sites. The need for licensed site professionals involvement at AREE sites is an open issue due to the history of regulatory involvement at these sites and their potential for inclusion as FFA sites. The Army needs to assess the need for licensed site professionals at certain sites and communicate their decision to the BCT.

Development/Use of Groundwater Zones. Development of groundwater zones or modification of existing evaluation zones into groundwater zones would allow for a more comprehensive evaluation of multiple sites with the potential for contamination co-mingling, according to the MADEP. The BCT needs to decide on the utility of groundwater zones. If determined to be useful, incorporation of these zones into the current groundwater modeling program will be completed by the USAEC. This would require identification and programming of funds.

Training Areas and Ranges. At the request of the MADEP, the BCT must decide if AREE 60, training areas and ranges, should be re-opened for study beyond normal operation and maintenance. If a new assessment/evaluation of historical ranges is warranted, the BCT must determine under which program to perform the study. If AREE 60 is to be treated similar to other installation-wide AREEs in an EE, then funds will have to be programmed and the effect on the reuse of these parcels evaluated.

6.6.3 Status/Strategy

Use of Commonwealth of Massachusetts Designated Licensed Site Professionals. The BEC, in coordination with the Fort Devens Environmental Management Officer and other Fort Devens staff, will assess the need for and utility of contractually requiring licensed site professional oversight at certain sites. Once a decision has been made, the BEC will notify the remainder of the BCT, in writing, of the intended use of licensed site professionals on Fort Devens.

Development/Use of Groundwater Zones. The BCT will hold a meeting with selected members of the Project Team to discuss the need for groundwater zones. If the BCT consensus is that such zones are needed, the BCT will assess available options for programming the required funds. If funds are available, the BEC will request that the USAEC modify an existing groundwater modeling contract to include the development of these zones.

Training Areas and Ranges. The BCT will hold a meeting with selected members of the Project Team to discuss the MADEP's request to re-open the installation-wide AREE 60,

training areas and ranges, for environmental assessment/evaluation. If the BCT consensus is that re-opening is warranted, then the BCT will assess available options for programming the required funds. If funds are available, the BEC will task the appropriate Project Team element to contract for the study.

6.7 Interim Monitoring of Groundwater and Surface Water

Since 1991, the Army has been performing quarterly measurements of elevations of groundwater in all groundwater monitoring wells and selected surface water elevations. Approximately 30 groundwater monitoring wells and 25 surface water elevation points are measured. These numbers will increase as more studies progress. The quarterly groundwater and surface water elevation measurements are taken by a USAEC contractor, loaded into the IRDMIS system, and made available to all members of the BCT.

6.7.1 BCT Action Items

The BCT needs to determine how long these quarterly measurements will continue and who will be responsible for long-term data collection and input.

6.7.2 Rationale

As the study phase ends, USAEC contractor involvement will decrease and consideration of alternate responsible agencies, such as USACE, New England Division, needs to be made. This transition could occur as soon as early FY 95 or as late as the middle of FY 96, when USAEC contractor involvement is anticipated to be nearly complete.

6.7.3 Status/Strategy

As an agenda item for a BCT meeting, the issue of continued (post-FY 95) quarterly groundwater elevation measurements will be discussed. A decision on how long to continue, or standards for discontinuing the measurement, will be made. The BEC will review contracting options and decide upon the appropriate agency.

6.8 Excavation of Contaminated Materials

This section identifies issues that need to be resolved with regard to excavation of contaminated materials.

6.8.1 BCT Action Items

In January 1994, the Army published what it considered the final General Soils Management Policy for Fort Devens. The policy was developed to establish installation-wide standards and procedures for the treatment and/or reuse of excavated waste site soils. The focus was on soils contaminated with petroleum-derived compounds. Subsequent comments from the MADEP have raised several issues in regard to the application of the policy. These include the use of

reportable concentrations as defined in 21E versus the Army's proposed use of MADEP 21E Method 1 Risk Assessment numbers.

Another issue is the requirement under 21E for Activity and Use Limitations due to certain soil reuses. The final issue is characterization of the proposed soil reuse areas.

During 1992 and 1993, the Army and the regulatory agencies developed a mutually agreed-upon UST Removal Protocol. Subsequent to this, development of the revised MADEP 21E regulations as well as the Army's development of the General Soils Management Policy, has raised the issue of the need to update the UST Removal Protocol to reflect these new requirements.

6.8.2 Rationale

The approval of a General Soils Management Policy will expedite the treatment and reuse of excavated waste site soils throughout Fort Devens. It allows for a holistic approach to excavated waste site soils treatment and reuse, and has the potential to accelerate future response actions. For these reasons, the General Soils Management Policy needs consensus for all soil contamination sites at Fort Devens.

The UST protocol was an important step towards a consensus between the Army and regulatory agencies on standards for UST removal. The recent publication of the updated MADEP 21E and the Army's proposed final General Soils Management Policy have made portions of the UST protocol obsolete. The UST protocol should be updated to reflect these changes.

6.8.3 Status/Strategy

The Army has received comments from the MADEP on the final General Soils Management Policy. Further comments will be provided by the MGLB. After receipt of all regulatory comments and comments from the MGLB, the Army will prepare a draft Response to Comments package and the BCT will have a meeting with selected project team members to discuss finalization of the General Soils Management Policy.

The Army, through a contract with the USAEC, will have the existing UST Removal Protocol updated to reflect the new requirements of 21E. Following this and approval of the final General Soils Management Policy, the Army will review the necessity of updating the UST Removal Protocol to accurately reflect the policy.

6.9 Protocols for Remedial Design Reviews

Fort Devens has developed protocols for RD reviews associated with the OUs that require RA.

6.9.1 BCT Action Items

The BCT needs to determine what levels of design actually need review and what agencies/persons should be included in the review process.

6.9.2 Rationale

A shorter review schedule than that in the FFA may be sufficient for the Fort Devens project. Also, due to the extremely complex nature of the RDs and the exhaustive public involvement in the Proposed Plan/ROD, a re-evaluation of who is to review the RDs is needed.

6.9.3 Status/Strategy

USACE, New England Division, will develop a plan for RD review. This plan will be presented to the BCT, and after approval, will be adopted into the FFA.

6.10 Conceptual Models

Conceptual site model data summaries for those OUs currently undergoing RI are provided in Appendix E. These OUs are: Shepley's Hill Landfill Groundwater (AOCs 4, 5, and 18), Cold Spring Brook Landfill (AOC 40), DRMO Yard (AOC 32), Central Fueling Point (AOC 43A) and the Barnum Road Maintenance Yards (AOCs 44 and 52). Conceptual site model data summaries will be developed for OUs undergoing RI in the future, and will be presented in the Risk Assessment Approach Plan document for that OU, and incorporated in subsequent versions of the BCP (Appendix E).

6.10.1 BCT Action Items

There are no issues with regard to conceptual site models that need to be resolved by the BCT or Project Team at this time.

6.10.2 Rationale

Conceptual site models have been developed for ongoing RI sites. There is a program for the development and presentation of conceptual site models at future RI sites.

6.10.3 Status/Strategy

Future RI sites will include conceptual site model data summaries in the Risk Assessment Approach Plan. The summaries will also be added to future versions of the BCP.

6.11 Cleanup Standards

For RI/FS sites (OUs), cleanup standards are developed through the ARARs process or through the establishment of risk-based cleanup standards in accordance with Risk Assessment Guidance for Superfund. For non-RI sites, such as removal action sites, standards are presented in the Removal Action Memorandum. These standards are developed in a process similar to the ARARs process, through review of regulations. At present, there is no plan to develop installation-wide cleanup standards beyond these processes. The only remaining issue is the preference in the MADEP 21E regulations to consider, where feasible, RAs that result in cleaning the site to background levels, in accordance with MADEP 21E regulations. The Army

and USEPA propose the MADEP 21E regulations are largely administrative in nature, and as such, are duplicative of the CERCLA process and not ARARs.

6.11.1 BCT Action Items

The BCT must determine how to address the MADEP's request that the Army consider and implement, where feasible, remedial options that result in cleanup to background levels for RAs at AOCs, subsequent to ROD and removal action sites.

6.11.2 Rationale

The Army has determined that cleanup standards are either ARARs-based or health risk-based and do not include cleanup to background levels. This has resulted in numerous comments and disagreements about specific site cleanup standards; however, the remediation process has not been significantly slowed or stopped.

6.11.3 Status/Strategy

Consideration and implementation of remedial alternatives that result in cleanup to background levels will be discussed at a BCT meeting. If the BCT cannot resolve the issue, the BEC will request that the MADEP prepare a position paper outlining the MADEP's position and requirements. The BEC and USEPA Remedial Project Manager will review the position paper. If the issue cannot be resolved through this process, a meeting of management-level personnel from all agencies involved will be convened to resolve the issue.

6.12 Initiatives for Accelerating Cleanup

During 1992 and 1993, the Army developed an Acceleration Plan that was reviewed and concurred with by the regulatory agencies. Key points of the plan included:

- ▶ Overlap of SI, RI/FS, and RD/RA phases
- ▶ Treatment of installation-wide AREEs outside the FFA process
- ▶ Acceleration of procurement actions
- ▶ Concurrent Army/regulatory review of all work plans, SI reports, FS reports, and secondary documents
- ▶ Compression of time allocated to produce revised documents and comment response packages
- ▶ Compression of field schedules
- ▶ Supplement existing work plans for future work instead of producing new work plans (includes Quality Assurance Project Plans and Health and Safety Plans)

- ▶ Initiate field work after review and resolution of comments on draft work plans
- ▶ Use of SI data packages as the decision point for NFRAP, removal actions, or continued study under Supplemental SIs or RI/FS
- ▶ Attempt to reduce review times to less than those stipulated in the FFA
- ▶ Agreement to proceed with acceleration prior to FFA modifications.

Additionally, since finalization of the Acceleration Plan in May 1993, the BCT has undertaken other acceleration initiatives including:

- ▶ Concurrent Army/regulatory review of all documents, including RI reports
- ▶ Reduction of the number of versions of primary documents from four to two. Previously and in accordance with the FFA, all primary documents had Army draft, regulatory draft, draft final, and final versions. Under acceleration, only draft and final versions are produced and reviewed.
- ▶ Concurrent submission of comment response packages for comments received on a draft document with the final version of the document, where appropriate
- ▶ Extensive use of targeted analytes and field screening techniques to allow for focusing of lab-quality analytical data gathering and collection of large amounts of quantification data at reduced cost.

6.12.1 BCT Action Items

No BCT action items have been identified at Fort Devens at this time.

6.12.2 Rationale

It is desirable to initiate accelerated cleanups at Fort Devens to facilitate the property transfer process.

6.12.3 Status/Strategy

Fort Devens has developed and implemented an aggressive Acceleration Plan for almost 2 years. New issues that have risen are due to the publication of the BCP Guidebook. Because the new issues are a direct result of the requirements of the "Fast Track Cleanup" program, resolution at the DOD level is suggested in the above status/strategy section.

6.13 Remedial Actions

In accordance with the NCP, RAs must be initiated no later than 15 months after ROD signature. The BCT will attempt to initiate actions prior to this date, whenever possible. General procedures for RAs are detailed in Section 6.6, Installation-wide Remedial Action Strategy.

6.13.1 BCT Action Items

There are no issues with regard to RAs that need to be resolved by the BCT or Project Team at this time.

6.13.2 Rationale

RA timetables are determined by the NCP and the FFA.

6.13.3 Status/Strategy

RAs will be incorporated into the installation-wide RA strategy. Selection of remedial alternatives will be based on data collected from ongoing environmental investigations, evaluation of cleanup standards, and the technical and administrative feasibility of potential alternatives.

6.14 Review of Selected Technologies for Application of Expedited Solutions

The BCT has had the opportunity to consider and review numerous technologies for expedited solutions. These technologies fall into two general categories. The first are generic remedies, described in Section 6.22. The second is the treatment of excavated petroleum-contaminated soils. During development of potential remedial alternatives for the contamination at the Barnum Roads Maintenance Yards OU (AOCs 44 and 52), construction of a Central Soil Treatment Facility and treatment of soils from AOCs at the treatment facility was developed. This is known as Alternative 9. The treatment facility will be modular in design. The first module will be designed to treat the initial volumes of soil and serve as the "pilot study" for subsequent remediations. In this manner, RAs can build upon lessons learned in prior RAs and not require pilot studies for each site. It was envisioned that the treatment facility could also be used to treat petroleum-contaminated soils from other CERCLA sites throughout Fort Devens. During review of the AOCs 44 and 52 FS reports, the BCT and the reuse agencies have recognized the benefit of having such a facility on Fort Devens.

6.14.1 BCT Action Items

Two issues remain concerning the Central Soil Treatment Facility. First, if Alternative 9 is not chosen as the most feasible remedial alternative for AOCs 44 and 52, then the BCT needs to decide if there is still a need for the treatment facility; and if there is a need, how to administratively develop, design and construct the treatment facility. Secondly, if the treatment facility is constructed, the BCT needs to determine if there is a method for allowing soil generated at non-CERCLA sites to be treated at the treatment facility.

6.14.2 Rationale

The construction of a Central Soil Treatment Facility at Fort Devens has the potential to both save money and accelerate restoration of sites with petroleum-contaminated soil throughout Fort Devens. It also could enhance future redevelopment because, if economically viable after closure, its presence would allow for rapid response to contamination detected during post-closure redevelopment construction activities. The cost benefit of the treatment facility is contingent upon reasonable capital construction costs and a sufficiently large quantity of soil requiring treatment to make the initial capitalization cost-effective over the life of the facility.

6.14.3 Status/Strategy

The Army, in conjunction with the BCT, will select the preferred alternative for AOCs 44 and 52. If Alternative 9 (including the Central Soil Treatment Facility) is not selected, the Army will open discussions with the remainder of the BCT on the viability of the treatment facility and administrative processes for supporting the construction of the treatment facility. On the second issue, if it is determined the treatment facility will be constructed, the BCT will determine if non-CERCLA soils should be treated at the treatment facility. Administration of treating non-CERCLA soils would need to be established for this to occur. The method of formalization of the resolution of this issue must also be discussed by the BCT.

6.15 Hot Spot Removals

As defined in the DOD guidance, this review item involves implementation of rapid removal of "hot spots" while investigation continues. This has been a goal of the Fort Devens restoration process. Early identification of these rapid removals was a key component of the SI Data Package concept, described in section 6.12, Initiatives for Accelerating Cleanup.

6.15.1 BCT Action Items

The BCT desires to ensure that all future hot spot removals be conducted using the appropriate contracting mechanisms. A previous removal action underestimated the amount of contaminated soil to be removed, and a "purchase order" contract was written to shorten the procurement time. The removal action had to be stopped due to limitations of purchase order contracts. The removal was subsequently completed with the appropriate contracting mechanism. The BCT would like to ensure that contracting mechanisms are in place to ensure the rapid completion of future removals.

6.15.2 Rationale

The exact total amount of contaminated soil, or other media, either cannot be accurately estimated, or the time and cost of data collection required to develop such an estimate would be prohibitive. Because of this, time-critical hot spot removal actions need to be conducted using a contracting method that allows for maximum flexibility as additional contamination is encountered or suspected contamination is quantified. The contract should allow for the remediation of an unexpectedly large quantity of contaminated media.

6.15.3 Status/Strategy

The BCT will continue the early identification of potential hot spot removal sites and support USACE in the development of multiple, in-place contract options to conduct these removals. USACE will update the BCT on a regular basis.

6.16 Identification of Clean Properties

The primary method for identification of clean parcels is the CERFA Report. This report is currently under review. The final determination of the first group of clean parcels will be dependant upon USEPA concurrence with the CERFA parcels identified in the report. Additional clean parcels may be identified through the preparation of parcel-specific Environmental Baseline Surveys, which could be completed after a parcel was identified as disqualified or having qualifiers due to "potential" environmental issues. These "potential" issues may be verified as non-existent subsequent to finalization of the CERFA Report. In this case, the parcel-specific Environmental Baseline Survey will be prepared to update the "potential" issues in the CERFA Report and identify the parcel as "clean."

6.16.1 BCT Action Items

There are no issues with regard to clean parcels that need to be resolved by the BCT or Project Team at this time.

6.16.2 Rationale

The CERFA Report will identify the initial group of clean parcels. Procedures for subsequent identification of clean parcels have been established.

6.16.3 Status/Strategy

The CERFA Report will serve as the initial identifier of clean parcels. Subsequently, additional parcels may be identified as clean through the preparation of parcel-specific Environmental Baseline Surveys and will be reflected in the CERFA Report.

6.17 Overlapping Phases of the Cleanup Process

After announcement of base closure, several acceleration initiatives, including the Fort Devens Acceleration Plan, discussed in Section 6.12, and this BCP were initiated. The resulting phase overlaps, all of which have been planned or in place since early 1993, are described below:

- ▶ Within a particular phase, SI, RI/FS, removal, etc., field work is initiated before completion and approval of a final work plan for that phase. The draft work plan is issued, and comments are received and resolved during the pre-drilling site visit. The work plan is then finalized for formal approval as a final version. When comments are received on a draft document, they are reviewed and discussed at a comment resolution meeting, if required. The formal comment

summary is submitted concurrently with the final version of the document. This allows technical personnel to work out issues directly and avoids a long, drawn-out review process. These initiatives allow overlap within a phase (sub-phase overlap) and contribute significantly to acceleration of the overall program.

- ▶ An SI or Supplemental SI data package is produced within 120 days of completion of the field effort under an SI or Supplemental SI. The data package includes a graphical and tabular presentation of data combined with a Preliminary Risk Evaluation for making a recommendation for appropriate follow-up work on the site, if any. The SI or Supplemental SI data package uses minimal narrative, and based upon an assessment of the nature and extent of contamination (if present) and the Preliminary Risk Evaluation, makes a recommendation of: NFA, removal action, or continued study as a Supplemental SI or RI/FS. After review, the BCT meets to discuss and approve or make alternate recommendations to those presented in the SI or Supplemental SI Data Package. The SI or Supplemental SI data package is produced very early in the traditional SI process, often 30 days after receipt of validated data. This allows for intensive overlap as scoping for removals, Supplemental SIs or RI/FSs can be initiated long before finalization of the complete SI report. As a result, the removal action, NFA, decision document, and RI/FS phases are all overlapped with the SI phase.
- ▶ The scoping and actual RD for OUs (AOCs) is planned to occur concurrently with the preparation of the ROD. The goal is to have the RD at least 60 percent complete by the time the ROD is signed.

6.17.1 BCT Action Items

There are no issues with regard to phase overlap that need to be resolved by the BCT or Project Team at this time.

6.17.2 Rationale

Fort Devens currently maximizes phase overlap in all areas of the restoration process.

6.17.3 Status/Strategy

The BCT will continue the ongoing phase overlap and will review new potential overlaps, as they are identified.

6.18 Improved Contracting Procedures

Currently, the majority of the study phase is conducted by the USAEC using the cost-plus-fixed-fee Total Environmental Program Support contracts. These contracts allow for maximum flexibility of delivery order assignments and modifications in response to changing situations. For RD and other program support, USACE has been using a pre-placed delivery order environmental engineering contract. This allows for rapid assignments of delivery orders to

initiate the design of removal and closure actions. Contractually, USACE has the capability to provide remediation services, depending upon the urgency at a particular site by the following means: (1) immediate response (contractor on-site between 48 and 72 hours), (2) rapid response (contractor on site between 30 and 60 days), and (3) pre-placed RA contracts (contractor on-site between 90 and 120 days). All three of these contracting mechanisms have been, or are planning to be, used at Fort Devens. The USACE also has the capability to use a Total Environmental Restoration Contract, where one contractor can perform RD/RA after USAEC completes the study phase of the project. The USACE can also access fixed price, competitive bid contracts where appropriate and time allows. Establishment of alternative, flexible, in-place RA contracts is being developed by USACE, New England Division.

6.18.1 BCT Action Items

The only issue with regards to improved contracting is described in Section 6.15.1, Hot Spot Removals.

6.18.2 Rationale

With the exception of removal actions (see Section 6.15.2), current contracting mechanisms provide the required flexibility and capacity to support the remediation program at Fort Devens.

6.18.3 Status/Strategy

The BCT will continue to use existing contract mechanisms and support the USACE in development of multiple options for removal and remedial actions (see Section 6.15.3).

6.19 Interfacing with the Community Reuse Plan

There is an extremely active reuse interest in Fort Devens. A CRP is anticipated to be finalized in 1994. The Memorandum of Agreement designated the U.S Army, the MGLB, the JBOS, the USFWS, and the Federal Bureau of Prisons as joint cooperating agencies in the Fort Devens Disposal and Reuse EIS. The proposed master reuse plan is a key portion of the EIS process, as it is with other environmental processes. Restoration studies and cleanup activities will be prioritized and focused upon high potential reuse areas, where possible. This was demonstrated by the focus of cleanup activities upon the Federal Bureau of Prisons parcel to allow for reuse as soon as possible. Reuse plans help develop cleanup standards to ensure the degree of cleanup is appropriate for the intended reuse. The master reuse plan considers the potential impacts of restoration sites and natural resources, and this coordination will continue as specific reuses are identified.

6.19.1 BCT Action Items

There are no issues with regard to interfacing with the CRP that need to be resolved by the BCT or Project Team at this time.

6.19.2 Rationale

Intensive interfacing between the reuse group, the Disposal and Reuse EIS, and restoration activities currently exists. The CRP is an integral component in development of the Disposal and Reuse EIS and the restoration program at Fort Devens.

6.19.3 Status/Strategy

The BCT will continue to work with the reuse group in the development of specific reuse activities that will be compatible with restoration activities. The BCT will continue to prioritize restoration activities on high-priority reuse parcels, where possible.

6.20 Bias for Cleanup Instead of Studies

The Fort Devens BCT exercises bias for cleanup instead of study through the implementation of rapid removal actions that use the "investigation by excavation" approach and the planned use of initial, smaller scale RAs as "pilot studies" for larger scale RAs. Under removal actions, various sites were identified in SI and Supplemental SI data packages for removal. In some cases, the SI or Supplemental SI detected contamination at unacceptable levels, although the contamination may not have been completely quantified. In these cases, the BCT developed a removal action that would provide additional data, resulting in "investigation by excavation." These removals begin in the identified areas of contamination, and using field screening chemical analysis techniques, follow the contamination until removed to an acceptable level. The completeness of removal will be verified through the collection and analysis of laboratory samples.

6.20.1 BCT Action Items

There are no issues with regard to bias for cleanup instead of studies that need to be resolved by the BCT or Project Team at this time.

6.20.2 Rationale

The BCT currently demonstrates a strong bias for cleanup instead of study.

6.20.3 Status/Strategy

The BCT will continue with current programs to make remedial decisions and exercising of the bias for cleanup.

6.21 Expert Input on Contamination and Potential Remedial Actions

It is necessary that proper resources are used to evaluate contamination and associated RAs.

6.21.1 BCT Action Items

The BCT relies upon the state, USEPA, USAEC, USACE, and contractors to ensure that the proper resources are used to evaluate contamination and potential RAs.

6.21.2 Rationale

The use of several entities involved in the restoration at Fort Devens will promote an expedited property transfer process.

6.21.3 Status/Strategy

The state, USEPA, USAEC, USACE, and contractors will continue to ensure that the proper resources are used to evaluate contamination and potential RAs.

6.22 Generic Remedies

The BCT promotes application of recently developed and future generic remedies. Of particular interest are those related to remediation of volatile organic compound contamination of soil and landfill capping. The BCT feels that both of these existing generic remedies have a great potential for application at Fort Devens. The USEPA Remedial Project Manager has been proactive in identifying sites where these remedies may be applied. After completion of a draft RI report, the Army will identify OUs for application of the generic remedy approach, accelerating the FS process.

6.22.1 BCT Action Items

The BCT will consider generic remedies to expedite implementation of the installation's RA strategy.

6.22.2 Rationale

Generic remedies provide a significant potential to accelerate the remedy selection process by applying proven technology to standard contamination scenarios, many of which may be anticipated to occur at Fort Devens.

6.22.3 Status/Strategy

The BCT recognizes the potential of applying generic remedies to volatile organic compound soil contamination remediation and landfill capping. The BCT is exploring ways to implement these generic remedies and the generic remedy selection process at ongoing RI sites. The USEPA Remedial Project Manager will take primary responsibility for identifying new generic remedies as they are developed and briefing the BCT. The BCT will discuss potential application of these new generic remedies at Fort Devens.

6.23 Partnering (Using Innovative Management, Coordination, and Communication Techniques)

The Fort Devens BCT has been undergoing various partnering initiatives since 1992. These have included facilitated, off-site conferences where issues were resolved and Process Action Teams were assigned to resolve specific issues. Additionally, a partnering agreement, which will be signed by the members of the BCT, will be included in Appendix F in the next version of the BCP. The Defense Environmental Network Information Exchange (DENIX) is a data management computer system. The USAEC, USACE, and installation all have the capability to easily transfer information between the respective agencies using the DENIX. The MADEP anticipates having DENIX capabilities within the near future.

6.23.1 BCT Action Items

The two previous interagency conferences were sponsored by FORSCOM. The BCT feels that a third conference should be scheduled and funded.

6.23.2 Rationale

The previous interagency conferences proved to be excellent team-building sessions where goals were set and ideas shared. These conferences were significant in their ability to develop teams at multiple layers of management, and set up informal channels for issue resolution.

6.23.3 Status/Strategy

The BEC will contact FORSCOM to determine if additional conferences can be scheduled and funded. The other members of the BCT will provide whatever support is necessary in the form of letters of support, etc.

6.24 Updating the CERFA Report and Natural/Cultural Resources Documentation

The CERFA Report serves as the basis for the installation-wide Environmental Baseline Survey. For certain parcels, i.e. "CERFA clean parcels," it may serve as the final Environmental Baseline Survey, provided the USEPA concurs with the CERFA designation of that parcel. In this instance, the CERFA Report will serve as the Environmental Baseline Survey for either transfer or lease of these parcels. Other parcels may need additional documentation and detail. As studies progress, more information may be gathered about a specific parcel. In these cases, site-specific Environmental Baseline Surveys to support either leasing or property transfer will be required.

6.24.1 BCT Action Items

The BCT needs to determine the mechanisms for production and review of Environmental Baseline Surveys and Findings of Suitability to Lease (FOSL) or Findings of Suitability for Transfer (FOST).

6.24.2 Rationale

As stated above, parcel Environmental Baseline Surveys will be required for many parcels. The BCT needs to establish methods of producing these Environmental Baseline Surveys, FOSLs and FOSTs, and methods for review and approval of these documents.

6.24.3 Status/Strategy

The BCT will meet and establish both short-term and long-term procedures for the production and review of Environmental Baseline Surveys, FOSLs, and FOSTs. Options include in-house preparation by the BEC office with the support of the BCT, in-house preparation by either the USAEC or USACE, New England Division, at the direction of the BEC, preparation by the activity gaining the property, or contracting for preparation. The BCT will decide upon an option or mix of options that will be used to update the Environmental Baseline Survey and prepare and review FOSLs and FOSTs.

6.25 Implementing the Policy for On-Site Decision Making

All members of the BCT fully support the policy for on-site decision making. However, at this time, delegation of authority from Headquarters, Department of the Army or Headquarters USEPA to sign RODs or other decision documents has not occurred.

6.25.1 BCT Action Items

The BCT needs to determine if delegation of authority will occur, and if it does occur, what levels of review and concurrence will be required.

6.25.2 Rationale

The delegation of authority, as specified in the BCP guidance, is a key element in accelerating the restoration of Fort Devens and releasing the property for reuse as soon as possible. Time spent in the review and approval process could be expedited.

6.25.3 Status/Strategy

The BCT is awaiting further guidance on the delegation of authority from Headquarters DA and USEPA. When received, the guidance will be reviewed to determine the level of review and concurrence required. The BCT will undertake programs to implement the policy, when delegation of authority and/or guidance is received.

6.26 Structural and Infrastructural Constraints to Reuse

At the present time, no structural or infrastructural constraints to the reuse of Fort Devens have been identified.

6.26.1 BCT Action Items

If structural and infrastructural constraints to reuse of Fort Devens are identified, the BCT will evaluate approaches for overcoming these constraints, or for alternative reuses, so the property can be transferred.

6.26.2 Rationale

Potential structural and infrastructural constraints must be overcome, or alternative reuses must be identified, to allow transfer of Fort Devens property.

6.26.3 Status/Strategy

At the present time, no structural or infrastructural constraints to the reuse of Fort Devens have been identified.

6.27 Other Technical Reuse Issues to be Resolved

This section of the BCT discusses issues relating to the co-location of the BCT.

6.27.1 BCT Action Items

The BRAC Cleanup Plan Guidebook and subsequent guidance have indicated a strong desire for co-location of BCT members at the installation. Resources have not been applied to develop such a process. At Fort Devens, the installation has made space available for the USEPA and MADEP, but additional resources such as funds for administrative support, upgrade of facilities to minimum requirements, etc. have not been made available to the Army or other members of the BCT.

6.27.2 Rationale

Other BCTs at installations similar to Fort Devens may have faced issues similar to those facing the Fort Devens BCT, and may have developed unique methods of resolutions. The opportunity to interface with bases similar to Fort Devens may be of benefit to all through the exchange of ideas.

Fort Devens has supported co-location of the BCT at Fort Devens to a limited degree. Additional resources are needed to expand this support.

6.27.3 Status/Strategy

The BCT proposes that the DOD provide guidance and/or additional resources to support co-location of the BCT at Fort Devens. The BCT would like DOD to sponsor smaller conferences where a limited number (perhaps three or four) of installations with similar issues could get together and discuss resolution of these issues.

CHAPTER 7

► PRIMARY REFERENCES ◀

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ABB Environmental Services, Inc., 1992f. Feasibility Study Work Plan - Group 1A. Fort Devens. Massachusetts. Draft Final Task Order Work Plan; prepared for USAEC; June.

ABB Environmental Services, Inc., 1992g. Draft Data Gap Activities Work Plan - Group 1A. Fort Devens. Massachusetts; prepared for USAEC; June.

ABB Environmental Services, Inc., 1992h. Site Investigation Work Plan - Groups 3. 5. & 6. Fort Devens. Massachusetts. Draft Final Task Order Work Plan; prepared for USAEC; June.

ABB Environmental Services, Inc., 1992i. Draft Final Project Operations Plan for Site Investigations and Remedial Investigations. Fort Devens. Massachusetts; prepared for USAEC; July.

ABB Environmental Services, Inc., 1992j. Feasibility Study Work Plan - Group 1A. Fort Devens. Massachusetts. Final Task Order Work Plan; prepared for USAEC; August.

ABB Environmental Services, Inc., 1992k. Site Investigation Work Plan - Groups 2 & 7. Fort Devens. Massachusetts. Draft Final Task Order Work Plan; prepared for USAEC; August.

ABB Environmental Services, Inc., 1992l. Site Investigation Work Plan - Historic Gas Stations. Fort Devens. Massachusetts. Draft Final Task Order Work Plan; prepared for USAEC; August.

ABB Environmental Services, Inc., 1992m. Site Investigation Work Plan - Groups 3. 5. & 6. Fort Devens. Massachusetts. Final Task Order Work Plan; prepared for USAEC; September.

ABB Environmental Services, Inc., 1992n. Draft Final Data Gap Activities Work Plan - Group 1A, Fort Devens, Massachusetts; prepared for USAEC; December.

ABB Environmental Services, Inc., 1992o. Final Project Operations Plan for Site Investigations and Remedial Investigations, Fort Devens, Massachusetts; prepared for USAEC; December 1992.

ABB Environmental Services, Inc., 1992p. Site Investigation Data Package for Groups 3, 5, & 6, Fort Devens, Massachusetts. Final Task Order Work Plan; prepared for USAEC; December.

ABB Environmental Services, Inc., 1992q. Site Investigation Work Plan - Groups 2 & 7, Fort Devens, Massachusetts, Final Task Order Work Plan; prepared for USAEC; December.

ABB Environmental Services, Inc., 1992r. Site Investigation Work Plan - Historic Gas Stations, Fort Devens, Massachusetts. Final Task Order Work Plan; prepared for USAEC; December.

ABB Environmental Services, Inc., 1993a. Site Investigation Data Package for Groups 2 & 7, Fort Devens, Massachusetts. Final Task Order Work Plan; prepared for USAEC; February.

ABB Environmental Services, Inc., 1993b. Site Investigation Data Package for Historic Gas Stations, Fort Devens, Massachusetts. Final Task Order Work Plan; prepared for USAEC; February.

ABB Environmental Services, Inc., 1993c. Final Data Gap Activities Work Plan - Group 1A, Fort Devens, Massachusetts; prepared for USAEC; March.

ABB Environmental Services, Inc., 1993d. Site Investigation Report for Groups 3, 5, & 6, Fort Devens, Massachusetts. Final Task Order Work Plan; prepared for USAEC; April.

Arthur D. Little, Inc., 1993a. Draft Supplemental Work Plan. Main Post Site Investigation, Fort Devens, Massachusetts; prepared for USAEC; January.

Arthur D. Little, Inc., 1993b. Draft Supplemental Health and Safety Plan. Main Post Site Investigation, Fort Devens, Massachusetts; prepared for USAEC; January.

Arthur D. Little, Inc., 1993c. Draft Supplemental Quality Assurance Project Plan. Main Post Site Investigation, Fort Devens, Massachusetts; prepared for USAEC; January.

Arthur D. Little, Inc., 1993d. Final Supplemental Work Plan. Main Post Site Investigation, Fort Devens, Massachusetts; prepared for USAEC; April.

Arthur D. Little, Inc., 1993e. Final Supplemental Health and Safety Plan. Main Post Site Investigation, Fort Devens, Massachusetts; prepared for USAEC; April.

Arthur D. Little, Inc., 1993f. Final Supplemental Quality Assurance Project Plan. Main Post Site Investigation, Fort Devens, Massachusetts; prepared for USAEC; April.

Ecology & Environment, Inc., 1992a. Risk Assessment Approach for the Shepley's Hill and Cold Spring Brook Landfill Sites. Fort Devens. Massachusetts; prepared for USAEC; February.

Ecology & Environment, Inc., 1992b. Draft Site Investigation Report for Study Areas 15. 24. 25. 26. 32. 48. Fort Devens Massachusetts; prepared for USAEC; March.

Ecology & Environment, Inc., 1992c. Draft Remedial Investigation Report for Areas of Contamination 4. 5. 18. 40. Fort Devens. Massachusetts; prepared for USAEC; June.

Ecology & Environment, Inc., 1992d. Draft Supplemental Remedial Investigation and Feasibility Study Work Plans for Areas of Contamination 25. 26. 32. Fort Devens Massachusetts; prepared for USAEC; August.

Ecology & Environment, Inc., 1992e. Draft Final Site Investigation Report for Study Areas 15. 24. 25. 26. 32. 48. Fort Devens Massachusetts; prepared for USAEC; September.

Ecology & Environment, Inc., 1992f. Draft Final Supplemental Remedial Investigation and Feasibility Study Work Plans for Areas of Contamination 25. 26. 32. Fort Devens Massachusetts; prepared for USAEC; November.

Ecology & Environment, Inc., 1992g. Final Site Investigation Report for Study Areas 15. 24. 25. 26. 32. 48. Fort Devens Massachusetts; prepared for USAEC; December.

Ecology & Environment, Inc., 1992h. Draft Final Remedial Investigation Report for Areas of Contamination 4. 5. 18. 40. Fort Devens. Massachusetts; prepared for USAEC; December.

Ecology & Environment, Inc., 1993a. Final Supplemental Remedial Investigation and Feasibility Study Work Plans for Areas of Contamination 25. 26. 32. Fort Devens Massachusetts; prepared for USAEC; March.

Ecology & Environment, Inc., 1993b. Final Remedial Investigation Report for Areas of Contamination 4. 5. 18. 40. Fort Devens. Massachusetts; prepared for USAEC; April.

Engineering Technologies Associates, Inc., 1992. Ground Water Flow Model at Fort Devens. Massachusetts; prepared for USAEC; October.

PRC Environmental Management, Inc., 1992. Fort Devens Interagency Workshop. Lenox. Massachusetts; December.

USAEC, 1992a. Action Memorandum. Removal Action. Study Area 32. Fort Devens. Massachusetts; October (signed on October 26, 1992).

USAEC, 1992b. Action Memorandum. Removal Action. Study Area 50. Fort Devens. Massachusetts; November (signed on November 24, 1992).

USAEC, 1992c. Action Memorandum, Removal Action. Study Area 15 and Study Area 48. Fort Devens. Massachusetts; October (signed on December 2, 1992).

USAEC, 1993. Final Decision Document No Further Action Under Comprehensive Environmental Response. Compensation and Liability Act Study Area 24 (Bunker 187) Fort Devens. Massachusetts; January (signed by Fort Devens' Commander on February 22, 1993; concurred by EPA on March 8, 1993)

Roy F. Weston, Inc., 1992. Enhanced Preliminary Assessment. Fort Devens. Massachusetts; prepared for USAEC; April.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS FORT DEVENS
FORT DEVENS, MASSACHUSETTS
01433 - 5010

May 3, 1995



BRAC Environmental Office

Ms. Gail L. Carter
Earth Tech
1420 King Street
Suite 600
Alexandria, Virginia 22314

Dear Ms. Carter:

Enclosed are the recommendations and comments on subject report (Draft Version 2) Base Cleanup Plan. These recommendations and comments represent a consolidation of responses from the Army, the Massachusetts Department of Environmental Protection (DEP), and the U.S. Environmental Protection Agency (EPA). The comments are listed by report section. If more than one reviewing agency provided comments for a particular section, those comments are separated by agency.

If you have any questions regarding this matter, you may contact me at (508) 796 - 3114 Ext. 311, Mr. Ron Defilippo at (508) 796 - 6171 Ext. 316, or Mr. Terry Martin at (508) 796 - 6171 Ext. 306.

Sincerely,


James C. Chambers
BRAC Environmental Coordinator

Enclosure

Recommendations and comments on subject report BCP (Draft Version 2) are as follows:

General Document Comments

EPA Comments:

All tables, figures, and schedules need to be updated. Many still reflect last year's information.

1. If this is to be the replacement for the MEP, more focus on the Superfund and other environmental issues on the South Post is needed. We need to discuss how to fit this into the "BRAC" Closure Plan.

The Map / Figures were generally difficult to interpret and of poor quality (too crowded, light, dark, small, etc.). Please consider the use of colors and GIS for generating higher quality maps.

BCP Glossary of Terms

EPA Comments:

2. I would suggest deleting the following terms in that I don't understand their relevance to the process: Corrective Measure Study, Decision Document, Early Action (replace with removal action), Environmental Investigation / Alternatives Analysis, Federal Facility Site Restoration Agreement. Please add: No Further Action Decision Document (NFADD), Massachusetts Contingency Plan & Chs. 21C & 21E.

Section ES Executive Summary

Army Comments:

Page ES-1, paragraph three, first sentence: Change "state" to "Massachusetts Department of Environmental Protection (MADEP)."

Page ES-1, paragraph 5, fourth sentence: Change "transfer and" to " transfers and a"

Page ES-2, paragraph two, new last sentence: Add "MADEP opted not to be a party to the IAG."

EPA Comments:

Page ES-1: In the bottom two paragraphs, please update the installation closure date to 3/31/96 and reference the fact that a reuse plan was approved on 12/7/94.

Chapter 1 Introduction and summary

DEP Comments:

Page 1-1, paragraph 2 and 3: Revise these paragraphs

Section 1.1 Environmental Response Objectives

Army Comments:

Page 1-2, paragraph 1, first sentence: Change " Base" to " BRAC"; change "environmental programs" to "environmental restoration programs"

Page 1-3, first bullet: Change "Massachusetts UST regulations and other applicable regulations" to "and other applicable laws"

Page 1-3, second bullet: Delete "progress"

Page 1-3, tenth bullet: Substitute a "proponent" for "arm" in the phrase "real estate arm"

DEP Comments:

3. Page 1-2, paragraphs 1 and 2: revise these paragraphs

Page 1-2, bullets: mention reuse plan; add a bullet for coordination and communication / management project to be as affective and streamlined as possible to save time and public resources.

Section 1.2 BCP Purposes, Updates, and Distribution

DEP Comments:

Page 1-4, first paragraph: The entire document won't change, certain tables and sections will. Rewrite the paragraph to make this clear.

Section 1.3 BCT/Project Team

Army Comments:

Page 1-4, paragraph 1, first sentence: Change "Mr. Chambers." to " Mr. James C. Chambers."

Page 1-4, paragraph 1, second sentence: Change "Mr. James Chambers," to " Mr. Chambers,"

Page 1-4, paragraph 1, fourth sentence: This should be changed to two sentences which read, "The Fort Devens Project Team consists of the BCT and additional individuals who the BCT selects to assist in the environmental restoration process at Fort Devens. Included in the team are the Base Transition Coordinator, Project Team representatives form the Environmental Management Office (EMO), U.S. Army Forces Command (FORSCOM), USAEC, USACE - New England Division, and Massachusetts Government Land Bank (MGLB) / Joint Boards of

Selectmen (JBOS) Fort Devens Reuse Center for the towns of Ayer, Harvard, Shirley, and Lancaster.

DEP Comments:

4. There should be a separate paragraph on BCT.

Page 1-4, paragraph 1, fourth sentence: Change "The Fort Devens" to "The Fort Devens Project Team"; Delete "including the Base Transition Coordinator"; Replace "and joint Boards of Selectmen (JBOS) for the towns of Ayer, Harvard, Shirley, and Lancaster" with "and the Reuse Center."

Page 1-4, paragraph 2: Omit the first sentence; Project meetings are not held regularly, fix to reflect this.

Section 1.4.1 Property Description

Army Comments:

Page 1-4, Paragraph 1, second sentence: Change "Howard" to "Harvard"

DEP Comments:

Page 1-11, paragraph 2, first and second sentence: Tense incorrect, change "is" to "was" in both sentences

Table 1-1 Current BCT/Project Team Members

Army Comments:

Page 1 - 5

Row 1: Change "James Chambers" to "James C. Chambers"

Row 2: Change "James Byrne" to "James P. Byrne"

Row 3: Change "Lynne Welsh" to "D. Lynne Welsh"

Row 4: Change "Fort Devens Deputy Commander" to "Deputy Commander, Fort Devens"

Row 5: Change "Ron Ostrowski" to "Ronald J. Ostrowski"; Change "Fort Devens Environmental Management Officer" to "Environmental Management Officer, Fort Devens"

Row 6: Change "Ronald Deflipppo" to "Ronald J. DeFilippo"; Change Title to "Protection Specialist"

Row 9: Change Title to "Public Affairs Officer, Fort Devens"

Row 17: Change Name to "Dave Salvadore"

Page 1 -6

5. Row 10: Change name to Steve Urbell, also need to change room and phone number

Row 14: Check spelling of Name

Row 18: Change Name to Judy Kohn

DEP Comments:

Page 1-5

Column "Name", row 13: Add Jerome Keefe

Page 1-6

Column "Name", row 12: Remove Eric Knapp

EPA Comments:

Please change the title for James Byrne to "Remedial Project Manager". Please add the following names under "Other Key Participants": Jerome Keefe, EPA Assistant Remedial Project Manager, (617) 223 - 5532; William Brandon, EPA Hydrogeologist, (617) 573 - 9629; Jayne Micaud, EPA Risk Assessor, (617) 223 - 5583. On page 1-6, the correct spelling is Steve Mierzykowski.

Section 1.4.2 History of Installation

Army Comments:

Page 1-12, Paragraph 2 and 3: Should be rewritten with consideration for current status. For example, "The U.S. Army Intelligence School", mentioned in the last sentence of paragraph two departed in 1994.

Table 1-2 Property Acquisition Summary

Army Comments:

Entire Table, Column "Acquisition Date": With regard to the "TBD", who will determine the acquisition date?

Table 1-3 History of Installation Operations

Army Comments:

Columns "Weapon System and Hazardous Substance Activities", will need to integrate UXO Archive Search Report (Final version due out in the middle of May 1995)

DEP Comments:

Add TSDF permit for B-1650

Figure 1-3 Map

Army Comments:

There needs to be a contrast in shade or color that makes the site numbers legible, currently too hard to read.

DEP Comments:

Need a better map.

Section 1.6 Hazardous Substances and Waste Management Practices

DEP Comments:

Page 1-22, paragraph 1, first sentence: Insert "coal pile" between "and" and "petroleum"

6. Page 1-22, paragraph 3: Discuss Railroad issues, Plow Shop Pond, and Grove Pond

Section 1.7 Off-Post Property/Tenants

Army Comments:

Page 1-22, reason 1.: At this time it has not been determined who will be responsible for property outside of Fort Devens.

Page 1-22, reason 2.: Revise this statement. The Sudbury Annex and the Hingham Annex have been nominated for the BRAC 95 list.

DEP Comments:

Table 1-5 Off-Post Properties

Army Comments:

Page 1-26, only sentence: Change "BCP" to "BCT"?

Section 1.8 Tenant Units

Army Comments:

Page 1-29, paragraph 1, third sentence: Delete "U.S. Army Intelligence School Division (USAISD)"; Change "94th Army Communications" to "94th Army Reserve Command"; Add RTS Medical; Remove comma in "Medical, and Dental Activity"; Add The Massachusetts Government Land Bank, the American Red Cross, and The Boston and Maine Railroad Operate Facilities located on Fort Devens

DEP Comments:

Add an estimated time of departure. The tenth SFG is scheduled to depart by September 1995.

Table 1-6 On-Post Tenant Units

Army Comments:

Page 1-30

Rows 2, 3, 4, 15, 17: These groups (U.S. Air Force, Marines, Navy, MEDDAC, and 756th Engineering) are gone

Row 13: Change Tenant to "94th Army Reserve Command"

Row 18: Change Tenant to "4/158th Aviation"

Page 1-31

Rows 1, 2: These groups are gone

Row 5: Change Tenant to "USARFIS"

DEP Comments:

Add a column for estimated date of departure.

Section 2.1 Status of Disposal Planning Process

Army Comments:

Page 2-1, paragraph 1, first sentence: Change "Brac II" to "Brac 91"

Page 2-1, paragraph 1, third sentence: Delete this sentence.

Page 2-1, paragraph 1, fifth sentence: Change "Auger" to "Ayer"

Page 2-1, paragraph 2, fourth sentence: socioeconomics is misspelled, "soioeconomics"

7. Page 2-1, paragraph 3, heading and first sentence: Change "disposal plan" to "screening process"

Page 2-1: Change "Fort Devens Reuse Task Force" to "Massachusetts Government Land Bank"

Page 2-2, paragraph 1: Delete second sentence

Page 2-2, paragraph 1, first sentence: Change to "was approved on December 7, 1994."

Page 2-2, paragraph 2, only sentence: Change to read "Several reuse parcels have been identified: for Innovation and Technology Business uses; for Rail, Industrial, and Trade Related uses; for Environmental Business use; for Residential use."

Page 2-2, paragraph 4, first sentence: delete "organization"

Page 2-2, paragraph 6: Delete entire paragraph

EPA Comments:

8. Page 2-1: NEPA Documentation paragraph needs to be updated for both NEPA and MEPA.

Page 2-1: Disposal Plan paragraph needs a reference to the approved Reuse Plan. (BEC Note: Reuse Plan discussed in the next section, page 2-6.)

Section 2.2 Relationship to Environmental Programs

Army Comments:

Page 2-2, paragraph 1, bullet 2: Between "contamination" and "may", insert "consistent with acceptable levels of risk"

EPA Comments:

Page 2-2, second bullet: Mention that this contamination will not be an unacceptable risk.

Section 2.3 Property Transfer Methods

Army Comments:

Page 2-4, paragraph 1, fifth sentence: Change "Fort Devens Reuse Committee" to "Massachusetts

Government Land Bank; Delete "other disposal methods".

DEP Comments:

Page 2-4, paragraph 1, second to last sentence: Has the Fort Devens Reuse Committee been defined?

(Comment noted by BEC)

9. This section should be rewritten and should also cover the master lease.
(Comment noted by BEC)

EPA Comments:

10. Page 2-4: The DoD / Army policies on EBS / FOST / FOSLs needs to be discussed in this section.

Section 2.3.1 Federal Transfer of Property

Army Comments:

Page 2-4, paragraph 1, last sentence: Change "The Fort Devens Task Force Subcommittee" to "Massachusetts Government Land bank"

Page 2-4, paragraph 2, bullet 1: Delete entire bullet

Page 2-9, bullet 1: Change "(FBP)" to "(BOP)"

Page 2-9, bullet 3: Add bullet "Department of Labor, Job Corps Center"

DEP Comments:

11. Page 2-4, paragraph 1: A third term for the subcommittee

Page 2-4, bullet 1: Delete entire bullet.

Figure 2-1 Disposal and Reuse Parcels

Army Comments:

Federal misspelled in key, "Federal"

Section 2.3.2 No-Cost Public Benefit Conveyance

Army Comments:

Page 2-9, only paragraph, second and third sentence: These sentences are not true. Correct or delete.

Section 2.3.7 Interim Leases

EPA Comments:

12. Page 2-10: The Guilford Transportation (Boston and Maine Railroad) Intermodal Facility needs to be discussed here. Additionally, mention of the Master Lease negotiations and timetable would be appropriate. (Comment noted by BEC)

Table 2-2 Existing Legal Agreements/Interim Leases

Army Comments:

Page 2-11, last row: Where is this license?

Page 2-12, row : Question with date of contract, was it revised?

13. Page 2-12, rows 6, 7, 8, 9, 10: Who (Fort Devens Hs. # 17 Inc., Fort Devens HS. #18 Inc., Fort Devens Hs. #19 Inc., Fort Devens #20 Inc., and Fort Devens #21 Inc.) is listed for Grantee? Define or list participants.

Section 3.1 Environmental Program Status

Army Comments:

Page 3-1, paragraph 1, first sentence: Change "BRAC office" to "BRAC Environmental Office"; Change "environmental programs" to "environmental restoration programs"; Define "MTL"?

Page 3-1, paragraph 3, last sentence: Rewrite end of sentence after "FFA" as follows, "FFA because of issues over Federal versus State authority. However, MADEP is an active participant in BCT."

Page 3-1, paragraph 4, last sentence: Change to read " The U.S. Army, MADEP and USEPA have agreed that the BCP will supersede the MEP."

Page 3-2, last paragraph: DESERTS should be mentioned here

DEP Comments:

14. Page 3-2, paragraph 2, bullet 1: Need a list of the AREEs
15. Page 3-2, paragraph 2, bullet 2: Recommend that the tanks become an OU

EPA Comments:

Page 3-1: MTL? Last time I checked this was the BCP for Fort Devens.

Table 3-1 Preliminary Location Summary

DEP Comments:

Page 3-3

16. Column "Final Determination", Row 6: Solid waste consolidation
17. Column "Final Determination", Row 7, 8, 10, 13: Question raised about status, sources required
Column "Final Determination", Row 12: solid waste closure required
Column "Final Determination", row 15: NFA after RA

Page 3-4

Need to add sites 16 and 29

Name of site 27 is Hotel Range, change description

More sampling required for site 31

Incorrect date cited for site 30, should be 2/95, approval no longer pending

Page 3-5

18. Add 37 and 38 subsets
Add 43A through 43S
Sites 33, 34, and 36 are NFA pending removal action completion
Site 41 solid waste consolidation

Page 3-6

Add site 57

19. Add all subsites to 61 and 66

Label 71 through 73 as Other SA/AOCs

Figure 3-1 Sites and OUs Currently Under Investigation

DEP Comments:

Need a better map.

Table 3-2 Environmental Restoration Site/Study Area Summary

Army Comments:

Entire Table Column "Description Change "base" to "post"

Page 3-11

Column "Regulatory Mechanism": change "RCRA" to "CERCLA"

Column "Description", rows 4, 5 Add " North Post"; row 6 Add WORT; rows 10, 12, 13 delete "Bldg."

Column "Material Disposed", row 4 change to "sanitary wastes"; row 5 change to "Treated sanitary waste water allowed to percolate through ground"

Page 3-12

Column "Regulatory Mechanism": change "RCRA" to "CERCLA"

Column "Description": row 1 add " North Post"; row 2 add "II"; row 10 question with building number; row 11, 12, 13 Delete "Bldg."

Page 3-13

Column "Regulatory Mechanism": change "RCRA" to "CERCLA"

Column "Description", row 1: Define and locate "F186"?

Page 3-14

Column "Regulatory Mechanism": change "RCRA" to "CERCLA"

Page 3-15

Column "Regulatory Mechanism", rows 1-8: change "RCRA" to "CERCLA"

DEP Comments:

Add a column for DEP concurrence.

Table 3-3 Environmental Restoration Early Action Status

DEP Comments:

20. Page 3-35, column "Status", last row: update, mention removal various sites

Section 3.1.1 Restoration Sites

Army Comments:

Page 3-34, paragraph 1, first sentence: mention USATHAMA

21. Removals Various Sites should be mentioned in this section

Table 3-4 Mission/Operational-Related Compliance Projects

Army Comments:

Page 3-36

Column "Status", row 2: Change "Cities" to "Towns"

Page 3-37

22. Column "Status", row 1, second sentence: Check permit status

Column "Regulatory Program", row 4: add "CAA"

DEP Comments:

23. This table needs a column for UIS closure which includes federal and state requirements for closure.

Table 3-5 Closure-Related Compliance Projects

Army Comments:

Page 3-37, column "Regulatory Program", rows 1, 2: Change "Clean Water Act" to "CERCLA"

Table 3-6 Compliance Early Action Status

DEP Comments:

SA 50 status should be changed to indicate that air sparging has been proposed to enhance the remedial efficiency of the existing Soil Vapor Extraction system. Also, it should list that a groundwater investigation has been implemented to determine the extent and concentration of contamination. Remedial proposals will follow.

Section 3.2 Compliance

DEP Comments:

24. The narrative should include Underground Injection Systems (UIS) in compliance with related remedial actions. The MCP should be added to the narrative in Regulatory Statutes.

Section 3.2.1.1 UST's

Army Comments:

Page 3-38, paragraph 1, third sentence: "WSC-400-89, WSC-401-91, and 9355.7-03" unfamiliar

Page 3-38, paragraph 2, second sentence: Delete entire sentence, this is not known for sure

DEP Comments:

The narrative should be changed to reflect that UST investigation and closure activities are being performed under the Massachusetts Contingency Plan and the Interim Remedial Waste Policy 94-400, not the listed policies. The BRAC UST management plan does not exist, they should be listing it as the Fort Devens UST protocol.

The narrative should include a reference to the table of USTs to be removed in 1995, see page 4-17.

25. The narrative explains the difference between localized contamination release and beyond localized release. This needs to be replaced by the current policy which includes submittal of Ram plans prior to UST removal and limiting initial soil excavation to 200 cubic yards prior to stepping back and evaluating the extent of contamination. At that time the regulating authorities and the Army can decide if excavation can complete the clean -up or if further investigation is warranted.
26. Page 3-38, paragraph 3: EPA and DEP guidance should be mentioned

EPA Comments:

27. The FFA's role in oil investigations and cleanups needs to be mentioned in this section.

Section 3.2.3 Hazardous Waste Management

Army Comments:

Page 3-70, paragraph 1, last sentence: Define or list "Department of Transportation regulations"

Section 3.2.4 Solid Waste Management

Army Comments:

Page 3-70, paragraph 1, first sentence: Define or list "Department of Transportation regulations"

Page 3-70, paragraph 3, second sentence: "NEP" unknown, is it supposed to be "MEP"?

DEP Comments:

28. Landfill #2 (SA) is not considered an NFA site. Although a recent archaeological survey of the area recommended further archaeological study, a removal is scheduled for the site. An additional site, SA 6A, containing 500 cubic yards is not noted in the plan. This landfill, consisting primarily of household debris, is located on the southern boundary of the South Post, immediately west of Shirley and Otis Roads. The report should note that SA 41 ("Beer Can Landfill"), SA 6, SA 6A, SA 12, & SA 13 are not being considered for NFA and will be handled as a group or bundle and may move to a proposed consolidation landfill site. The "bundle" will be excavated and removed under the Auspices of the Army Corps of Engineers (New England Division) as non-critical removals. Tables 3-1 and 3-2 should be corrected to reflect the above status.

29. Page 3-71, last paragraph of section: this should be updated

EPA Comments:

30. Page 3-70: reference the Landfill Consolidation Plan

Section 3.2.8 RCRA Facilities

Army Comments:

Page 3-73, paragraph 2, last sentence: Change "remains active under RCRA interim status" to "is used for emergency purposes under agreement with MADEP"

Page 3-73, paragraph 3, last sentence: include storage bunker status

Section 3.2.9 Wastewater Discharges

Army Comments:

Page 3-73, paragraph 1, last sentence: Change "allow" to "allows"; Change "to recharge to the groundwater" to "percolate through the ground."

Page 3-74, only paragraph, last sentence: Delete entire sentence

Section 3.2.12 NRC Licensing

Army comments:

Delete first and second sentence. Add second paragraph: "The U. S. Army Center for Health Promotions and Preventive Medicine is conducting a radiological survey in buildings known to or suspected to have stored equipment or materials containing NRC licensed commodities. Results of these surveys will be available for inclusion in Environmental Baseline Surveys or other Property Transfer Documents.

Section 3.2.15 Lead-based Paint

Army Comments:

Page 3-75, paragraph 1, first sentence: Insert "and Massachusetts Department of Public Health" after "(HUD)"

Page 3-75, paragraph 2, fourth sentence: Change "Buen Vista Housing Development" to "Buena Vista Housing Area", occurs in two place in this sentence

DEP Comments:

Page 3-75: Mention that the lead based paint is AREE 68

Page 3-75, paragraph 2, second to last paragraph: name the report that is mentioned.

Section 3.2.17 Unexploded Ordnance

Army Comments:

Page 3-75, paragraph 2, last sentence: Change "is to be" to "was"

DEP Comments:

Page 3-75, paragraph 2: update this paragraph

Page 3-75, paragraph 3: Be more detailed.

Section 3.2.18 National Environmental Policy Act (NEPA)

Army Comments:

Page 3-75, paragraph 1, only sentence: Delete entire sentence

DEP Comments:

Page 3-75, paragraph 2, second sentence: change "wa" to "was"

Section 3.2.19 Air Emissions

Army Comments:

Page 3-76, paragraph 1, last sentence: Check with EMO for MADEP registration number

Section 3.3.2 Wildlife

Army Comments:

Page 3-77, paragraph 2, sixth sentence: Change "Slaterock" to "Slate Rock"

Section 3.3.4 Designated Preservation Areas

DEP Comments:

31. Please identify the potential preservation areas and provide an update on the status of the designated Area of Critical Environmental Concern (ACEC).

Section 3.4 Environmental Condition of Property

Army Comments:

Page 3-79, paragraph 1, third sentence: Change "BRAC 88" to "BRAC I"

EPA Comments:

Page 3-79: It would be useful to mention the number of acres nominated in each category by the Army as well as the CERFA PA from April 1994. Also reference the number of clean parcel areas that EPA concurred on.

Section 3.4.5 Suitability of Installation Property for Transfer by Deed

Army Comments:

Page 3-83, paragraph 2, first sentence: The reference "(see Section 3.4.5)" is incorrect

Page 3-83, paragraph 2, first sentence: Reference to figure 3-3 in appendix F refers to incorrect placement, the figure is included in the text.

Section 3.5 Status of Community Involvement

Army Comments:

Page 3-88, bullet 2, first sentence: who is the "Secretary"?

Page 3-88, bullet 4, last sentence: "beginning in 1995", is this true?

Page 3-88, bullet 5, last sentence: Is the "secretary" here named the same as from bullet two? if so why not capitalized?

Page 3-89, bullet 1, second sentence: Change "Title" to "Section"; Change "2001" to "200-1"

Page 3-90, bullet 3, second sentence: Change "EMO" to "BEC"

DEP Comments:

General comments:

The Table of Contents is inaccurate (the page numbers listed do not correspond to the actual pages in the document.)

Attached to these comments is the original 3.5 submission from the Department of the Army for the draft BCP Version 1. There is a great deal more detail in this submission than was put into the Final BCP Version 1. Please feel free to use any information from this attachment.

Specific Comments:

Page 3-87, paragraph 1: To update this section, please contact Ms. Susan Brown, U.S. Army Corps of Engineers, at (617) 647 - 8536. Ms. Brown will be able to provide details regarding the National Environmental Policy Act (NEPA) activities at the base since the publication of the BCP Version 1. Some of these activities include publication of the draft EIS, comment periods, public notices, and public meetings.

Page 3-87, paragraph 3: For additional community involvement information on the Federal Bureau of Prisons, please contact Ms. Natalie Landy at (202) 514-6470

Page 3-87, paragraph 4: To update information on the MEPA process, the Devens Reuse Plan, Devens By-laws, and the Devens Enterprise Commission, please contact Ms. Judy Kohn, at the Massachusetts Government Land Bank, (508) 772-6340.

Page 3-88, paragraph 6: For information on the Community Relations Plan, which is currently undergoing revision, contact Ms. Ann Johnson at ABB Environmental Services, Inc. (703) 769-8156. Additional information should be provided to you by Mr. James Chambers, the BRAC Environmental Coordinator at Fort Devens.

EPA Comments:

32. Page 3-88, last arrow: discuss the updated CRP as well as your new initiatives, including the

newsletter.

Page 3-89, 2nd to last arrow: Delete this and discuss the RAB in detail.

Table 4-1 Relationship Between IRP Sites, OUs, and Parcels

Army Comments:

Page 4-3, Column "Site(s)", rows 9, 11, 12: Change "AOC" to "SA"

Page 4-3, Column "Site(S)", last row: Change "--" to "63AX"

Figure 4-1 Primary Documents

Army Comments:

33. No page number, third page of figure: "HQs 10th Special Forces OU" not an acknowledged OU, check for proper name

Section 4.1.1 Zone Designations

DEP Comments:

34. AREEs should be included

Page 4-2, paragraph 1, last sentence: Does "reuse parcels" refer to CERFA parcels or reuse map?

Page 4-2, paragraph 2: AREE information available and should be included.

Section 4.1.2 OU Designation

Army Comments:

35. Page 4-9, last bullet, first and last sentences: Change "AOC" to "SA"
36. Page 4-10, bullet 2: "Headquarters 10th Special Forces OU" not an acknowledged OU, check for proper name

EPA Comments:

37. Page 4-9: reference the landfill consolidation plan on this page

Table 4-2 Cleanup Sequence

Army Comments:

Page 4-12, column "Reconcile Comments": Nothing listed in this column, is it necessary?

DEP Comments:

Update this table

Section 4.1.3.2 Remediation Timelines and Documents

Army Comments:

38. Page 4-13, last and third to last bullets: These OUs not acknowledged OUs, check for proper names

Table 4-3 Environmental Restoration Planned Early Actions

Army Comments:

Page 4-15, Column "Time Frame": Check on current status, time frame outdated

Section 4.1.5 Remedy Selection Approach

Army Comments:

Page 4-16, bullet 3: Change "may be constructed" to "was considered"; Insert before last sentence, "Due to environmental issues of treated soils and economic analysis comparing this alternative to more conventional treatment, the CSTF is no longer under consideration."

DEP Comments:

Page 4-16, bullet 3: update

Page 4-16, last bullet: mention that these procedures are consistent with Massachusetts law.

Page 4-17, Category B: Add MAAF or on a case by case decision

39. Page 4-17, paragraph 1: Will there be an update from EMO?

EPA Comments:

Page 4-16, third arrow: Discuss why the CSTF is no longer a viable option (Comment noted in revision). Discuss what we plan to do with the soil currently and the General Management Procedures for Excavated Waste Site Soils.

40. Page 4-17: Discuss the updates General Management Procedures for Excavated Waste Site Soils.

Section 4.2 Compliance Strategy

EPA Comments:

By early actions, do you mean removal actions under CERCLA or the MCP?

Section 4.2.1.1 USTs

Army Comments:

Page 4-18, paragraph 1, second to last sentence: Change "September 1997" to "March 1996"

Section 4.2.4 Solid Waste Management

DEP Comments:

The closure plan for Shepley's Hill Landfill received approval from the MADEP. However, the MADEP has not granted final approval of the closure action itself pending receipt of the closure reports and as-builts required by 310 CMR 19.000.

Section 4.2.5 PCBs

DEP Comments:

This section should have a reference to the AREE 66 study which identified the need for PCB investigation and the resulting remedial actions. The AREE 66 sites should be listed.

Section 4.2.8 RCRA Facilities

Army Comments:

Page 4-20, paragraph 1, second to last sentence: Check on "RCRA part B interim status."

DEP Comments:

The RCRA Part B permit will not close, the facility will close upon closure of Fort Devens.

Section 4.2.10 Oil/Water Separators (OWS)

DEP Comments:

Fort Devens has performed a non-residential floor drain study that has identified discharge points from floor drains and OWS. The study was performed by SEA, Inc. for the Army Corps of Engineers. Most of these drainage systems are comprised of OWS that discharge to on-site dry wells or to the sanitary sewer. These types of drainage systems have also been identified through

the investigation of Maintenance and Waste Accumulation Areas under the AREE 61 project.

Those floor drain systems found to be discharging to on-site discharge points will be eliminated through MADEP Underground Injection Control (UIC) Policy and USEPA CFR closure requirements. Those OWS that are connected to the sanitary sewer will require inspection to determine if they are in compliance with current regulations.

OWS will continue to undergo routine maintenance by the installation until property is transferred to other ownership. The new owner will be required to maintain all components in the drainage system after that time.

Section 4.2.12 NRC Licensing

Army Comments:

41. Delete this section

Section 4.2.14 Radiation

DEP Comments:

A radiological survey was completed at AOCs 44 & 52 in January 1995 due to the potential presence of radioactive components from scrapped military vehicles. During the conduct of the survey one radioluminescent instrument dial was found and disposed of. No further radiation compliance issues are anticipated.

Section 4.2.15 Lead Based Paint

Army Comments:

Page 4-21, only paragraph, second to last sentence: Change "MADEP" to "Massachusetts Department of Public Health"

Section 4.2.17 Unexploded Ordnance

Army Comments:

The paragraph should be rewritten as follows:

"The Defense Explosives Safety Board has imposed ordnance clearance requirements for BRAC installation. The U. S. Army Corps of Engineers (USACE) - Huntsville Division is developing an ordnance, ammunitions, and explosives safety plan based on results of an Archive Search Report produced by the USACE - St. Louis District. The final results of the Archive Search Report are expected in May 1995. The survey for ordnance is expected to be completed by USACE - Huntsville Division in September 1995.

DEP Comments:

The unexploded ordnance report and site survey for Main and North Posts has not yet been presented.

Section 4.2.18 National Environment Policy Act

DEP Comments:

This paragraph states that Fort Devens does not plan to produce NEPA documents besides the Disposal and Reuse EIS. While this is true, it might be good to mention that other NEPA documents have been produced by other Federal agencies (i.e., the Bureau of Prisons). It is possible that additional NEPA documents will be produced by other Federal agencies in the future.

Section 4.3.6 Cultural resources

DEP Comments:

Please list the eleven prehistoric sites and the eighteen historic sites. (Comment noted by Army, not appropriate at this time to list sites.)

Section 4.4 Community Involvement Strategy

Army Comments:

Page 4-24, bullet 1: Add "Spring 1995"

Page 4-24, last bullet: Change "TRC" to "RAB"

DEP Comments:

The Draft EIS has already been released and the Final is scheduled to be released within the next few months.

The Draft EIR has also been released and the Final is scheduled to come out within the next few months. Also, the Reuse Plan has been adopted, as well as Devens Bylaws.

The Technical Review Committee has been absorbed into the Restoration Advisory Board. The TRC is now a subcommittee of the larger RAB, which meets monthly at Fort Devens.

Chapter 5

EPA Comments:

The schedules need to be updated to reflect the most current dates.

Table 5-1 BCT Meeting Schedule

DEP Comments:

The table's schedule and contents are outdated. Please correct.

Chapter 6 Technical and Other Issues yet to be Resolved

Army Comments:

42. Page 6-1, sections 6.1, 6.1.1, 6.1.2, 6.1.3: Incorrect format, delete these sections

EPA Comments:

43. Change Chapter 6 to reflect the discussions we had on 4/19/95 at Fort Devens.

Section 6.2.2 Rationale

Army Comments:

Page 6-2:

Current status revision by Mr. Terry Martin is enclosed.

DEP Comments:

Page 6-2, paragraph 1: Resources should be identified for database and user interface maintenance

Page 6-2, paragraph 3: Storage space may require enhancement.

Page 6-3, paragraph 1: Data has now been standardized

Section 6.2.3 Status/Strategy

Army Comments:

Page 6-3, paragraph 1: Revise entire paragraph about "Long-term GIS System Responsibility" (Current status revision by Mr. Terry Martin is enclosed.)

DEP Comments:

The BEC has obtained GIS personnel, hardware and software.

Section 6.4.3 Status/Strategy

Army Comments:

Page 6-5: Get background information from Charlie George, USACE

Section 6.5 Risk Assessments

Army Comments:

44. Page 6-5: state policy

Section 6.6.1 BCT Action Items

Army Comments:

Page 6-6, paragraph 2, third sentence: Change "should not be" to "is not"

Page 6-6, paragraphs 2, 3: Delete both paragraphs

Section 6.6.2 Rationale

Army Comments:

45. Page 6-7, paragraph 1: meaning of first two sentences is unclear

Page 6-7, paragraph 3, first sentence: "AREE 60, Training Areas and Ranges should be re-opened for study beyond normal O&M" should be taken care of in unexplained ordnance survey

Section 6.6.3 Status/Strategy

Army Comments:

Page 6-7, paragraph 1, last sentence: Delete entire sentence

Section 6.8.1 BCT Action Items

Army Comments:

46. Page 6-8, paragraph 1, first sentence: Revise "In January 1994 the Army published what it considered the"

Section 6.8.3 Status/Strategy

Army Comments:

47. Page 6-9: Check on GMSP current status, soil staging areas

Section 6.11 Cleanup Standards

Army Comments:

Page 6-10, paragraph 1, last two sentences: Delete these two sentences

Section 6.11.1 BCT Action Items

Army Comments:

Page 6-11: Delete this section

Section 6.11.2 Rationale

Army Comments:

48. Page 6-11: Delete this Section

Section 6.11.3 Status/Strategy

Army Comments:

Page 6-11, first paragraph, first sentence: Keep first sentence, Delete rest of paragraph

Section 6.14 Review of Selected Technologies for Application of Expedited Solutions

Army Comments:

49. Page 6-13, only paragraph: Update this section and discuss reasons for discontinuing CSTF

DEP Comments:

A central soil treatment facility (CSTF) was not constructed to treat soils from AOCs 44 & 52. Although the construction of such a facility was considered in the Feasibility Study, it was not part of the selected remedial alternative.

Section 6.14.1 BCT Action Items

Army Comments:

50. Page 6-13, only paragraph: Update this section

DEP Comments:

Construction of a CSTF is currently being considered for Fort Devens. A draft design is being developed by OHM. The proposed CSTF will treat all petroleum contaminated soils originating on Fort Devens as well as provide a segregation area for PCB and pesticide contaminated soils.

Section 6.14.3 Status/Strategy

DEP Comments:

A remedial alternative (excavation and asphalt batching) has been selected for AOCs 44 & 52. The EPA's Record of Decision, detailing the alternative, has been signed.

Section 6.15 Hot Spot Removals

Army Comments:

Page 6-14, only paragraph: Update this section in light of the various sites removals

Section 6.19 Interfacing with the Community Reuse Plan

DEP Comments:

Please note that the reuse plan provides only general future use types rather than specific redevelopment on a parcel by parcel basis. Therefore, the Army and the regulators do not have specific reuse information to utilize in remedial decision making.

Section 6.23

Army Comments:

Add to section:

"Based on a recommendation from the MADEP the Massachusetts Office of Dispute Resolution (MODR) was engaged to facilitate improving partnering among the BCT. During February and March 1995, Mr. Greg Sorbel of MODR interviewed BCT members and other individuals from the respective agencies. Mr. Sorbel is in the process of summarizing his findings and providing recommendations.

The Executive Steering Committee (ESC) was established in April 1994. Participating are senior management from the respective BCT agencies as well as from the Massachusetts Government Land Bank. The Installation Commander, Col. Edward R. Nuttall chairs the committee which meets quarterly. the ESC is used as a forum for the BCT to present issues requiring executive guidance and decision."

Section 6.23.1 BCT Action Items

Army Comments:

Page 6-20: Delete second sentence. Add "The Bct will continue to use the above partnering techniques and seek out other innovative techniques as well."

Section 6.23.3 Status/Strategy

Army Comments:

51. Delete entire section

Section 6.24.3 Status/Strategy

Army Comments:

Page 6-21, paragraph 1, last sentence: Delete this sentence

Section 6.25 Implementing the Policy for On-Site Decision Making

Army Comments:

52. Page 6-21: Update this section in light of the interim policy

Section 6.25.2 Rationale

Army Comments:

53. Page 6-21: talk about letter on delegated authority

Table F-1 BCP Distribution List

Army Comments:

Page F-8, Column "Name", row 5: Change "Dileppo" to "Deleppo"

Page F-8, column "Name", row 8: Change "Rasumuson" to "Rasmuson"

Page F-9, column "Name", row 5: This name unfamiliar

Page F-9, column "Name", row 7: This person has left

Chapter 6

TECHNICAL AND OTHER ISSUES TO BE RESOLVED

This chapter summarizes technical and other issues that are yet to be resolved. These issues include information management; usability of historical data; data gaps; natural (background) levels of elements and compounds in soil, groundwater, surface water, and sediments; risk assessment; state cleanup standards; and program initiatives to complete cleanup requirements as required to meet property transfer schedules.

6.1 Data Usability

This section identifies issues that need to be resolved with regard to the quality and comparability of data gathered and used in the installation environmental restoration and compliance programs. No data usability issues exist for Fort Devens.

6.2 Information Management

This section summarizes unresolved issues pertaining to data management in the installation environmental restoration program.

6.2.1. BCT Action Items

Geographic Information Systems using Arc/INFO 6.1.1. are currently available to the U.S. Army Base Realignment And Closure Environmental Office, the Massachusetts Department of Environmental Protection (Worcester), and the U.S. Environmental Protection Agency (Region I). Details for data standards, coordination, and cooperation need to be addressed by the BCT.

GIS Data Standards, Coordination, and Cooperation. Draft data quality standards of documentation have been developed by the Executive Office of Environmental Affairs for the MassGIS. These standards need to be discussed, modified as needed, accepted, and implemented by all GIS, CAD and database developers working on Fort Devens. GIS coordination through meetings of GIS managers has been implemented. Regular meetings of a GIS coordination committee need to be established. Cooperative agreements on data exchange between parties need to be developed.

6.2.2. Rationale

GIS Standards. GIS standardization exists in hardware and software. Standardization in naming conventions and data standards is a necessary precursor to cooperative exchange of data.

GIS Coordination. GIS coordinators meeting on a regular basis can assure common approaches to problems and upgrade paths.

GIS Cooperation. Exchange protocols ensure that all interested parties are looking at the same

information as the basis for decision making.

6.2.3. Status/Strategy

The BRAC Environmental Coordinator has now come on-line with a Sun UNIX workstation running Arc/INFO 6.1.1. Regulators and the Army now share common hardware, software, and data. The BEC is working to proof existing coverages and databases while developing new coverages.

Draft Data Standards for exchange protocols will be developed by cooperative agreement. Long term issues of standards and responsibilities will be addressed by the BCT.

Coordination issues will be addressed by convening meetings of GIS coordinators as directed by the BCT.

Cooperative agreements for data exchange will be developed by the BCT. GIS coordinators will work out the exchange details.

The following information is being requested to complete the BCTs comments regarding the Version 2 of Fort Devens BCP.

1. Please provide information on Superfund issues that apply to the sites on South Post and where the BCT would like these issues to be presented.
2. Please copy the Massachusetts Contingency Plan and Chapters 21C and 21E, so that EARTH TECH can insert them. (Chapters of a document really don't belong in a glossary of terms).
3. How do you want these paragraphs revised? The BCT should be revising (rewriting) these paragraphs and EARTH TECH will insert.
4. There is a paragraph on the BCT. It is the first paragraph in Section 1.3.
5. Please provide the room and phone number for Steve Urbell.
6. Please write (discuss) the paragraph regarding railroad issues, Plow Shop Pond, and Grove Pond. EARTH TECH does not know the issues regarding these "sites".
7. The screening process is part of the disposal plan. The screening process does not replace the disposal plan.
8. The BCT needs to update this paragraph. EARTH TECH knows of no additional NEPA documentation that is to be done and has no information as to what the MEPA is?
9. Please give concrete examples of how the BCT wishes this section to read and please add the information regarding the master lease. EARTH TECH has no information regarding the master lease.
10. Please provide DoD/Army policies on EBSs, FOSTs, and FOSLs.
11. Something is missing here.
12. The comment is "the Guildford Transportation (Boston and Maine Railroad) Internodal Facility needs to be discussed here". EARTH TECH has listed this facility in the section entitled interim leases. If additional information regarding the facility needs to be mentioned (or discussed) please provide the information. "Additionally, mention of the master lease negotiations and timetable would be appropriate." Please provide information on master lease, the master lease negotiations and any time tables you would like mentioned. EARTH TECH does not have this information.
13. This information was received from AEC during preparation of the first version of the Fort Devens BCP.
14. A list of AREEs is provided in Table 3-2, which starts on the next page.

15. Fort Devens and the regulators should be discussing what the OUs are. EARTH TECH did not decide on what was to be an OU or the names of the OUs.
16. Does this mean that "Solid Waste Consolidation" is to replace "Removal Action" or is it to be added in addition to the removal action?
17. The "final determination" status and dates were received from AEC.
18. What subsets? Please provide information the BCT would like to add.
19. These subsites are shown in Table 3-2.
20. The removals of various sites is in Column 1 - IRP Site No., the purpose states it was a removal of contamination source. The "removal various sites" does not belong in the status column. The status column is where the site stands in the regulatory process (i.e., a NFA DD has been approved; an RI is planned, etc.).
21. EARTH TECH needs the names of the sites that have had these "removals", as in the "removals various sites".
22. EPA would have the information regarding the permit status of the EOD bunker and EDD range. Since the EOD range was listed in Fort Devens RCRA Part A application - it would operate under interim status - until a RCRA Part B application has been approved for the range.
23. Instead of another column to this table state that UIS closure has or has not been met in the "status" column.
24. Please provide information on underground injection systems and how UISs are related to remediation actions. Please provide information on MCP.
25. Need information regarding current policy and RAM plans.
26. Please provide EPA and DEP guidance information that you want mentioned here.
27. Please provide information on the FFA's role in oil, investigations and cleanups that you want mentioned here.
28. Is SA 6A a new site? Please provide information regarding this site. EARTH TECH has been informed by Fort Devens that Site 41 is an AOC, not a study area (SA) and AOC 41's "name" is the Unauthorized Dumping Area, not "Beer Can Landfill"; unless otherwise directed the site status shall remain an AOC and the name of AOC 41 will not change.
29. Please provided status updates for all sites (landfills) within this section.

30. Please provide information on the Landfill Consolidation Plan so it can be referenced correctly.
31. Please provide information on what the designated area of critical environmental concern (ACEC). According to the Fort Devens Reuse Plan, an Open Space Plan will be prepared in accordance with the DEP's published "Guidelines for Operations and Land Stewardship Programs", used in the State Park System. This plan will identify the potential preservation areas.
32. Contacted Ann Johnson as suggested in previous comment, updated document according to information provided. No newsletter was mentioned. Please include newsletter information EPA wants to add.
33. Jim Chambers named this OU on January 5, 1995, while EARTH TECH was conducting a site visit. If the OU is to have a "new" name - please rename it at this time.
34. There are too many installation-wide AREEs to include in the figures. Working on new figures - may be able to include AREEs.
35. According to the databases and information EARTH TECH received from Fort Devens, this site is an AOC, not an SA.
36. See 34 above.
37. Please provide information on the Landfill Consolidation Plan.
38. Jim Chambers of Fort Devens named the OUs on January 5, 1995, for the BCP, if the names of the OUs have changed, please provide that information.
39. EMO needs to answer this.
40. Please provide the updated General Management Procedures for Excavated Waste Site Soils.
41. For consistency within Chapters 3 and 4, this section should not be detected.
42. According to AEC, this is the proper format. The section on data usability is not applicable to Fort Devens.
43. EARTH TECH was not present at the April 19, 1995 BCT meeting of Fort Devens and has no information regarding the discussions on the BCP. Please provide the text the BCT would like inserted.
44. Please provide U.S. Army policy on risk assessments.

45. Meaning of first two sentences is not unclear if Section 6.6.1 is read. Please provide text to make statements understandable.
46. Please provide text on how the BCT wishes to revise this paragraph.
47. Please provide information regarding the General Soil Management Plan and Soil Staging Areas.
48. Can't just delete a section like this. It throws the sequence off. Each of these sections has 4 parts. If there are no BCT action items for cleanup standards, that information will be stated.
49. Please provide information regarding Central Soil Treatment Facility and the reasons for discontinuing it. EARTH TECH has no information regarding this facility.
50. Please provide the text to update this section.
51. Same as 49 above.
52. Please provide information as to what is the interim policy.
53. Please provide letter on delegated authority and provide information on what BCT wants to state in this section.

APPENDIX A

► FISCAL YEAR FUNDING REQUIREMENTS/COSTS ◄

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TABLE A-1. TOTAL ENVIRONMENTAL PROGRAM SUMMARY

FUND REQUIREMENTS (\$000)								
Program	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	Total
IRP DERA	0	0	0	0	0	0	0	0
IRP BRAC	18,581.9	11,410	7,193	7,179	1,040	0	0	45,403.9
EC-CR	155	540	500	250	250	0	0	1,695
EC-MR	2,029.1	1,425	1,825	1,150	825	0	0	7,254.1
NAT/CULT	0	0	0	0	0	0	0	0
Total	20,766	13,375	9,518	8,579	2,115	0	0	54,353

Key: BRAC = Base Realignment and Closure
 DERA = Defense Environmental Restoration Account
 EC-CR = Environmental Compliance-Closure Related
 EC-MR = Environmental Compliance-Mission Related
 FY = Fiscal Year
 IRP = Installation Restoration Program
 NAT/CULT = Natural/Cultural

TABLE A-2. HISTORICAL ENVIRONMENTAL PROGRAM EXPENDITURES SUMMARY

FUND REQUIREMENTS (\$000)									
Program	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	Total
IRP DERA	0	0	0	0	278.5	1,662.4	3,321.6	104	5,366.5
IRP BRAC	0	0	0	0	0	0	0	4,863	4,863
EC-CR	0	0	0	0	0	0	0	0	0
EC-MR	2,424.7	82.8	1,176.8	1,140.4	1,819	1,536.8	3,368.2	3,347	14,896.5
NAT/CULT	0	0	0	0	0	0	0	0	0
Total	2,424.7	82.8	1,176.8	1,140.4	2,098.3	3,199.2	6,689.8	8,314	25,126

Key: BRAC = Base Realignment and Closure
 DERA = Defense Environmental Restoration Account
 EC-CR = Environmental Compliance-Closure Related
 EC-MR = Environmental Compliance-Mission Related
 FY = Fiscal Year
 IRP = Installation Restoration Program
 NAT/CULT = Natural/Cultural

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APPENDIX B

► INSTALLATION ENVIRONMENTAL RESTORATION DOCUMENT SUMMARY TABLES ◀

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TABLE B-1. PROJECT DELIVERABLES

Year	Phase	Project Title	Report No.	Study Areas examined	Delivery Date/Contractor
1992	PA	Master Environmental Plan for Fort Devens	1	Groups 1A, 1B, 2-12	April 1992/Argonne National Laboratory
1992	PA	Enhanced Preliminary Assessment	2	Groups 1A, 1B, 2-12, Site 59, AREE 60-69	April 1992/Roy F. Weston, Inc.
1992	SI	Final Task Order (Site Investigation) Work Plan	3	Groups 3, 5 & 6 [38, 44, 52, 9, 19, 20, 21, 30, 31, 47, 50]	September 1992/ABB Environmental Services, Inc.
1992	RI/FS	Final Feasibility Study Work Plan	4	Group 1A [4, 5, 18, & 40]	August 1992/ABB Environmental Services, Inc.
1992	RI/FS	Draft Fish Tissue Sampling and Analysis Work Plan	5	Group 1A [4, 5, 18, & 40]	September 1992/ABB Environmental Services, Inc.
1992	SI	SI Data Package	6	Groups 3, 5 & 6 [38, 44, 52, 9, 19, 20, 21, 30, 31, 47, 50]	December 1992/ABB Environmental Services, Inc.
1992	SI	Final Task Order (Site Investigation) Work Plan	7	Groups 2 & 7 [13, 45, 49, 56, 57, 58, 12, 14, 27, 28, 41, & 42]	December 1992/ABB Environmental Services, Inc.
1992	SI	Final Task Order (Site Investigation) Work Plan	8	SA 43 - Historic Gas Stations	December 1992/ABB Environmental Services, Inc.
1992	SI	Final Project Operations Plan - Volumes I, II and III	9	Installation-wide	December 1992/ABB Environmental Services, Inc.
1993	SI	SI Data Packages - Volumes I & II	10	Groups 2 & 7 [13, 45, 49, 56, 57, 58, 12, 14, 27, 28, 41, 42, & Historic Gas Stations]	January 1993/ABB Environmental Services, Inc.
1993	RI/FS	Final Data Gap Activities Work Plan	11	Group 1A [4, 5, 18, & 40]	March 1993/ABB Environmental Services, Inc.
1993	SI	Final Site Investigation Report - Volumes I, II and III	12	Groups 3, 5 & 6 [38, 44, 52, 9, 19, 20, 21, 30, 31, 47, 50]	April 1993/ABB Environmental Services, Inc.
1993	SI	Final Site Investigation Report - Volumes I, II, III and IV	13	Groups 2 & 7 [13, 45, 49, 56, 57, 58, 12, 14, 27, 28, 41, 42, & Historic Gas Stations]	May 1993/ABB Environmental Services, Inc.
1993	RI/FS	Draft Alternatives Screening Report	14	Group 1A [4, 5, 18, & 40]	July 1993/ABB Environmental Services, Inc.
1993	EIS	Biological and Endangered Species Baseline Study	15	Installation-wide	August 1993/ABB Environmental Services, Inc.
1993	SI	Supplemental SI Data Package	16	Study Areas 38, 44, 52, 21, & 50	September 1993/ABB Environmental Services, Inc.

TABLE B-1. PROJECT DELIVERABLES**Continued**

Year	Phase	Project Title	Report No.	Study Areas examined	Delivery Date/Contractor
1993	RI/FS	Draft Railroad Roundhouse Site Investigation Report	17		September 1993/ABB Environmental Services, Inc.
1993	FS	Biological Treatability Study Report	18	AOCs 44 & 52	September 1993/ABB Environmental Services, Inc.
1993	RI/FS	Final RI Addendum Report - Volumes I, II, III & IV	19	Group 1A [4, 5, 18, & 40]	December 1993/ABB Environmental Services, Inc.
1993	SI	No Further Action Decision Under CERCLA	20	Study Area 30	December 1993/ABB Environmental Services, Inc.
1993	SI	No Further Action Decision Under CERCLA	21	Study Area 9	December 1993/ABB Environmental Services, Inc.
1993	SI	No Further Action Decision Under CERCLA	22	Study Area 47	December 1993/ABB Environmental Services, Inc.
1994	SI	No Further Action Decision Under CERCLA	23	Study Area 28	January 1994/ABB Environmental Services, Inc.
1994	SI	No Further Action Decision Under CERCLA	24	Study Area 58	January 1994/ABB Environmental Services, Inc.
1994	SI	Draft No Further Action Decision Under CERCLA	25	Study Areas 19, 20 & 21	January 1994/ABB Environmental Services, Inc.
1994	SI	Draft No Further Action Decision Under CERCLA	26	Study Area 31	January 1994/ABB Environmental Services, Inc.
1994	FS	Final Siting Study Report for Central Soil Treatment Facility	27	AOCs 44 & 52	January 1994/ABB Environmental Services, Inc.
1994	FS	General Management Procedures for Excavated Waste Site Soils	28	AOCs 44 & 52	January 1994/ABB Environmental Services, Inc.
1994	FS	Final Feasibility Study Report For AOCs 44 and 52	29	AOCs 44 & 52	January 1994/ABB Environmental Services, Inc.
1994	FS	Draft Excavated Soils Management Plan	30	AOCs 44 & 52	January 1994/ABB Environmental Services, Inc.
1994	FS	Draft Proposed Plan - Barnum Road Maintenance Yards	31	AOCs 44 & 52	January 1994/ABB Environmental Services, Inc.
1994	SI	Supplemental SI Data Package	32	Study Areas 13, 12, 14, 49, 42, 41, 43B, 43D, 43G, 43H, 43I, 43J, 43N, & 43O	January 1994/ABB Environmental Services, Inc.

TABLE B-1. PROJECT DELIVERABLES**Continued**

Year	Phase	Project Title	Report No.	Study Areas examined	Delivery Date/Contractor
1993	RI	Functional Areas I and II Draft Remedial Investigation Report	33	AOCs 25, 26, 27, 32, 43A, and South Post Impact Area	3/94
1993	RI	Functional Areas I and II Draft Initial Screening of Alternatives	34	AOCs 25, 26, 27, 32, 43A, and South Post Impact Area	3/94
1993	FS	Functional Areas I and II Final Initial Screening of Alternatives	35	AOCs 32, AOC 43A, and South Post Impact Area	5/94
1993	FS	Functional Areas I and II Final Remedial Investigation Report	36	AOCs 25, 26, 27, 32, 43A, and South Post Impact Area	6/94
1993	FS	Functional Areas I and II Draft Detailed Screening of Alternatives	37	AOCs 32, AOC 43A, and South Post Impact Area	7/94
1993	FS	Functional Areas I and II Final Detailed Analysis of Alternatives	38	AOCs 32, AOC 43A, and South Post Impact Area	9/94
1993	FS	Functional Areas I and II Draft Feasibility Study Report	39	AOCs 32, AOC 43A, and South Post Impact Area	10/94
1993	FS	Functional Areas I and II Final Feasibility Study Report	40	AOCs 32, AOC 43A, and South Post Impact Area	12/94
1993	SI	Main Post SI Final Supplemental Work Plan	41	SAs 10, 11, 16, 17, 29, 22, 34, 35, 36, 37, 39, 51, 59	April 1993, ADL
1993	SI	Main Post SI Final Supplemental Quality Assurance Project Plan	42	SAs 10, 11, 16, 17, 29, 22, 34, 35, 36, 37, 39, 51, 59	June 1993, ADL
1993	SI	Main Post SI Final Supplemental Health and Safety Plan	43	SAs 10, 11, 16, 17, 29, 22, 34, 35, 36, 37, 39, 51, 59	June 1993, ADL
1993	SI	Main Post SI Data Package	44	SAs 10, 11, 16, 17, 29, 22, 34, 35, 36, 37, 39, 51, 59	September 1993, ADL
1993	SI	Main Post SI Final SI Report	45	SAs 10, 11, 16, 17, 29, 22, 34, 35, 36, 37, 39, 51, 59	December 1993, ADL
1994	SSI/RI	Main Post SSI and RI/FS Work Plan, Supplemental QAPP, Supplemental HASP	46	SAs 17, 39, 51, AOC 11	March 1994, ADL
1994	SI	Main Post SI NFA Decision Document	47	SAs 10, 16, 29, 59	July 1994, ADL
1994	SSI	Main Post SSI Data Package	48	SAs 17, 39, 51	September 1994, ADL
1994	RI	Risk Assessment, AOC 11, Risk Assessment Approach Plan	49	AOC 11	November 1994, ADL
1994	SSI	Main Post SSI Revised Final SI Report	50	SAs, 17, 39, 51	December 1994, ADL

TABLE B-1. PROJECT DELIVERABLES**Continued**

Year	Phase	Project Title	Report No.	Study Areas examined	Delivery Date/Contractor
1994	RI	Risk Assessment, AOC 11, NFA Decision Document	51	SAs, 17, 39, 51	May 1995, ADL
1994	SSI	Main Post SSI RI/FS Report	52	AOC 11	May 1995, ADL
1995	SSI	Main Post SSI Draft Supplemental Work Plan	53	AREE 61, 63, 66, 69	April 1993, ADL
1995	RI	RI/FS, AOC 11 Final Supplemental Quality Assurance Plan	54	AREE 61, 63, 66, 69	June 1993, ADL
1993	BRAC	BRAC EE Final Supplemental Health and Safety Plan	55	AREE 61, 63, 66, 69	June 1993, ADL
1993	BRAC	BRAC EE Draft Maintenance and Waste Accumulation Areas (AREE 61)	56	All AREE 61 Sites	November 1993, ADL
1993	BRAC	BRAC EE Previously Removed Underground Storage Tank (AREE 63) Draft Report	57	All AREE 63 Sites	November 1993, ADL
1993	BRAC	BRAC EE Draft Previously Removed Underground Storage Tank (AREE 63) Memorandum Work Plan	58	All AREE 63 Sites	October 1993, ADL
1993	BRAC	BRAC EE Draft Past Spill Sites Report (AREE 69)	59	All AREE 69 Sites	October 1993, ADL
1993	BRAC	BRAC EE Draft Transformer Study Report (AREE 66)	60	All AREE 66 Sites	November 1993, ADL
1994	BRAC	BRAC EE (Part II) Draft Supplemental Work Plan (AREEs 65 and 67)	61	Main and North Posts	January 1994, ADL
1994	BRAC	BRAC EE (Part II) Final Health and Safety Plan (AREEs 65, 67, and 68)	62	Main and North Posts	January 1994, ADL
1994	BRAC	BRAC EE (Part II) Final QA/QC Plan (AREEs 65 and 67)	63	Main and North Posts	January 1994, ADL
1994	BRAC	BRAC EE (Part II) Final QA/QC Plan (AREE 68)	64	Main and North Posts	February 1994, ADL
1994	BRAC	BRAC EE Draft Stormwater Report System Evaluation (AREE 70)	65	All AREE 70 Sites	February 1994, ADL

TABLE B-2. SITE DELIVERABLES

Site No.	PA/SI	RI/FS	RD/RA	Close Out	IRA	LTM
SA 1	1, 2, 15					
SA 2	1, 2, 15					
SA 3	1, 2, 15					
AOC 4	1, 2, 9, 15	4, 5, 11, 14, 19				
AOC 5	1, 2, 9, 15	4, 5, 11, 14, 19				
SA 6	1, 2, 15					
SA 7	1, 2, 15					
SA 8	1, 2, 15					
SA 9	1, 2, 3, 6, 9, 12, 15					
SA 10	1, 2, 15, 41, 42, 43, 44, 45, 47					
AOC 11	1, 2, 15, 41, 42, 43, 44, 45	49, 52				
SA 12	1, 2, 7, 9, 10, 13, 15, 32					
SA 13	1, 2, 7, 9, 10, 13, 15, 32					
SA 14	1, 2, 7, 9, 10, 13, 15, 32					
SA 15	1, 2, 15					
SA 16	1, 2, 15, 41, 42, 43, 44, 45, 47					
SA 17	1, 2, 15, 41, 42, 43, 44, 45, 48, 50, 51					
AOC 18	1, 2, 9, 15	4, 5, 11, 14, 19				
SA 19	1, 2, 3, 6, 9, 12, 15					
SA 20	1, 2, 3, 6, 9, 12, 15					
SA 21	1, 2, 3, 6, 9, 12, 15, 16					
SA 22	1, 2, 15					
SA 23	1, 2, 15					
SA 24	1, 2, 15					
AOC 25	1, 2, 15	33, 34, 35, 36				

TABLE B-2. SITE DELIVERABLES

Continued

Site ID	PA/SI	RI/FS	RD/RA	Close Out	IRA	LTM
AOC 26	1, 2, 15	33, 34, 35, 36				
AOC 27	1, 2, 7, 9, 10, 13, 15	33, 34, 35, 36				
SA 28	1, 2, 7, 9, 10, 13, 15					
SA 29	1, 2, 15, 41, 42, 43, 44, 45, 47					
SA 30	1, 2, 3, 6, 9, 12, 15					
SA 31	1, 2, 3, 6, 9, 12, 15					
AOC 32	1, 2, 15	33, 34, 35, 36, 37, 38, 39, 40				
SA 33	1, 2, 15, 41, 42, 43, 44, 45					
SA 34	1, 2, 15, 41, 42, 43, 44, 45					
SA 35	1, 2, 15, 41, 42, 43, 44, 45					
SA 36	1, 2, 15, 41, 42, 43, 44, 45					
SA 37	1, 2, 15, 41, 42, 43, 44, 45					
SA 38	1, 2, 3, 6, 9, 12, 15, 16					
SA 39	1, 2, 15, 41, 42, 43, 44, 45, 46, 48, 50, 51					
AOC 40	1, 2, 9, 15	4, 5, 11, 14, 19				
AOC 41	1, 2, 7, 9, 10, 13, 15, 32					
SA 42	1, 2, 7, 9, 10, 13, 15, 32					
AOC 43A	1, 2, 8, 9, 10, 13, 15	33, 34, 35, 36, 37, 38, 39, 40				
SA 43B	1, 2, 8, 9, 10, 13, 15, 32					
SA 43C	1, 2, 8, 9, 10, 13, 15					
SA 43D	1, 2, 8, 9, 10, 13, 15, 32					

TABLE B-2. SITE DELIVERABLES

Continued

Site ID	PA/SI	RI/FS	RD/RA	Close Out	IRA	LTM
SA 43E	1, 2, 8, 9, 10, 13, 15					
SA 43F	1, 2, 8, 9, 10, 13, 15					
SA 43G	1, 2, 8, 9, 10, 13, 15, 32					
SA 43H	1, 2, 8, 9, 10, 13, 15, 32					
SA 43I	1, 2, 8, 9, 10, 13, 15, 32					
SA 43J	1, 2, 8, 9, 10, 13, 15, 32					
SA 43K	1, 2, 8, 9, 10, 13, 15					
SA 43L	1, 2, 8, 9, 10, 13, 15					
SA 43M	1, 2, 8, 9, 10, 13, 15					
SA 43N	1, 2, 8, 9, 10, 13, 15, 32					
SA 43O	1, 2, 8, 9, 10, 13, 15, 32					
SA 43P	1, 2, 8, 9, 10, 13, 15					
SA 43Q	1, 2, 8, 9, 10, 13, 15					
SA 43R	1, 2, 8, 9, 10, 13, 15					
SA 43S	1, 2, 8, 9, 10, 13, 15					
SA 44	1, 2, 3, 6, 9, 12, 15, 16	18, 27, 28, 29, 30, 31				
SA 45	1, 2, 8, 9, 10, 13, 15					
SA 46	1, 2, 15					
SA 47	1, 2, 3, 6, 9, 12, 15					
SA 48	1, 2, 15					
SA 49	1, 2, 8, 9, 10, 13, 15, 32					
SA 50	1, 2, 3, 6, 9, 12, 15, 16					

TABLE B-2. SITE DELIVERABLES

Continued

Site ID	PA/SI	RI/FS	RD/RA	Close Out	IRA	LTM
SA 51	1, 2, 15, 41, 42, 43, 44, 45, 46, 48, 50, 51					
SA 52	1, 2, 3, 6, 9, 12, 15, 16	18, 27, 28, 29, 30, 31				
SA 53	1, 2, 15					
SA 54	1, 2, 15					
SA 55	1, 2, 15					
SA 56	1, 2, 8, 9, 10, 13, 15					
SA 57	1, 2, 8, 9, 10, 13, 15					
SA 58	1, 2, 8, 9, 10, 13, 15					
SA 59	2, 15, 41, 42, 43, 44, 45, 47					
AREE 60	2, 15					
AREE 61	2, 15, 53, 54, 55, 56					
AREE 62	2, 15					
AREE 63	2, 15, 53, 54, 55, 57, 58					
AREE 64	2, 15					
AREE 65	2, 15, 61, 62, 63, 64					
AREE 66	2, 15, 53, 54, 55, 60					
AREE 67	2, 15, 61, 62, 63, 64					
AREE 68	2, 15, 61, 62, 63, 64					
AREE 69	2, 15, 53, 54, 55, 59					
AREE 70	15, 65					

Note: Numbers in table refer to report numbers listed in Table B-1.

APPENDIX C

► DECISION DOCUMENT/ROD SUMMARIES ◀

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APPENDIX C

► DECISION DOCUMENT/ROD SUMMARIES ◀

As of August 1995, there are no record of decision (ROD) documents for any of the IRP sites at Fort Devens. Several no further action (NFA) documents have been prepared for sites at Fort Devens. NFA summaries are provided in Appendix D.

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APPENDIX D

► NO FURTHER ACTION (NFA) SUMMARIES ◀

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APPENDIX D

► NO FURTHER ACTION SUMMARIES ◀

Table D-1 identifies those sites where restoration has been completed or where no releases have occurred at Fort Devens. The table will be updated as additional remedial actions are completed.

Following Table D-1 are the executive summaries of Decision Documents that require No Further Action under CERCLA. As additional No Further Action Decision Documents are documented, their executive summaries will be incorporated in this section.

TABLE D-1. NO FURTHER ACTION SITES

AREE Number	AREE Description	Date of No Further Action Decision
SA 1	Cutler Army Hospital Incinerator	April 1993
SA 2	Veterinary Clinic Incinerator	April 1993
SA 3	Intelligence School Incinerator	April 1993
SA 6	Landfill No. 2 - South Post Area	
SA 7	Landfill No. 3 - South Post Impact Area	April 1993
SA 8	Landfill No. 4 - South Post Area 8a	April 1993
SA 9	North Post Landfill (Landfill No. 5)	Submitted December 1993 - solid waste closure required
SA 10	Landfill No. 6 - Near Shirley Gate	June 1995
SA 14	Landfill No. 10 - South Post (Abandon Quarry Dixie Road)	June 1995
SA 15	Landfill No. 11 - South Post (Helipad)	Pending
SA 16	Landfill No. 12 Shoppette Landfill	June 1995
SA 19	Wastewater Treatment Plant	Pending June 1995
SA 20	Rapid Infiltration Basins	Pending June 1995
SA 21	Sludge Drying Beds	Pending June 1995
SA 22	Hazardous Waste Storage Facility (Building 1650)	April 1992
SA 23	Paper Recycling Center (Building 1650)	April 1992
SA 24	Waste Explosive Storage Bunker (Building 3644)	February 1993
SA 28	Training Area 14, South Post	

TABLE D-1. NO FURTHER ACTION SITES**Continued**

AREE Number	AREE Description	Date of No Further Action Decision
SA 30	Drum Storage Area - MAAF	Pending
SA 31	Firefighting Training Area MAAF	June 1995
SA 35	Former DEH Entomology Shop, Building 254	Pending
SA 46	Training Area 6d, South Post	April 1993
SA 47	Buildings 3816 Leaking UST Site - MAAF	June 1995
SA 53	POL Spill Area, South Post	April 1993
SA 54	Historic Gas Station, Former Building 182	
SA 55	Shirley Housing Area Trailer Park Fuel Tanks	April 1993
SA 58	Building 2648 and 2650 Leaking UST Sites	Pending
SA 59	Bridge 526	June 1995
INSTALLATION-WIDE AREES		
60	Training Areas and Ranges	
61	Hazardous Waste Accumulation Areas	
62	Existing USTs	Pending removal and compliance upgrade actions
63	Previously Removed USTs	
64	ASTs	
66	PCB Transformers	
69	Past Spill Sites	
70	Storm Sewer System	

DECISION DOCUMENT
NO FURTHER ACTION UNDER
COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT
STUDY AREA 24 (BUNKER 187)
FORT DEVENS MASSACHUSETTS

Final

January 1993

Prepared By:

United States Army Environmental Center
formerly United States Army
Toxic and Hazardous Materials Agency

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EXECUTIVE SUMMARY

Extensive study of Study Area 24 (Bunker 187) at Fort Devens Massachusetts has resulted in the conclusion that no further studies or remediation are required at this site. Study Area 24 was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on 21 December 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation have been conducted which address Study Area 24.

Field investigation of Study Area 24 was conducted during 1991 in conjunction with a site investigation of six sites on Fort Devens. The field investigation consisted of an inspection of the structure and the collection of five surface soil samples from the areas around the bunker. The bunker was determined to be structurally sound following a joint Army/Environmental Protection Agency inspection, with no potential for release of contaminants through cracks in the floor. Analysis of the samples did not detect any explosive compounds, the primary contaminant of concern. One sample was analyzed using the Toxicity Characteristics Leaching Procedure for extraction and analysis of the leachate for metals and organic compounds. This analysis resulted in anomalous levels of one compound. Silver was detected at a level of 415 micrograms per liter, which is below the threshold for characterization as a hazardous waste (5000 micrograms per liter). Results of chemical analyses are presented in Appendix J of the Group 1B Site Investigations Report (USATHAMA, 1992c).

Study Area 24 was a portion of a permitted Resource Conservation and Recovery Act Title X Storage and Disposal permitted facility. The facility was operating under an interim permit, which expired in November, 1992. Closure of the facility in accordance with the provisions of the Resource Conservation and Recovery Act is ongoing.

Based upon results of the study, it was determined that there is no evidence or reason to conclude that activities at Bunker 187 have caused environmental impact or pose a threat to human health or the environment.

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**NO FURTHER ACTION DECISION
UNDER CERCLA
STUDY AREA 09
NORTH POST LANDFILL
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Wakefield, Massachusetts
Project No. 6917-11

DECEMBER 1993

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EXECUTIVE SUMMARY

Investigations of Study Area 09 (North Post Landfill) at Fort Devens Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Any further action should be addressed under applicable solid waste regulations and standards. Study Area 09 was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation have been conducted which address Study Area 09.

Field Investigation of Study Area 09 was initiated in 1992 in conjunction with the other ten Group 3, 5 and 6 Study Areas at Fort Devens. The Study Area 09 site investigations consisted of both Study Area-specific investigations (geophysical surveys, monitoring wells, test pits, and surface water and sediment sampling near the landfill) and non-Study Area-specific investigations of the whole Group 5 area (existing monitoring wells and sampling of surface water and sediment in the Nashua River).

A geophysical survey was conducted at the landfill to supplement information derived from evaluation of aerial photographs and delineate the actual limits of the landfill. The results of the survey assisted in the placement of test pits and groundwater monitoring wells, and provided insight into the distribution of landfilled materials.

Three soil borings for monitoring wells were drilled just outside the limits of the North Post Landfill (to avoid penetrating landfill materials), to approximately 10 feet below the water table. Two rounds of groundwater samples and water table measurements, collected three months apart, were collected from the three new monitoring wells and 16 existing monitoring wells. The 16 existing monitoring wells had been previously installed to evaluate the effectiveness of the wastewater treatment plant (Study Area 19). The samples were analyzed for project analyte list organics, inorganics, anions/cations, explosives and water quality parameters; and total petroleum hydrocarbon compounds,

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

total suspended solids, and total- and fecal-coliform bacteria. Due to cross-contamination during the second sampling round a third round of groundwater samples was collected for volatile organic compounds only.

Three sets of surface water and sediment samples were collected from a swampy area to the southwest of the landfill. The surface water samples were analyzed for organics, inorganics, total petroleum hydrocarbon compounds, total suspended solids, explosives, and water quality parameters. Sediment samples were analyzed for organics, inorganics, total petroleum hydrocarbon compounds, total organic carbon, and explosives.

To further characterize the nature of soils and landfilled materials, four test pits were excavated in areas where landfilled material was identified during the geophysical surveys. A total of eight soil samples were collected from the test pits for laboratory analysis. The samples were analyzed for organics, inorganics, and total petroleum hydrocarbon compounds.

Ten sets of surface water and sediment samples were collected from the Nashua River. Sample locations were spaced along the Nashua River both upgradient and downgradient of the Group 5 Study Areas, as a means of assessing contaminated groundwater discharging to the river. Surface water and sediment samples were submitted for analysis of organics, inorganics, explosives, and total petroleum hydrocarbon compounds. In addition, surface water samples were analyzed for water quality parameters, total and fecal coliform bacteria, and total suspended solids.

Sampling and analysis during the site investigation indicated that some organic polynuclear aromatic hydrocarbons and inorganic (beryllium) analytes are present in the study area subsurface soil at concentrations exceeding human health guidelines. These contaminants were likely derived from unspecified landfill material, but exposure to these contaminants is expected to be minimal under foreseeable site use scenarios. Furthermore, the landfilled material has been present on site for an extended period of time and has had no significant impact to groundwater quality. Groundwater samples from monitoring well locations in the subject area do not indicate that organic contamination from former landfilling operations has impacted groundwater. Although inorganic analytes are elevated in groundwater at all locations, their presence in samples can be readily explained by the high total suspended solid concentrations (inorganic particulates). Arsenic is present in groundwater at a concentration exceeding drinking water standards but is detected in only an upgradient well location and is therefore not considered to be attributable to Study Area 09.

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On the basis of findings at Study Area 09 and Preliminary Risk Evaluations performed, there is no evidence or reason to conclude that possible hazardous waste contamination due to contents in the landfill has caused significant environmental contamination or poses a threat to human health or the environment. The decision has been made to remove Study Area 09 from further consideration in the Installation Restoration Program process and that any further action be addressed under applicable solid waste regulations and standards.

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NO FURTHER ACTION DECISION UNDER CERCLA

**FORT DEVENS STUDY AREA 28
WASTE EXPLOSIVES DETONATION RANGE
(TRAINING AREA 14)**

DATA ITEM A009

CONTRACT DAAA15-91-D-0008

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND**

JANUARY 1994

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NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 28
WASTE EXPLOSIVES DETONATION RANGE
(TRAINING AREA 14)

FORT DEVENS, MASSACHUSETTS

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-D-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

JANUARY 1994

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EXECUTIVE SUMMARY

Study Area 28 (one of the 13 Groups 2 and 7 Study Areas) was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination. Investigations of Study Area 28 (Waste Explosives Detonation Range [Training Area 14]) at Fort Devens Massachusetts have resulted in the decision that no further hazardous waste studies are required at this site. Any further action should be addressed under applicable Resource Conservation and Recovery Act explosive ordnance disposal closure regulations and standards.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation have been conducted which address Study Area 28.

Field investigation of Study Area 28 was initiated in 1992 in conjunction with the other twelve Groups 2 and 7 Study Areas at Fort Devens. The Study Area 28 site investigation activities included unexploded ordnance clearing, soil excavation, subsurface soil sampling, monitoring well installation, and groundwater sampling.

Two test pit excavations were dug in each of the two largest impact craters/burn pits identified at Study Area 28. These test pits were excavated by hand to four feet below ground surface and two soil samples were collected from each test pit. The soil samples were analyzed for Project Analyte List organics, inorganics, total petroleum hydrocarbon compounds, and explosives.

Four soil borings were advanced (one upgradient and three downgradient or cross-gradient) in the study area for the purpose of installing groundwater monitoring wells. Two rounds of groundwater samples and water table measurements, three months apart, were collected from the four monitoring wells. The groundwater samples were analyzed for Project Analyte List organics, inorganics, anions/cations, explosives, and total petroleum hydrocarbon compounds.

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EXECUTIVE SUMMARY

Sampling and analysis performed on soil and groundwater samples collected during the site investigation indicated that there is no evidence of SA-derived organic compound concentrations exceeding human health guidelines [bis(2-ethylhexyl)phthalate detected in groundwater was determined to be a laboratory contaminant]. Only beryllium in subsurface soil exceeded both background concentrations and human health risk guidelines. However, the detected concentration only slightly exceed the human health risk-based guideline. Aluminum and iron were detected in groundwater at concentrations exceeding background and secondary Maximum Contaminant Level guideline, however, these concentrations are not expected to pose a significant threat to human health. Two inorganic analytes, copper and zinc, detected in surface soils were determined to exceed established ecological benchmark values. Due to the limited ecological habitat present in the vicinity of the impact craters/burn pits where the contaminants were found, these exceedances are not considered to pose significant ecological risk.

On the basis of findings at Study Area 28 and Preliminary Risk Evaluations performed, there is no evidence or reason to conclude that possible hazardous waste contamination due to past site activities has caused significant environmental contamination or poses a threat to human health or the environment. The decision has been made to remove Study Area 28 from further investigation under the Comprehensive Environmental Response, Compensation and Liability Act process and that any further action be addressed under applicable Resource Conservation and Recovery Act closure regulations and standards.

**NO FURTHER ACTION DECISION
UNDER CERCLA**

**FORT DEVENS STUDY AREA 30
MOORE ARMY AIRFIELD
DRUM STORAGE AREA
DATA ITEM A009**

CONTRACT DAAA15-91-D-0008

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND**

DECEMBER 1993

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NO FURTHER ACTION DECISION
UNDER CERCLA
STUDY AREA 30
MOORE ARMY AIRFIELD DRUM STORAGE AREA
FORT DEVENS, MASSACHUSETTS

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-D-0008

Prepared by:

ABB Environmental Services, Inc.
Wakefield, Massachusetts
Project No. 6917-11

DECEMBER, 1993

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EXECUTIVE SUMMARY

Investigations of Study Area 30 (Moore Army Airfield Drum Storage Area) at Fort Devens Massachusetts have resulted in the decision that no further studies or remediation are required at this site. Study Area 30 was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, and Enhanced Preliminary Assessment, and a Site Investigation have been conducted which address Study Area 30.

Field Investigation of Study Area 30 was initiated in 1992 in conjunction with the other ten Group 3, 5 and 6 Study Areas at Fort Devens. Investigation at Study Area 30 entailed installing a total of two monitoring wells and eight soil borings in the east and west drum storage areas. Nine other wells were installed as part of the group-wide water quality assessment at the airfield. To evaluate the potential impact of contaminant migration from Study Area 30 to the Nashua River, surface water and sediment samples were collected from the Nashua River.

Total petroleum hydrocarbon compound concentrations in soil samples were observed to be generally low; the highest concentration of 171 micrograms per gram was detected in a surface soil sample in the east drum storage area. Many of the other samples exhibited total petroleum hydrocarbon compound concentrations near or below the detection limit. Organic compounds (toluene, xylene, and polynuclear aromatic hydrocarbons) were observed predominantly in surface soils in unpaved areas. Concentrations of these analytes decrease with, or are absent at depth. The current volatile organic compound distribution suggests that downward migration may have occurred in two well borings but significant concentrations are not observed at depth. The poor correlation between polynuclear aromatic hydrocarbons and total petroleum hydrocarbon compounds distribution in surface soils suggests that airborne combustion product deposition is a likely source for the polynuclear aromatic hydrocarbons. The absence of polynuclear aromatic hydrocarbons in the west is likely the result of pavement

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

cover there. The absence of chlorinated solvents in all of the soils suggests that releases of those compounds have not occurred in this study area. Inorganic analyte concentrations in Study Area 30 soil samples were observed to be generally at or below calculated background concentrations for Fort Devens soils. Elevated concentrations of sodium (maximum 487 micrograms per gram) in soil are likely be the result of runway and taxiway de-icing. The source of the slightly elevated concentrations of beryllium (maximum 0.847 micrograms per gram) in soil is not known.

Based on groundwater analytical data it is apparent that no observable contamination of groundwater has occurred as a result of potential releases from drummed waste in Study Area 30.

The results of sediment sampling support the conclusion that contaminant migration via storm and surface water runoff from the airfield and other upstream sources is a likely source of sediment contamination in the Nashua River; the specific source area for this contamination cannot be determined however, due to the large number of stormwater connections. Surface water and sediment in the Nashua River will be further investigated under Area Requiring Environmental Evaluation 70.

Ecological and human health Preliminary Risk Evaluations found no unacceptable risk associated with volatile organic compounds. Polynuclear aromatic hydrocarbon concentrations detected in surficial soils exceeded both human health and ecological guidelines, but are likely the result of combustion product deposition and not historical Study Area 30 activities.

In summary, based on the results of the investigation and Preliminary Risk Evaluations performed for Study Area 30, there is no evidence or reason to conclude that historical site operations conducted at Study Area 30 have resulted in significant environmental contamination which poses a threat to human health or the environment.

**NO FURTHER ACTION DECISION UNDER
CERCLA**

**FORT DEVENS HISTORIC GAS STATIONS
STUDY AREAS 43C, E, F, K, L, M, P, Q, R, S**

DATA ITEM A009

CONTRACT DAAA15-91-D-0008

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND**

JANUARY 1994

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**NO FURTHER ACTION UNDER CERCLA
STUDY AREA 43C
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

JANUARY 1994

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EXECUTIVE SUMMARY

Investigations of Study Area 43C (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43C was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43C.

Field investigation of Study Area 43C was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43C site investigation consisted of surficial geophysical surveys, which included a metal detector and ground penetrating radar survey.

The geophysical surveys indicated that one abandoned underground storage tank was present on the southern side of the existing pumphouse. This tank was removed by ATEC Environmental Consultants on August 27, 1992. ATEC performed field screening for volatile organic compounds and total petroleum hydrocarbons on eight soil samples collected from the walls of the excavation. One soil and one groundwater sample from the bottom of the excavation were collected for confirmatory laboratory analysis. The soil sample was analyzed for total petroleum hydrocarbons and the groundwater sample was analyzed for volatile organic compounds and total petroleum hydrocarbons. No volatile organic compounds were detected in groundwater and total petroleum hydrocarbon results were below the detection limit of the method. ABB Environmental Services, Inc. collected one composite sample from the bottom of the excavation for off-site laboratory analysis. Total petroleum hydrocarbons were detected at 78.2 parts per million. Based on ATEC Environmental Consultants' sampling results, the excavation was backfilled and no further site investigation was conducted.

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

On the basis of findings at Study Area 43C and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43C from further consideration in the Installation Restoration Program.

ABB Environmental Services, Inc.

NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43E
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

JANUARY 1994

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EXECUTIVE SUMMARY

Investigations of Study Area 43E (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43E was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43E.

Field investigation of Study Area 43E was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43E site investigation consisted of surficial geophysical surveys, which included a metal detector and ground penetrating radar survey.

The geophysical surveys indicated that one abandoned underground storage tank was present on the northern side of Building 2020. This tank was removed by ATEC Environmental Consultants on September 3, 1992. No visually contaminated soil was observed in the excavation, and groundwater was not encountered. ATEC Environmental Consultants performed field screening for volatile organic compounds and total petroleum hydrocarbons on 10 soil samples collected from the walls of the excavation. The photoionization detector headspace screening showed volatile organic compound concentrations ranging from 0.2 to 0.5 parts per million. Total petroleum hydrocarbons were detected at concentrations ranging from 4.8 to 43.5 parts per million. ABB Environmental Services, Inc. collected one composite sample from the bottom of the excavation for off-site laboratory analysis. Total petroleum hydrocarbons were detected at 85 parts per million. Based on ATEC Environmental Consultants' sampling results, the excavation was backfilled. Because total petroleum hydrocarbon

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EXECUTIVE SUMMARY

concentrations were below 100 parts per million, no further site investigation was conducted.

On the basis of findings at Study Area 43E and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43E from further consideration in the Installation Restoration Program.

NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43F
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

JANUARY 1994

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EXECUTIVE SUMMARY

Investigations of Study Area 43F (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43F was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43F.

Field investigation of Study Area 43F was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43F site investigation consisted of collecting subsurface soil samples and soil gas samples for field analysis. Surficial geophysical surveys were not conducted at SA 43F because the historic gas station is located under the current Post Exchange building.

Nine TerraProbe points were advanced along the three accessible sides of the Post Exchange building to seek evidence of possible migration of residual contamination away from the site of the historic gas station (see Figure 2-2).

Seven soil samples were collected from 9 feet and three soil samples were collected from 15 feet. Only one sample was collected from 20 feet due to subsurface obstructions. All of the soil samples collected from SA 43F were analyzed in the field for benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbons. Because the water table was not reached in any of the soil sampling TerraProbe points, soil gas samples were collected from all nine locations and field-screened for benzene, toluene, ethylbenzene, and xylenes only. No soil borings or monitoring wells were completed at this site.

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

On the basis of findings at Study Area 43F and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43F from further consideration in the Installation Restoration Program.

ABB Environmental Services, Inc.

NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43K
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Investigations of Study Area 43K (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43K was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43K.

Field investigation of Study Area 43K was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43K site investigation consisted of a surficial geophysical survey, subsurface soil sampling using ABB Environmental Services, Inc.'s TerraProbe unit, field analysis of the subsurface soil samples, and one soil boring to collect samples for laboratory analysis.

The geophysical survey indicated that one abandoned underground storage tank was present at the site. This tank was removed by ATEC Environmental Consultants on September 3, 1992. ATEC performed field screening for volatile organic compounds and total petroleum hydrocarbons on eight soil samples collected from the walls of the excavation. Volatile organic compound concentrations ranged from 0.5 to 190 parts per million, and total petroleum hydrocarbon concentrations ranged from 22 to 89 parts per million. Based on these results, ATEC removed more soil from the excavation and collected four additional soil samples. Volatile organic compounds ranged from 1 to 4 parts per million in the soil headspace and total petroleum hydrocarbon concentrations (measured in the laboratory) ranged from 15 to 58 parts per million. The 58 parts per million of total petroleum hydrocarbons was found in the southeast corner of the excavation. No volatile organic compounds were detected in the one soil sample analyzed in the laboratory for volatile organic compounds. One groundwater sample was collected from the excavation and analyzed in the laboratory for total petroleum

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EXECUTIVE SUMMARY

hydrocarbons only. A concentration of 22 milligrams per liter of total petroleum hydrocarbons was detected in this sample. Due to these results, ATEC lined the southeast corner of the excavation with polyethylene sheeting and backfilled the entire excavation with clean fill. Based on the results of the ATEC field screening, this underground storage tank removal was classified as a successful removal and no further soil removal or remediation was conducted.

To determine whether contamination had migrated laterally along the water table, 11 soil samples were collected at ten TerraProbe points around the excavation at SA 43K. The results of the field analyses indicated that no benzene, toluene, ethylbenzene, and xylene compounds or total petroleum hydrocarbons were present in the subsurface soil samples around the excavation.

One soil boring (43K-92-01X) was drilled to the water table to confirm the field screening results. No volatile organic compounds or total petroleum hydrocarbons were detected in the soil sample collected from the water table, and lead was present below established Fort Devens background concentrations.

On the basis of findings at Study Area 43K and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43K from further consideration in the Installation Restoration Program.

**NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43L
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Investigations of Study Area 43L (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43L was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and an underground storage tank removal program, have been conducted which address Study Area 43L.

An investigation of subsurface soil at Study Area 43L was conducted by Kurz Associates in 1989 as part of an underground storage tank removal program at Fort Devens. The three underground storage tanks were removed, and were observed to be in good condition. The headspace of nine soil samples from each excavation were screened for total volatile organic compounds with a photoionization detector. Concentrations ranged from 0.4 to 6.8 parts per million. Four composite soil samples were collected from the excavations for total petroleum hydrocarbon analysis. The concentrations ranged from 57 to 108 parts per million.

After assessing the distribution and migration potential of the contaminants at the station, it was concluded by Fort Devens personnel that groundwater was not being impacted and that current site conditions, at the time, posed no significant risk to potential receptors. Based on this assessment, the excavations were backfilled, and no additional investigation was conducted.

Based on the recommendations in the Kurz report, ABB Environmental Services, Inc. did not conduct a site investigation at SA 43L during the 1992 field program. Based on the results of the work by Kurz Associates, it does not appear that the past activities at SA 43L have impacted the soil quality in the vicinity of the former underground storage

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

tank locations. The decision has been made to remove Study Area 43L from further consideration in the Installation Restoration Program.

**NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43M
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Investigations of Study Area 43M (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43M was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and an underground storage tank removal program, have been conducted which address Study Area 43M.

An investigation of subsurface soil at Study Area 43M was conducted by Kurz Associates in 1989 as part of an underground storage tank removal program at Fort Devens. Two USTs were removed, and were observed to be in good condition. The headspace of nine soil samples from each excavation were screened for total volatile organic compounds with a photoionization detector. Concentrations ranged from 1.0 to 7.4 parts per million. Four composite soil samples were collected from the excavations for total petroleum hydrocarbon analysis. The total petroleum hydrocarbon compound concentrations ranged from 73 to 101 parts per million.

After assessing the distribution and migration potential of the contaminants at Study Area 43M, it was concluded by Fort Devens personnel that groundwater was not being impacted by the concentration detected and that current site conditions pose no significant risk to potential receptors. Based on this assessment, the excavations were backfilled, and no additional investigation was conducted.

Based on the recommendations in the Kurz report, ABB Environmental Services, Inc. did not conduct a site investigation at SA 43M during the 1992 field program. Based on the results of the work by Kurz Associates, it does not appear that the past activities at SA 43M have impacted the soil quality in the vicinity of the former underground storage

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

tank location. The decision has been made to remove Study Area 43M from further consideration in the Installation Restoration Program.

**NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43P
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Investigations of Study Area 43P (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43P was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43P.

Field investigation of Study Area 43P was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43P site investigation consisted of collecting subsurface soil samples, field analysis of those samples, and one soil boring.

Eleven TerraProbe points were advanced to refusal at each location and up to three subsurface soil samples per point (21 total) were collected for field analysis. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbons. Benzene, toluene, ethylbenzene, and xylenes were not detected in any of the samples, and total petroleum hydrocarbon compounds were detected in only one sample at 220 parts per million.

One soil boring was advanced to refusal, apparently bedrock, and two subsurface soil samples were collected for laboratory analysis. The samples were analyzed for volatile organic compounds, total petroleum hydrocarbons, and lead. No volatile organic compounds or total petroleum hydrocarbon compounds were detected, and lead was present below the established Fort Devens background concentration.

The water table was not reached in any of the TerraProbe points or the soil boring.

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

On the basis of findings at Study Area 43P and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43P from further consideration in the Installation Restoration Program.

**NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43Q
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Investigations of Study Area 43Q (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43Q was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43Q.

Field investigation of Study Area 43Q was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43Q site investigation consisted of a geophysical survey program, TerraProbe points to collect subsurface soil and soil gas samples, and field analysis of these soil and soil gas samples.

The surficial geophysical program consisted of metal detector, magnetometer, and ground penetrating radar surveys. This program was designed to determine if any abandoned underground storage tanks were present at this site. The results of the surficial geophysical surveys did not indicate the presence of an abandoned underground storage tank, but several small magnetic anomalies were detected in the reported area of the historic gas station. These anomalies were believed to be construction debris from the former pumphouse and pump island.

Three soil samples were collected, from two locations, because refusal was reached at approximately 9 feet. Refusal was encountered at each TerraProbe point prior to reaching the water table. The soil samples were analyzed in the field for benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbons. No benzene, toluene, ethylbenzene, and xylenes or total petroleum hydrocarbons were detected in any of the soil samples collected. Because each of the TerraProbe points met refusal before

EXECUTIVE SUMMARY

encountering groundwater, 11 soil gas samples were collected between 8 and 9 feet from 10 points. These depths were estimated to be at or below the bottom of the former underground storage tank. Two soil gas samples were collected from TP-04. All of the soil gas samples were analyzed for benzene, toluene, ethylbenzene, and xylenes, only. No benzene, toluene, ethylbenzene, and xylenes compounds were detected in the soil gas samples collected from SA 43Q.

On the basis of findings at Study Area 43Q and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43Q from further consideration in the Installation Restoration Program.

**NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 43R
HISTORIC GAS STATION SITES
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Investigations of Study Area 43R (Historic Gas Station Site) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site. Study Area 43R was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 43R.

Field investigation of Study Area 43R was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 43R site investigation consisted of a geophysical survey program, TerraProbe points to collect subsurface soil and soil gas samples, field analysis of these soil and soil gas samples, and one soil boring to collect soil samples for laboratory analysis.

The geophysical surveys determined that one abandoned underground storage tank was present at the site. This tank was removed by ATEC Environmental Consultants on June 26, 1992. ATEC performed field screening for volatile organic compounds and total petroleum hydrocarbons on 10 soil samples collected from the walls of the excavation and two samples from the bottom of the excavation. ABB Environmental Services, Inc. collected one composite sample from the bottom of the excavation for off-site laboratory analysis. Based on the results of the field screening, the soils were deemed uncontaminated and the excavation was backfilled. However, based on the results of the composite sample collected and analyzed by ABB Environmental Services, Inc., an additional investigation was conducted to confirm the nature and distribution of fuel contamination detected in the bottom of the excavation.

A total of two soil samples were collected from two TerraProbe points, and one soil gas sample was collected from each of 10 TerraProbe points. The soil samples were

EXECUTIVE SUMMARY

analyzed in the field for benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbon compounds while the soil gas samples were analyzed for benzene, toluene, ethylbenzene, and xylenes, only. Benzene, toluene, ethylbenzene, xylenes, and total petroleum hydrocarbon compounds were not detected in the soil or soil gas samples, indicating that residual fuel contamination was not present outside of the former underground storage tank excavation.

One soil boring was drilled through the middle of the backfilled excavation. Two soil samples were collected from two depth intervals in the boring and analyzed for volatile organic compounds, total petroleum hydrocarbon compounds, and lead. No volatile organic compounds or total petroleum hydrocarbon compounds were detected in the subsurface soil samples. Lead concentrations were below the established Fort Devens background concentration.

On the basis of findings at Study Area 43R and the Preliminary Risk Evaluation, there is no evidence or reason to conclude that petroleum contamination due to the former underground storage tank has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 43R from further consideration in the Installation Restoration Program.

**NO FURTHER ACTION DECISION
UNDER CERCLA**

**FORT DEVENS STUDY AREA 47
MOORE ARMY AIRFIELD
UNDERGROUND STORAGE TANK
DATA ITEM A009**

CONTRACT DAAA15-91-D-0008

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND**

DECEMBER 1993

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**NO FURTHER ACTION DECISION
UNDER CERCLA
STUDY AREA 47
MOORE ARMY AIRFIELD UNDERGROUND STORAGE TANK
FORT DEVENS, MASSACHUSETTS**

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-D-0008

Prepared by:

ABB Environmental Services, Inc.
Wakefield, Massachusetts
Project No. 6917-11

DECEMBER 1993

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EXECUTIVE SUMMARY

Investigations of Study Area 47 (Moore Army Airfield Underground Storage Tank) at Fort Devens Massachusetts have resulted in the decision that no further studies or remediation are required at this site. Study Area 47 was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on 21 December 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation have been conducted which address Study Area 47.

Field investigation of Study Area 47 was initiated in 1992 in conjunction with the other ten Group 3, 5 and 6 Study Areas at Fort Devens. Investigation at Study Area 47 entailed installing a monitoring well soil boring adjacent to the former underground storage tank excavation. Two other wells were installed as part of the group-wide water quality assessment at the airfield, but were near enough to and roughly downgradient of the former tank location to provide additional relevant data on impacts due to potential releases from that tank. To evaluate the potential impact of contaminant migration from Study Area 47 to the Nashua River, surface water and sediment samples were collected from the Nashua River.

Soil samples collected from the boring were analyzed for volatile organic compounds, lead, and total petroleum hydrocarbon compounds. No volatile organic compounds were detected and lead was detected at concentrations below background. The maximum total petroleum hydrocarbon compounds concentration was found to be 39.3 micrograms per gram from the boring placed adjacent to the tank. This concentration was lower than what would be expected for overtly contaminated soil. The investigation results indicate that fuel-related contamination may have occurred. However, the absence of petroleum hydrocarbons in deeper soils suggests that migration was not extensive in this study area.

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

Bis(2-ethylhexyl)phthalate was detected in a groundwater sample collected from the monitoring well adjacent to the tank at concentrations exceeding the U.S. Environmental Protection Agency Region III drinking water guidelines, but is a suspected laboratory contaminant. Aluminum and iron concentrations at this location exceeded secondary Maximum Concentrations Limits in the second round of sampling only, but are well below calculated background concentrations. Based on these results, no observable contamination of groundwater has occurred as a result of potential releases associated with the former underground storage tank at Study Area 47.

The results of sediment sampling support the conclusion that contaminant migration via storm and surface water runoff from the airfield is a likely source of sediment contamination in the Nashua River; the specific source area for this contamination cannot be determined however, due to the large number of stormwater connections. Surface water and sediment in the Nashua River will be further investigated under Area Requiring Environmental Evaluation 70.

On the basis of the investigation and Preliminary Risk Evaluations performed for Study Area 47, there is no evidence to conclude that possible residual contamination due to releases from a former leaking underground tank have caused significant environmental contamination or poses a threat to human health or the environment.

NO FURTHER ACTION DECISION UNDER CERCLA

**FORT DEVENS STUDY AREA 58
BUILDINGS 2648 AND 2650 FUEL OIL SPILLS**

DATA ITEM A009

CONTRACT DAAA15-91-D-0008

**U.S. ARMY ENVIRONMENTAL CENTER
ABERDEEN PROVING GROUND, MARYLAND**

JANUARY 1994

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NO FURTHER ACTION DECISION UNDER CERCLA
STUDY AREA 58
BUILDINGS 2648 AND 2650 FUEL OIL SPILLS
FORT DEVENS, MASSACHUSETTS

Prepared for:

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland
Contract DAAA15-91-D-0008

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7053-12

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EXECUTIVE SUMMARY

Study Area 58 (one of 13 Groups 2, 7, and Historic Gas Stations Study Areas) was identified in the Federal Facilities Agreement between the U.S. Environmental Protection Agency and the U.S. Department of Defense as a potential site of contamination. Investigations of Study Area 58 (Buildings 2648 and 2650 Fuel Oil Spills) at Fort Devens, Massachusetts have resulted in the decision that no further hazardous waste studies or remediation are required at this site.

Fort Devens was placed on the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act on December 21, 1989. In addition, under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990, Fort Devens was selected for cessation of operations and closure. In accordance with these acts, numerous studies, including a Master Environmental Plan, an Enhanced Preliminary Assessment, and a Site Investigation, have been conducted which address Study Area 58.

Field investigation of Study Area 58 was initiated in 1992 in conjunction with the other 12 Groups 2, 7, and Historic Gas Stations Study Areas at Fort Devens. The Study Area 58 site investigation consisted of field analysis of soil samples collected from TerraProbe points to characterize the vertical and horizontal distribution of potential localized contaminants, the collection of subsurface soil samples for laboratory analysis and geologic classification, the installation of groundwater monitoring wells, and the collection of groundwater samples.

Nineteen subsurface soil samples were collected from 10 TerraProbe points located around the former heating oil underground storage tank excavation at Building 2648. One soil sample was collected from between 5 feet and 7 feet below ground surface from each TerraProbe point. Another soil sample was collected from nine of the 10 TerraProbe points at a depth of 9 feet or refusal (approximately 11 feet below ground surface). These samples were analyzed on-site for benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbons. Toluene, ethylbenzene, xylenes, and total petroleum hydrocarbons were detected in several samples indicating that some residual fuel contamination may be present outside of the former heating oil underground storage tank excavation.

Based on the results of the TerraProbe program, four soil borings (58M-92-01X through 58M-92-04X) were drilled (one upgradient and three downgradient) and four monitoring wells were installed. One soil sample was collected from each boring and analyzed for Project Analyte List volatile organic compounds, total petroleum hydrocarbons, total organic

ABB Environmental Services, Inc.

EXECUTIVE SUMMARY

carbon, and grain size. No volatile organic compounds or total petroleum hydrocarbons were detected in any of the subsurface soil samples collected from Study Area 58 except for low concentrations of acetone in soil borings 58M-92-01X and 58M-29-04X. Acetone is considered a common laboratory contaminant and does not appear to be a site contaminant.

Monitoring well 58M-92-01X was installed as part of this investigation at a location presumed to be upgradient of the former underground storage tank excavation, and wells 58M-92-02X through 58M-92-04X were installed at presumed downgradient locations. Wells 58M-92-01X and 58M-92-02X were screened across the till/bedrock interface, and wells 58M-92-03X and 58M-92-04X were screened in till. Two rounds of groundwater samples were collected from each of the four monitoring wells. The first round was collected in September 1992 and the second round was collected in January 1993. All of the groundwater samples were submitted for laboratory analysis of Project Analyte List volatile organic compounds, total petroleum hydrocarbon compounds, selected inorganics, and anions and cations. Round Two groundwater samples were also analyzed for total suspended solids.

Volatile organic compounds were detected in the Round One groundwater sample collected from 58M-92-01X, only. No volatile organic compounds were detected in the other three groundwater samples collected. Round Two groundwater sampling results indicate that volatile organic compounds were not present in any of the samples collected. Total petroleum hydrocarbons were not detected in any of the groundwater samples collected from Study Area 58 during either round. Inorganic analyte (calcium, magnesium, and potassium) concentrations were above the calculated Fort Devens groundwater background concentrations in all wells. These elevated inorganic concentrations are not likely associated with leaking underground storage tanks.

On the basis of findings at Study Area 58 and Preliminary Risk Evaluation performed, there is no evidence or reason to conclude that petroleum contamination due to the former heating oil underground storage tanks has caused significant environmental contamination or poses a threat to human health. The decision has been made to remove Study Area 58 from further consideration in the Installation Restoration Program.

APPENDIX E

► CONCEPTUAL SITE MODEL DATA SUMMARIES ◄

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Table E-1. Conceptual Site Model Summary, AOCs 4, 5, and 18 (Shepley's Hill Landfill Sites), Chemical Standards, Exceedances and Potential Restoration Goals

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Media/ Contaminant	ARAR	Source	Exceedance of ARAR	Risk-Based Restoration Goal ⁽ⁿ⁾	Technology- Based Restoration Goal ⁽ⁿ⁾
AOC 5 - Shepley's Hill Landfill (sanitary landfill No. 1)	Encompasses approximately 84 acres in the NE corner of the Main Post. Inferred groundwater flow is generally NE toward Plow Shop Pond and Ayer industrial, residential and commercial zoned areas. AOC 5, Shepley's Hill Landfill, was used for disposal of household and military refuse. In 1984, a closure plan was initiated in accordance with state regulations. Landfill capping was completed in 4 phases between 1986-1993. AOC 4, the landfill incinerator, was located in an area included in Phase I of the landfill closure. It was used to burn household refuse until the late 1940's. Incinerator ash was buried in the landfill. AOC 18, the asbestos cell, is located in the section of the landfill closed during Phase IV. An estimated 6.6 tons of asbestos construction debris were placed in the landfill between 1982-1985. A second cell was opened for disposal of small volumes of asbestos material until 1992.	Background for organics is below method detection limit aluminum: 6870 µg/l arsenic: 10.5 µg/l iron: 9100 µg/l manganese: 291 µg/l	Groundwater (Ingestion): - 2 rounds/22 wells - 1 round/27 wells (confirming) - 1 round/5 new wells	Ingestion: residents Inhalation: residents Dermal: residents	Groundwater: aluminum arsenic iron manganese sodium other inorganics ^(a) 1,2-dichloroethane other trace VOCs ^(a) chloroethane	200 µg/l 50 µg/l 300 µg/l 50 µg/l various 5 µg/l various —	MA SMCLs ⁽¹⁾ MA MCL ⁽²⁾ MA GWQC ⁽³⁾ MA GWQC ⁽³⁾ (2),(3) SDWA/MCL ⁽⁴⁾ (3),(4) —	X X X X X —	—	—
AOC 4 - Sanitary Landfill Incinerator										
AOC 18 - Asbestos Cell	Based on the results of the RI, a Feasibility Study (FS) is recommended to evaluate alternatives to reduce potential human health risks associated with potential future exposure to groundwater. A separate FS is recommended to evaluate alternatives to reduce potential human health and ecological risks associated with contaminated fish and sediments in Plow Shop Pond.	—	Plow Shop Pond Sediments (direct contact): - 28 sample locations (supplemental RI) - Fish sampling program	Ingestion: residents, aquatic and semi-aquatic receptors Dermal: residents, aquatic and semi-aquatic receptors	Sediments: (landfill related) arsenic barium iron manganese nickel	— ⁽ⁿ⁾	— ⁽ⁿ⁾	— ⁽ⁿ⁾	—	—
		—	Plow Shop Pond Surface Water (direct contact): - 13 sample locations (RI) - Fish sampling program (supplemental RI)	Ingestion: residents, aquatic and semi-aquatic receptors Dermal: residents, aquatic and semi-aquatic receptors	Surface Water: (landfill related) iron	— ⁽ⁿ⁾	— ⁽ⁿ⁾	— ⁽ⁿ⁾	—	—

Notes:
(1) MA SMCLs - State Secondary Maximum Contaminant Level; MA MCL - State Maximum Contaminant Level.
(2) MA GWQC - State Groundwater Quality Standards
(3) SDWA/MCL: Safe Drinking Water Act/Maximum Contaminant Level
(4) MA ORSG: Office of Research and Standards Guidelines, MA DEP
(5) Arsenic, barium, calcium, chromium, cobalt, copper, potassium, magnesium, nickel, vanadium, and zinc
(6) 1,1-dichloroethane, 1,2-dichloropropane, 1,2-dichloroethene, and benzene
(7) Cleanup criteria to be based on a risk assessment approach

Table E-1. (cont'd.) Conceptual Site Model Summary, AOC 40 (Cold Spring Brook Landfill), Chemical Standards Summary

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Media/ Contaminant	ARAR/ Standard ^(a)	Source	Exceedance of ARAR/ Standard ^(a)	Risk-Based Restoration Goal ^(b)	Technology- Based Restoration Goal ^(b)
AOC 40 - Cold Spring Brook Landfill	The Cold Spring Brook Landfill (AOC 40) occupies approximately 4 acres along the edge of Patton Road in the SE part of the Main Post.				Groundwater:	($\mu\text{g/l}$)				
	The landfill extends approximately 800 feet along Patton Road and out into the former wetland along Cold Spring Brook, now mostly submerged beneath Cold Spring Brook Pond. The 3.5-acre pond was created by the raised inlet of the Patton Road culvert, between 1965 and 1972. The landfill is considered abandoned and was identified in 1987 when 14 55-gallon drums were discovered along the edge of Cold Spring Brook Pond. Other wastes at the landfill include concrete slabs, wire, storage tanks, rebar, timber, and debris.	Background for organics is below method detection limit arsenic: 10.5 $\mu\text{g/l}$ manganese: 291 $\mu\text{g/l}$ sodium: 10800 $\mu\text{g/l}$	Groundwater (ingestion): - 2 rounds/7 wells (RI) - 2 round/10 wells (confirming during supplemental RI)	<u>Ingestion:</u> residents <u>Inhalation:</u> residents <u>Dermal:</u> residents	arsenic bis(2-ethylhexyl)phthalate manganese sodium	50 6 50 20	MCL MCL GWQC HIA	X (max) X X	—	—
	Future residential exposure to groundwater at Cold Spring Brook Landfill presents potential human health risks above the USEPA points of departure. Risks associated with consumption of fish from Cold Spring Brook Pond and exposure to surface soil are within the USEPA target risk range. A Feasibility Study is recommended to evaluate alternatives to reduce potential human health risks associated with groundwater exposure and ecological risks associated with sediment hotspots in Cold Spring Brook Pond.	Background for organics is below method detection limit	Cold Spring Brook Sediments (direct contact): - 10 samples (RI) - 16 samples (supplemental RI)	<u>Direct Contact:</u> aquatic biota <u>Food Chain:</u> semiaquatic biota	Sediments ⁽¹⁾ : anthracene DDD DDT arsenic barium lead manganese	($\mu\text{g/g}$) 0.085 0.152 0.152 33 20 35 428	NOAA ⁽⁴⁾ USEPA SQC ⁽⁵⁾ USEPA SQC ⁽⁶⁾ NOAA ⁽⁴⁾ USEPA REG V ⁽⁶⁾ NOAA ⁽⁴⁾ NYSDEC ⁽⁷⁾	X X X X X X X	—	—

Notes:
(1) Contaminants with concentrations exceeding available sediment Reference Toxicity Values under average exposure and Reasonable Maximum Exposure assumptions.
(2) FS proposed. ARAAs not yet established. Values listed are number-of-fish/ponds used for screening level analysis.
(3) FS proposed. Cleanup standards not yet established.
(4) NOAA - National Oceanic and Atmospheric Administration Sediment Threshold Values
(5) USEPA SQC - USEPA Interim Sediment Quality Criteria
(6) USEPA REG V - USEPA Region V Sediment Classification System
(7) NYDEC - New York State Department of Environmental Conservation Sediment Criteria
(8) MCL - Maximum Contaminant Level; GWQC - Max. Groundwater Quality Standard; HIA - USEPA Water Lifetime Health Advisories

Table E-1. (cont'd.) Conceptual Site Model Summary, SA 41 (Unauthorized Dumping Area), Chemical Standards Summary

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Media/ Contaminant	ARAR/ Standards ^m	Source ⁿ	Exceedance of ARAR/ Standards ^m	Risk-Based Restoration Goal ⁿ	Technology- Based Restoration Goal ⁿ
SA 41 - Unauthorized Dumping Area (Site A)	SA 41 is located on the South Post, approximately one-half mile west of the Still River Gate, on the north shore of New Cranberry Pond. Inferred local groundwater flow may fluctuate away from and towards New Cranberry Pond depending upon groundwater and surface water level in the pond. Surface drainage is generally SE toward New Cranberry Pond.	Background for organics is below method detection limit	Groundwater (ingestion): - 2 rounds/1 well (SI) - 1 round/6 wells (SSI)	Ingestion: residents Inhalation: residents Dermal: residents	Groundwater ¹⁾ : 1,1,2,2-tetrachloroethane tetrachloroethylene trichloroethylene	(µg/l) 0.052 5 5	Reg III MCL MCL	X X X	—	—
		Background for organics is below method detection limit arsenic: 21 µg/g	Soil (direct contact): - 10 surface soil samples (SI) - 7 subsurface samples (SSI)	Ingestion: residents, site workers Dermal: residents, site workers	Soil ¹⁾ : benzo(a)anthracene benzo(a)pyrene benzo(b)fluoranthene chrysene indeno(1,2,3-c,d)pyrene PCB-1260 arsenic	(µg/g) 0.7 0.088 0.7 0.7 0.083 0.36	MCP Reg III MCP MCP MCP Reg III Reg III	X X X X X X X	—	—
	Based on results of the SI and SSI an RI/FS is recommended to determine the source and distribution of the VOC groundwater contamination detected at the site.	Background for organics is below method detection limit	Sediments from New Cranberry Pond and base of waste material (direct contact): - 2 samples (SI) - 5 samples (SSI)	Ingestion: wading and swimming Dermal: wading and swimming	Sediments ¹⁾ : PCB 1260 arsenic	(µg/g) 0.083 0.36	Reg III Reg III	X X	—	—
		Background for organics is below method detection limit	New Cranberry Pond Surface Water (direct contact): - 2 sample locations (SI) - 2 sample locations (SSI)	Ingestion: wading and swimming Dermal: wading and swimming	Surface Water ¹⁾ : aluminum iron lead manganese	(µg/l) 50-200 300 15 50	SMCL SMCL USEPA ⁶⁾ SMCL	X X X X	—	—

Notes:

- (1) Contaminants listed are those found to exceed MCL or Region III tap water concentrations. Groundwater filtered inorganic contaminants were either below detection limit or below the action level guidelines. Groundwater inorganic contaminants detected in non-filtered samples are a result of suspended solids and not SA-derived contamination.
- (2) RI proposed. ARARs not yet established. Values listed are drinking water/soil standards/guidelines used for screening level analysis.
- (3) RI proposed. Cleanup standards not yet established.
- (4) Listed contaminants are those having concentrations exceeding soil guidelines.
- (5) MCL - Maximum Contaminant Level; Reg III - Region III tap water; MCP - Massachusetts Contingency Plan
- (6) USEPA lead action level

Table E-1 (cont'd). Conceptual Site Model Summary, SA 43A - Historic Gas Station (POL Yard), Chemical Standards Summary

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Media/ Contaminant	ARAR	Source	Exceedance of ARAR	Risk-Based Restoration Goal ⁽¹⁾	Technology- Based Restoration Goal ⁽¹⁾
SA 43A - Historic Gas Station Site at POL Yard	SA 43A, the former central distribution facility for all of the historic gas stations is located in what is now the Petroleum, Oil, and Lubricant (POL) Storage Yard near the NE end of the Main Post.	Background for organics is below method detection limit	Groundwater (ingestion): - 1 round/3 wells	Ingestion: residents <u>Inhalation:</u> residents <u>Dermal:</u> residents	Groundwater ⁽¹⁾ : calcium sodium chloroform di-n-butylphthalate trichloroethylene xylene	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾	—	—
	Locally, inferred groundwater flow is SW toward areas likely to be zoned commercial or industrial upon base closure.	calcium: 14700 µg/l sodium: 10800 µg/l								
	Gasoline was delivered to this facility by railroad and was off-loaded into above ground and underground storage tanks (ASTs and USTs). From there it was transported by truck to the individual historic gas stations.	Background for organics is below method detection limit	Soil (direct contact): <u>Area 1</u> - 24 soil samples <u>Area 2</u> - 24 soil samples	<u>Ingestion:</u> residents, site workers <u>Dermal:</u> residents, site workers	Soils: (Areas 1 & 2) TPHC toluene ethylbenzene xylene (only Area 1) tetrachloroethylene lead	— ⁽¹⁾	— ⁽¹⁾	— ⁽¹⁾	—	—

Notes:
(1) Groundwater contaminants listed are those found to exceed NCL or Region III tap water concentrations or those contaminants for which no guideline currently exist. Inorganic contaminants listed are for shared samples.
(2) RI proposed. ARARs not yet established.
(3) RI proposed. Cleanup standards not yet established.

Table E-1. (cont'd.) Conceptual Site Model Summary, SA 43G - Historic Gas Station (AAFES Gas Station Area), Chemical Standards Summary

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Contaminants, Chemical Standards, Exceedances and Potential Restoration Goals	ARAR/ Standard ⁽²⁾	Source ⁽⁴⁾	Exceedance of ARAR/ Standards ⁽²⁾	Risk-Based Restoration Goal ⁽³⁾	Technology- Based Restoration Goal ⁽³⁾
SA 43G - Historic Gas Station Site and AAFES Gas Station	SA 43G is located SW behind Building 2009 and SW of the installation's active Army Air Force Exchange Service (AAFES) gas station in the central portion of the Main Post. Locally, inferred groundwater flow is east towards Robbins Pond and areas identified to become open space and recreational property upon base closure. The structures of the station consisted of a pump island and a small gasoline pump/house. A 5,000 gallon UST was located between the gasoline pump/house and pump island. The station was used during World War II as a vehicle motor pool to support military operations. The motor pool operations were discontinued during the late 1940's or early 1950's. Records are not available regarding decommissioning of this motor pool or removal of the associated tank. AAFES gas station is comprised of the service station building (Building 2008), 3 active 10,000 gallon USTs, and associated pump islands. Five former gasoline USTs were removed in 1990. Although there was no visual indication of holes or leaks, soil samples collected from the excavation and during subsequent investigations revealed contaminated soil. A 500 gallon waste oil UST from behind Building 2008 was removed in 1992. Sampling from the excavation revealed VOC, SVOC and TPHC contamination. A SI and SSI were conducted to further assess the extent of contamination at SA 43G and AAFES. The site was subdivided into 3 areas: Area 1 - historic gas station SA 43G; Area 2 - AAFES active gasoline tank areas; and Area 3 - AAFES former waste oil UST. Based on sampling results, AAFES station leaking tanks have impacted groundwater and soil. A RI is recommended for Areas 2 and 3. No further action is recommended for Area 3.	Background for organics is below method detection limit iron: 9100 $\mu\text{g/l}$ magnesium: 3480 $\mu\text{g/l}$ manganese: 291 $\mu\text{g/l}$ sodium: 10600 $\mu\text{g/l}$	Groundwater (ingestion): - 1 round/7 wells (Nobis) - 1 round/8 wells (SSI)	Ingestion: residents Inhalation: residents Dermal: residents	Groundwater ⁽¹⁾ :	($\mu\text{g/l}$)	MCL MCL Reg III — MCP SMCL — SMCL —	X X NA X NA X X NA X NA	—	—
		Background for organics is below method detection limit	Soil (direct contact): - 11 geoprobe points w/ 7 soil samples and 10 gas samples (SI) - 1 boring to the groundwater table w/ 2 soil samples (SI) - 38 geoprobe points w/ 43 soil samples (SSI) - 7 borings w/ 20 soil samples (SSI)	Ingestion: residents, site workers Dermal: residents, site workers	Soils:	(mg/kg)	Reg III MCP MCP MCP MCP	X	—	—

Notes:

(1) Groundwater concentrations listed are those found to exceed MCL or Region III tap water concentrations or those contaminants for which no guidelines currently exist. Inorganic contaminants listed are for filtered samples.

(2) RI proposed. AARAs not yet established. Values listed are from water or soil standards/guidelines and are used for screening level analysis.

(3) RI proposed. Cleanup standards not yet established.

(4) MCL - Maximum Contaminant Level; Reg III - Region III tap water; MCP - Maximum Contingency Plan

Table E-1. (cont'd.) Conceptual Site Model Summary, SA 43J - Historic Gas Station (Building T-2446 Area), Chemical Standards Summary

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Media/ Contaminant	ARAR/ Standard ^(a)	Source ^(b)	Exceedance of ARAR/ Standard ^(a)	Risk-Based Restoration Goal ^(b)	Technology- Based Restoration Goal ^(c)
SA 43J - Historic Gas Station Site at Building T-2446	SA 43J is located in the central portion of the storage yard and maintenance facility (Building T-2446) for a Special Forces Unit. Locally, inferred groundwater flow is SE toward the golf course which will potentially become a federal prison complex upon base closure. The structures of the station consisted of a pump island and a small gasoline pumphouse. A 5,000 gallon UST was located between the gasoline pumphouse and pump island. The station was used during World War II as a vehicle motor pool to support military operations. The motor pool operations were discontinued during the late 1940's or early 1950's. Records are not available regarding decommissioning of this motor pool or removal of the associated tank.	Background for organics is below method detection limit arsenic: 10.5 µg/l iron: 9100 µg/l magnesium: 3480 µg/l manganese: 291 µg/l sodium: 10800 µg/l	Groundwater (ingestion): - 1 round/3 wells (ATEC) - 1 round/7 wells	<u>Ingestion:</u> residents <u>Inhalation:</u> residents <u>Dermal:</u> residents	Groundwater^(d): benzene ethylbenzene 2-methylnaphthalene phenanthrene toluene TPHC arsenic iron magnesium manganese sodium	(µg/l) 5 700 NA NA 1000 1000 50 300 NA 50 28000	MCL MCL — MCL MCP MCL SMCL — SMCL —	X X NA NA X X X X NA X X	—	—
	The USAEC initiated field investigations to determine if any abandoned UST(s) were present at the site and if any residual contamination was present in the subsurface soil. Field investigations revealed the presence of one 5,000 gallon UST which was removed in 1992 as part of the installations UST removal program. Additionally, a 1,000 gallon waste oil UST was removed in 1992. The waste oil tank had been used by the Special Forces Unit for operations at this vehicle maintenance facility. Based on sampling and analysis, it appears that contents of the abandoned gasoline UST and the former waste oil UST have contaminated the soil and groundwater at SA 43J.	Background for organics is below method detection limit	Soil (direct contact): - 9 geoprobe points w/ 9 soil samples (SI) - 1 boring to bedrock w/ 1 soil sample (SI) - 15 geoprobe points w/ 16 soil samples (SSI) - 3 borings (wells) w/ 5 samples (SSI)	<u>Ingestion:</u> residents, site workers <u>Dermal:</u> residents, site workers	Soils: TPHC benzene toluene ethylbenzene xylenes	(mg/kg) 1680 10 90 80 800	Reg. III MCP MCP MCP MCP	X	—	—

Notes:

(1) Groundwater concentrations listed are those found to exceed MCL or Region III tap water concentrations or those concentrations for which no guideline currently exist. Inorganic contaminants listed are for filtered samples.

(2) RI proposed. ARARs not yet established. Values listed are from water or soil standards/guidelines and are used for screening level analysis.

(3) RI proposed. Cleanup standards not yet established.

(4) MCL - Maximum Contaminant Level; Reg. III - Region III tap water; MCP - Maximum Contingency Plan

Table E-1. (cont'd.) Conceptual Site Model Summary, AOCs 44 and 52 (Barnum Road Maintenance Yards), Chemical Standards, Exceedances and Potential Restoration Goals

Current Site ID (Past Site ID)	Site Description and Source Characterization	Background Concentrations	Pathway Description	Potential Receptors	Media/ Contaminant	ARAR	Source	Exceedance of ARAR	Risk-Based Restoration Goal	Technology- Based Restoration Goal
AOCs 44 & 52 - Barnum Road Maintenance Yards	AOCs 44 and 52 is an 8.8 acre site located northeast of Building 3713, on Barnum Road, on the Main Post. Inferred groundwater flow is NE towards the MA National Guard and Grove Pond. The AOCs are located within the Zone II of the Town of Ayer's Grove Pond wells. AOC 44 is an unpaved area where vehicles are stored before being dismantled for usable parts. AOC 52 is an unpaved maintenance yard where vehicles are stored while awaiting repairs. Because adjacent yards (RTS and K-Yards) have also had a history of vehicle storage, they were included with AOCs 44 and 52 (all yards combined as one site). Collectively these four yards are referred to as the Maintenance Yards.	Background for organics is below method detection limit	Soil (ingestion): - 16 borings w/ 51 samples (SI) - 4 borings w/ 16 samples (SSI)	Ingestion: Long-term worker to surface soils.	Soils ⁽¹⁾ benzo(a)anthracene benzo(b)pyrene benzo(k)fluoranthene benzo(e)pyrene chrysene dibenz(a,h)anthracene indeno(1,2,3-cd)pyrene TPHC	— ⁽²⁾	— ⁽²⁾	— ⁽²⁾	500 ppm ⁽³⁾ (TPHC) — ppm ⁽⁴⁾ cPAHs	—

Notes:
(1) Contaminants listed have been identified as contributing to unacceptable health risk.
(2) There are no chemical-specific ARARs identified for AOCs 44 and 52. Cleanup objectives are based upon risk-based cleanup levels.
(3) 500 ppm cleanup level established for TPHC is based on guidance from the Massachusetts Contingency Plan (MCP) [310 CMR 40, Sec. 19, 1993] using MCP Method 1 and S-1 and QV-1 groundwater sampling.
(4) The cleanup level for cPAHs is currently under investigation.

TABLE E-2. FUTURE LAND USE RISK ASSESSMENT FOR DEVELOPMENT OF REMEDY SELECTIONS

Site ID	Risks	Contaminants			Current Use	Adjacent Uses	Anticipated Uses
		Groundwater	Soil	Surface Water/Sediment			
SA 4 - Sanitary Landfill Incinerator (Shepley's Hill Landfill OU)	See SA 5	See SA 5	See SA 5	See SA 5	Located within Phase I of the sanitary landfill closure. Incinerator demolished and buried in landfill. Sand barren, old field, and grassland habitat.	See SA 5	See SA 5
SA 5 - Sanitary Landfill No. 1 (Shepley's Hill Landfill OU)	Human Health: 3×10^{-6} - 4×10^{-7} (Plow Shop Pond fish ingestion) 9×10^{-6} - 6×10^{-4} (Plow Shop Pond sediments) 4×10^{-4} - 8×10^{-3} (Residential use of groundwater); Ecological: Risk to aquatic and semi-aquatic receptors in Plow Shop Pond	VOCs, inorganics	Surface Soils: none	Plow Shop Pond Sediments: SVOCs, pesticides, inorganics Plow Shop Pond Surface Water: VOCs, inorganics	Closed landfill containing household and military refuse. Capped with PVC membrane, soil and vegetation. Sand barren, old field, and grassland habitat.	Modeled groundwater flow is generally north past Plow Shop Pond and toward industrial, general residence and commercial zoned areas in Ayer.	Identified for open space and rail related uses after base closure.
SA 18 - Sanitary Landfill Asbestos Cell (Shepley's Hill Landfill OU)	Asbestos inhalation risks if cell is excavated	--	--	--	Cell located within section of landfill closed during Phase IV. Sand barren, old field, and grassland habitat.	--	See SA 5
SA 40 - Cold Spring Brook Landfill	Human Health: 1×10^{-6} - 6×10^{-4} (Cold Spring Brook Pond sediment/current land use) 2×10^{-5} - 1×10^{-4} (Cold Spring Brook Pond sediments/future land use) 5×10^{-5} - 8×10^{-4} (Residential use of groundwater/unfiltered) 1×10^{-6} - 9×10^{-4} (Cold Spring Brook Pond fish ingestion) Ecological: Low levels of risk to aquatic receptors in adjacent portion of Cold Spring Brook Pond.	Landfill not believed to be a source of inorganic groundwater contaminants.	Cover Soils: SVOCs, pesticides, inorganics	Cold Spring Brook Pond Sediments: SVOCs, pesticides, inorganics Cold Spring Brook Pond Surface Water: Inorganics	Abandoned landfill. Forest and old field habitat.	Groundwater generally discharges to Cold Spring Brook Pond. Groundwater at western edge of landfill may flow southwest toward Patton Well, Mirror Lake and area identified to become open space upon base closure.	Identified for open space after base closure.

TABLE E-2. FUTURE LAND USE RISK ASSESSMENT FOR DEVELOPMENT OF REMEDY SELECTIONS

Continued

Site ID	Risks	Contaminants			Current Use	Adjacent Uses	Anticipated Uses
		Groundwater	Soil	Surface Water/Sediment			
SA 43A - Historic Gas Station Site; Central distribution facility for all historic gas stations	Human Health PREs: Human health risks are not significant and ecological risks are not relevant to the subsurface environment. However, groundwater and saturated zone subsurface soil have been adversely impacted by historical activities.	Fuel and solvent related VOCs.	Fuel-related VOCs and TPHC at the water table	--	Used as the Petroleum, Oil and Lubricant (POL) Storage Yard to store fuel for military vehicles.	Site located near a groundwater divide. Locally, inferred groundwater flow is southwest toward areas identified for potential reuse likely to be zoned commercial or industrial.	Possible commercial/industrial use.
SA 43G - Historic Gas Station Site; Historic service station expanded to include AAFES gas station	Human Health PRE: SA 43G has slightly impacted soil quality but contaminants have not migrated to groundwater; no ecological PRE performed since investigation focused on subsurface soils. AAFES gas station leaking gasoline and waste oil tanks have impacted groundwater and soil.	Fuel-related contaminants from AAFES gas station tanks.	Fuel-related VOCs and TPHC	--	SA 43G now inactive; vacant unpaved area located south of the installation's active gas station (AAFES station).	Locally, inferred groundwater flow is east towards Robbins Pond and areas identified to become open space and recreational property upon base closure.	Potentially to remain Department of Defense (DOD) Property (Army Reserve Enclave).
SA 43J - Historic Gas Station Site; Service Station	Human Health PRE: Station activity has impacted subsurface soils and groundwater creating potential risk to public health; no ecological PRE performed since investigation focused on subsurface soils.	Fuel-related VOCs and TPHC.	Fuel-related VOCs and TPHC.	--	Vehicle storage yard and maintenance facility (Bldg. T-2446) for a Special Forces Unit.	Locally, inferred groundwater flow may be southeast toward the golf course which will potentially become a prison complex upon base closure.	Potentially to remain DOD Property (Army Reserve Enclave).
SA 44 - Cannibalization Yard	Human Health: 4×10^{-6} - 5×10^{-5} (Construction worker/exposure to subsurface soils) 7×10^{-4} - 4×10^{-3} (Long-term worker/exposure to surface soils) Ecological: Lack of ecological exposure pathways.	None	Subsurface: TPHC Surface: cPAHs, TPHC.	--	Temporary storage of vehicles awaiting dismantling for usable parts.	Inferred groundwater flow is northeast towards the Massachusetts National Guard, and Grove Pond. Site located within Zone II of Ayer Grove Pond wells. Surface drainage to Cold Spring Brook.	Possible commercial/industrial use.

TABLE E-2. FUTURE LAND USE RISK ASSESSMENT FOR DEVELOPMENT OF REMEDY SELECTIONS

Continued

Site ID	Risks	Contaminants			Current Use	Adjacent Uses	Anticipated Uses
		Groundwater	Soil	Surface Water/Sediment			
SA 52 - TDA Maintenance Yard	See SA 44	None	Subsurface: TPHC Surface: cPAHs, TPHC	--	Temporary storage of vehicles awaiting repairs.	See SA 44.	See SA 44.
SA 41 - Unauthorized Dumping Area (Site A)	Human Health and Ecological PREs: Potential human health risks (residential scenario) from surface soil exposure and groundwater ingestion. Potential ecological risks in adjacent pond/wetlands surface water and sediment.	VOCs and inorganics.	Surface: PAHs and inorganics (human health) and inorganics (ecological)	Surface water and sediments (New Cranberry Pond); inorganics and pesticides.	Abandoned dumping area overgrown with trees and swampy vegetation.	Inferred groundwater flow may fluctuate seasonally away from and toward New Cranberry. Surface drainage is southeast toward New Cranberry Pond.	To remain DOD Property (Fort Devens South Post Training Area).

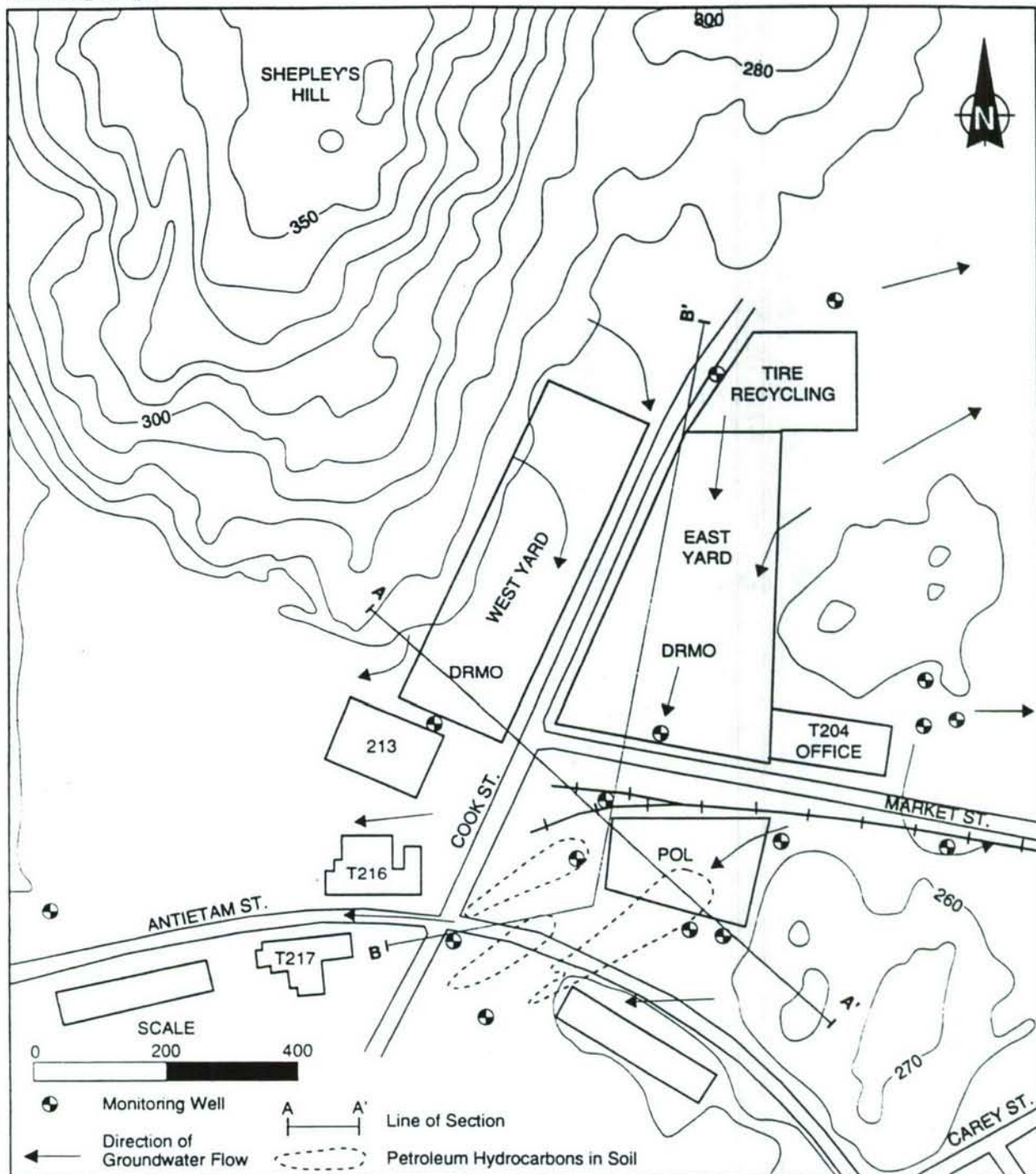
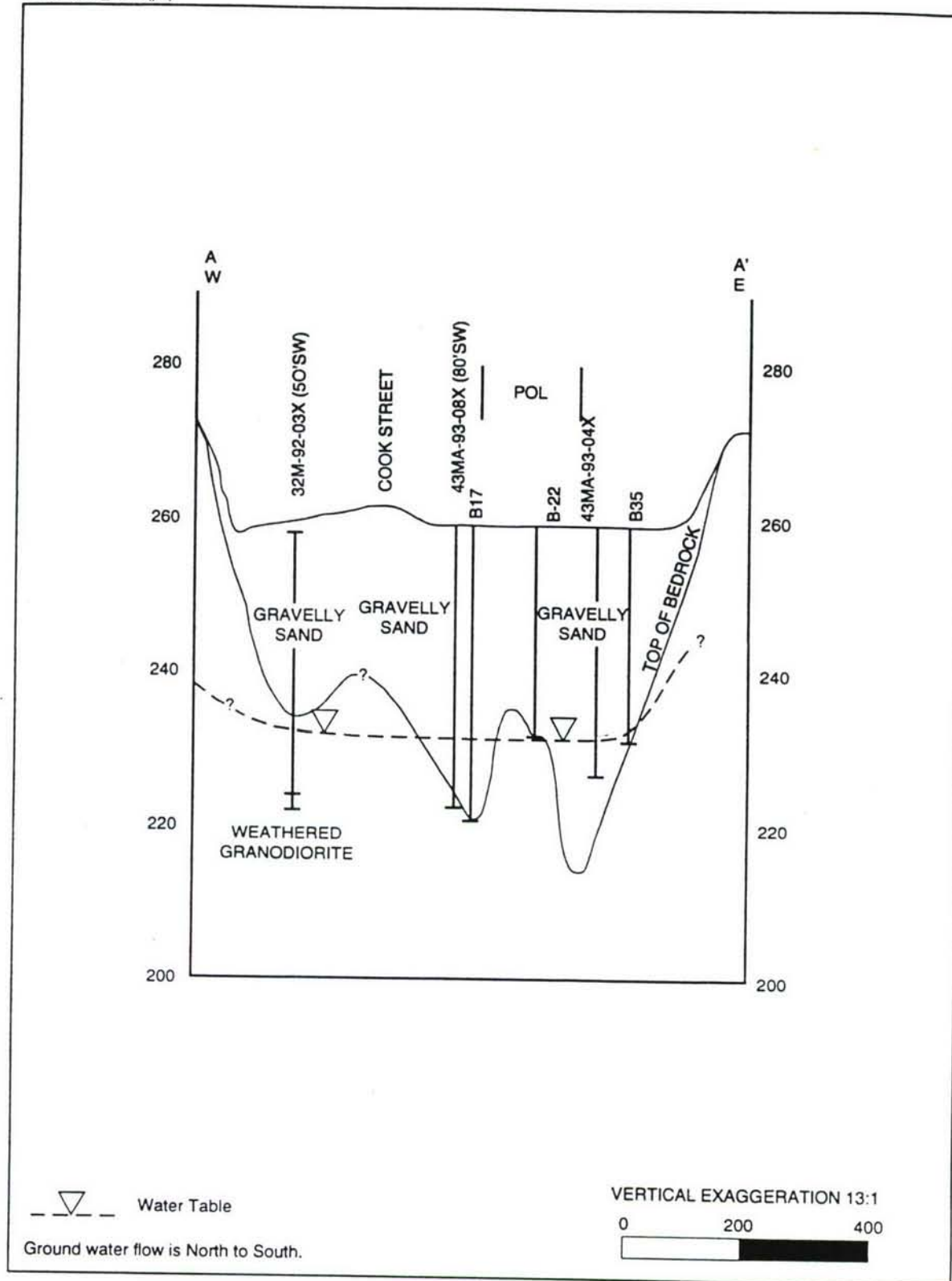
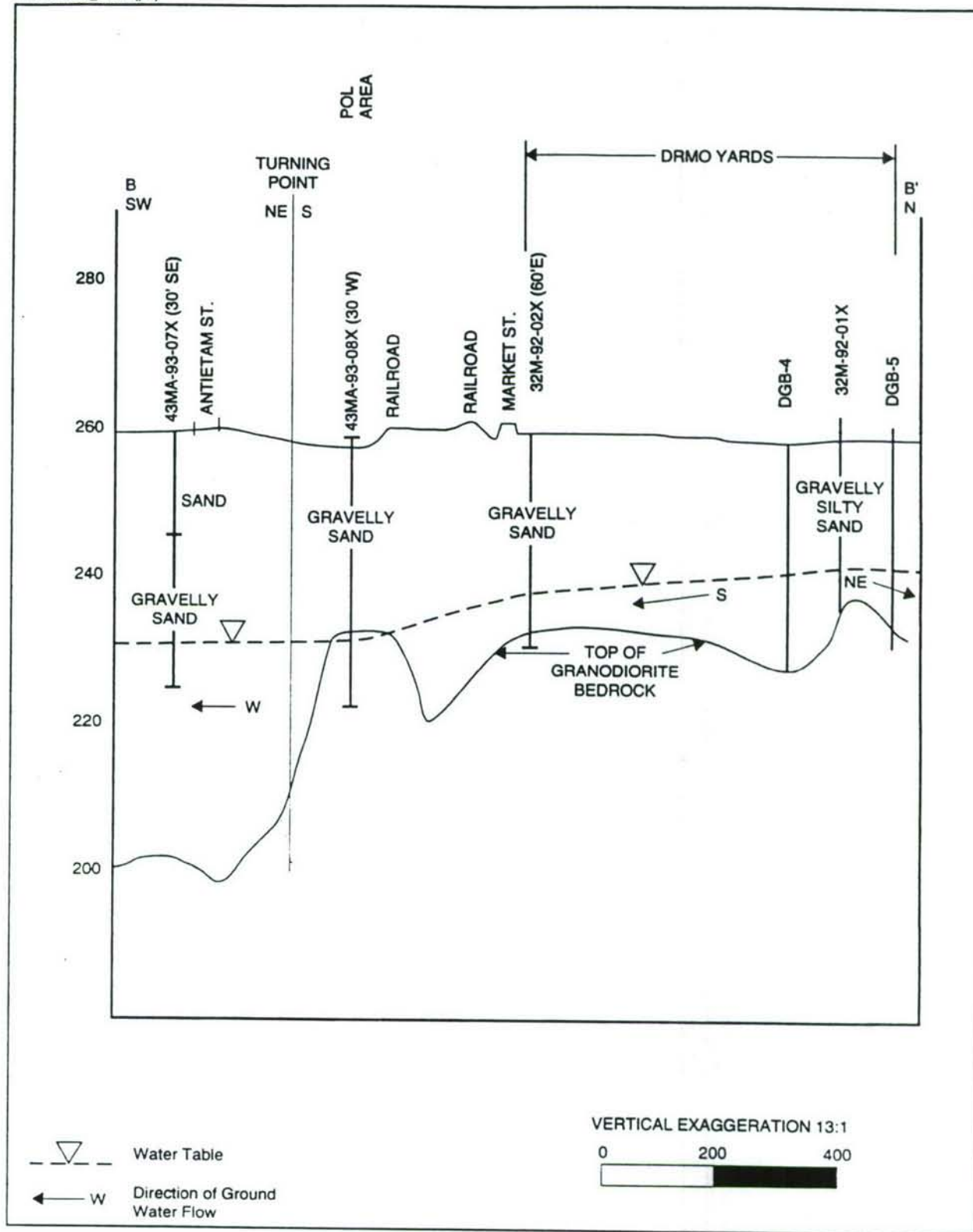


Figure E-1.4 CONCEPTUAL SITE MODEL DATA SUMMARY
POL/DRMO (AOC 43/32) MAP VIEW



**Figure E-2.4A CONCEPTUAL SITE MODEL DATA SUMMARY
POL AREA (AOC 43) CROSS SECTION VIEW A-A'**



**Figure E-2.4B CONCEPTUAL SITE MODEL DATA SUMMARY
POL/DRMO (AOC 43/32) CROSS SECTION B-B'**

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APPENDIX F

► ANCILLARY BCP MATERIALS ◀

- Environmental Justice Issues at Fort Devens
- AREE Descriptions
- Table F-1, BCP Distribution List

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► **ENVIRONMENTAL JUSTICE ISSUES**
AT FORT DEVENS ◀

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ENVIRONMENTAL JUSTICE ISSUES AT FORT DEVENS

There has been growing concern during the past decade about the effect of environmental pollution on particular population groups. A movement to ensure environmental justice for all individuals is the outgrowth of a widespread belief that minority and low-income communities bear a disproportionately high risk of exposure to health hazards related to contamination or pollution.

The President issued Executive Order 12898 on Environmental Justice on February 11, 1994. The Order and its accompanying Presidential memorandum marked a significant step toward focusing the attention of Federal agencies on concerns of environmental justice. The order requires certain Federal agencies, including the DOD, to the greatest practicable and permitted by law, to make environmental justice part of their missions by identifying and addressing disproportionately high and adverse health or environmental effects on minority and low-income populations.

At closing installations such as Fort Devens, considerations of environmental justice must be examined in the context of cleanup activities, including their relationship to plans for reuse of land and community redevelopment initiatives. The decision-making processes for establishing cleanup priorities, determining relative risk, developing reuse plans, and other actions related to installation closure, must ensure that environmental protection and environmental justice are adequately addressed.

The Defense Environmental Response Task Force of the DOD formed the Environmental Justice Subworking Group to determine whether concerns related to environmental justice are being adequately addressed at installations affected by BRAC. The subworking group has identified several significant issues related to environmental justice that are applicable to environmental restoration at BRAC installations. These include:

- ▶ Outreach
- ▶ Cultural Resources
- ▶ Risk Assessment
- ▶ Cleanup Priorities
- ▶ Risk Communication
- ▶ Epidemiology
- ▶ Natural Resources
- ▶ Brownfield or Urban Revitalization
- ▶ Deed and Lease Restrictions.

Fort Devens has proactively addressed many of these issues in its current BRAC environmental restoration, compliance, and natural resources strategies. The Fort Devens approach for

addressing each of the issues is summarized below and is also addressed in context, in applicable sections of the BCP.

Outreach. Fort Devens has an active outreach program. A CRP was prepared in 1991 and updated in June 1995. The plan establishes the procedures for effective communication with all elements of the surrounding community on environmental issues. A RAB has been formed at the installation and meets monthly to promote public involvement and provide a forum for public input on the Fort Devens IRP. During the formation of the RAB, particular attention was placed on ensuring balanced community representation. Public hearings are conducted to obtain community input on particular environmental documents including EISs and proposed plans. The installation also keeps community members informed through open houses and installation tours, the issuance of fact sheets and the maintenance of information repositories.

Cultural Resources. Four historical structures surveys have been conducted for Fort Devens. One of these surveys developed National Register and Army classification recommendations for the resources. At this time, one historic property, the 1930s Permanent Cantonment Area is listed on the National Register of Historic Places. Eighteen other historical buildings and archaeological sites that have been assessed as having fair to very good and excellent integrity, are located on property that is to be disposed of and/or transferred to the Army Reserves. Environmental justice issues such as the provision of installation access to interested parties will be investigated.

Risk Assessment. Preliminary Risk Evaluations were conducted for every site during the site investigation. Formal risk assessments have been conducted for all sites in the RI process. An exposure pathway analysis was conducted to identify all potential on-site or off-site receptor population. The risk assessment then calculated risk caused by each restoration site and installation total risk for each of the identified receptor populations. The potential for varying patterns of consumption or other risk factors relative to particular population groups in the Fort Devens area were considered in the RI risk assessment exposure pathway analysis. This ensured that the risk assessment accurately evaluated risk for all potential receptor populations.

Cleanup Priorities. The SI and Community Reuse Plan provides the basis for determining cleanup priority. The SI identified site specific qualitative risks to on-site and off-site populations. This information will be evaluated in conjunction with community reuse goals presented in the Reuse Plan. A restoration strategy has been developed that accomplishes two goals: prioritization of cleanup to mitigate any immediate risks to receptor populations, and prioritization of cleanup on the basis of community reuse planning goals and priorities.

Risk Communication. Issues relative to human health risks are fully disclosed to the public through the various outreach activities conducted by the installation.

Epidemiology: The most current risk assessment data and epidemiological studies were utilized in the preparation of the Fort Devens RI Risk Assessments. The potential for differences in contaminant impacts based on racial or demographic differences in receptor populations were considered in the risk assessment.

Brownfield and Urban Revitalization. Fort Devens is located within a semi-urban area northwest of Boston, Massachusetts. In order to maximize the reuse opportunities for Fort Devens, the Massachusetts General Court passed legislation which established the legal parameters for the future governance of the closing portions of Fort Devens. This act established a new public agency, the Fort Devens Enterprise Commission, as the agency responsible for reviewing and approving all future uses. Full community participation was solicited in the reuse planning process by establishing broad based community representation on the Commission and by conducted numerous public meeting to obtain community input.

As part of the DOD disposal process, McKinney Act screening has been conducted to identify potential use of the property by providers for the homeless. Providers for the homeless expressed interest in nine buildings, Buildings 17, 152 through 157 and 159. Following guidance promulgated as a result of the Pryor Amendment, the Fort Devens Enterprise Commission established a subcommittee on the homeless which has proactively met with these providers for the homeless to further discuss Fort Devens facilities which would be appropriate and economically feasible for their use.

The USFWS has filed an application to acquire approximately 890 acres of the installation for open space and recreation use by the community as outlined with the community reuse plan.

Deed and Lease Restrictions. Deed and lease restrictions are a critical element in the disposal planning process for Fort Devens if RA at the installation will continue past installation closure and property disposal. Issues such as access, liability for RA equipment and operation, impacts on redevelopment, and conflicts with construction are being investigated as bid documents for the sale/development of Fort Devens property are prepared. Small, disadvantaged, and minority-owned business impacts from potential deed and lease restricts will be considered by the U.S. Army throughout the disposal process.

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► AREE DESCRIPTIONS ◀

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AREE DESCRIPTIONS

SA 1 - Cutler Army Hospital Incinerator. The Cutler Army Hospital incinerator was located outside of the southeast corner of the hospital (Building 3654) on Main Post. The incinerator was built and installed in 1977, operated until 1992, and was dismantled in 1993. It was used to incinerate pharmaceutical wastes and nonhazardous medical wastes, including used syringes, hypodermic needles, human body parts, and clothing and bedding used by diseased patients. The incinerator was gas fed and could be operated 8 hours per day, 5 days per week, and could incinerate approximately 100 pounds per year (104 tons per year). The ash from the incinerator was sampled and analyzed periodically and determined to be non-toxic.

SA 2 - Veterinary Clinic Incinerator. The veterinary clinic incinerator was located inside Building 1450 on the Main Post. The veterinary incinerator was used primarily to incinerate animal carcasses, although it was also used to burn classified materials, needles, medical or veterinary wastes, and expired drugs. Occasionally, the incinerator was used to incinerate photographs and paper, as well as medical and pharmaceutical wastes from the Cutler Army Hospital when its incinerator was nonoperational. The gas-fired veterinary incinerator could handle a maximum loading of 100 pounds per hour. The ash was normally placed in plastic bags and sent to the Shepley's Hill Landfill. The incinerator was dismantled in 1993.

SA 3 - Intelligence School Incinerator. The Intelligence School incinerator was located outside Building 1484 on the Main Post. It was used from 1971 until 1976 to burn paper (classified documents) about twice weekly.

AOC 4 - Sanitary Landfill Incinerator (Building 38). The sanitary landfill incinerator was located near Cook Street within the area included in Phase I of the sanitary landfill closure. The incinerator was located in former Building 38, which was built in 1941; the incinerator was operated until the late 1940s. It burned household debris generated on site. Glass and incinerator ash were placed in a landfill next to the building. In September 1967, the incinerator was demolished and placed in the sanitary landfill. In 1976, the building foundation was also removed and landfilled on site.

AOC 5 - Shepley's Hill Landfill (No. 1). The sanitary landfill (Landfill No. 1) is in the northeastern portion of the main cantonment and encompasses about 84 acres. Landfill operations date as far back as 1917. A small portion of the landfill is the site of a former railroad roundhouse. The roundhouse was used between 1900 and 1935. Because of the age of the facility, any contaminants would probably be the result of coal and steam wastes. The landfill at one time received about 6,500 tons per year of household refuse, military refuse, and construction debris.

SA 6 - Landfill No. 2 - South Post Area 7b. Landfill No. 2 was probably an old town dump used by local residents for disposal of household rubbish and glass from about 1850 to 1920, before the site's incorporation into Fort Devens. The site's supposed location is somewhere in the South Post near Training Area 7b. Despite repeated attempts, Fort Devens personnel have

not been able to locate the site, and no surface evidence has been found to indicate its location. The exact size of the landfill is unknown, but it has been reported to have been about 1 acre.

SA 7 - Landfill No. 3 - South Post Impact Area. Landfill No. 3 is reported to have been an undocumented estate or farm dump where household rubbish and glass were disposed of from the mid-1800s to about 1920. The landfill, which cannot be found, is reported to have been located in the middle of the South Post; it existed before Fort Devens acquired the South Post property. The site was reported to be about 1 acre in size. Based on the landfill's estimated location, the site would be approximately west of the EOD Range in the impact area.

SA 8 - Landfill No. 4 - South Post Area 8a. The exact location of Landfill No. 4 is unknown. The landfill was reportedly used from about 1900 to 1930 for the disposal of household items and military items before and after the land was incorporated into Fort Devens. The landfill is reported to have been about 6 acres in size and located in the south-central part of the South Post. Fort Devens environmental personnel have searched for the site, and troops have traversed area 8 and adjacent training areas for years, and the site has not been found.

SA 9 - North Post Landfill (No. 5). The North Post Landfill is located in the North Post. The landfill occupies 14.8 acres and is an old "stump dump," used primarily for construction demolition debris and tree stumps. The landfill operated from the later 1950s until 1978. The site was used by the Army, National Guard, contractors, and off-post personnel. The type of disposal methods were area filling and trench landfilling. Access was not controlled during the period when the dump was operated.

SA 10 - Landfill No. 6 Near Shirley Gate. Landfill No. 6 was reported to be a trench that received debris from demolition of six warehouses (Buildings T-955 through T-960). The landfill's reported location is the flat area northwest of the enlisted housing area near Shirley Gate along the west side of the main cantonment area and between Perimeter and Lowell roads. If the landfill was in this area, no evidence is available attesting to its existence. At the time of a site visit in November 1988, an attempt was made to locate this site, but it could not be found. The site is level and overgrown with grass.

AOC 11 - Landfill No. 7 Near Lovell Street. Landfill No. 7, located just east of Lovell Street in the main cantonment area, was active from 1975 to 1980. The site, about 2 acres in extent, was part of a small gully leading down to the Nashua River, about 200 feet distant. During the time the site was active, it received wood-frame hospital demolition debris. The landfill was covered and graded after closure. Between 1980 and 1982, Fort Devens used this area to dispose of tree limbs and other vegetation uprooted or felled during heavy storms. This material was placed on the surface, not buried. According to available information, no illegal dumping occurred at this site.

SA 12 - Landfill No. 8 - South Post Combat Pistol Range. Landfill No. 8 consists of debris randomly dumped without supervision over the edge of a 30-foot hill. Various scrap metal and wooden debris have been disposed of at this site. The site is located across from the combat pistol range in the South Post between Dixie Road and the Nashua River. The Oxbow National

Wildlife Refuge is about 250 feet east of the site. No records are available concerning the quantities or nature of the material disposed of at this site.

SA 13 - Landfill No. 9 Near Lake George Street. Landfill No. 9 was used from 1965 to 1970 for the disposal of construction debris, tree trunks, stumps, and possibly waste oil. The site, about 1 acre in size, is located in the main cantonment area at Lake George Street and Hattonsville Road. The landfill's exact location is not apparent because it was covered when it was closed. The only evidence of a landfill was a miscellaneous mixture of wood, metal objects, cans, and other debris scattered about on the surface. The landfill is about 2,350 feet to the north-northwest of the Nashua River.

SA 14 - Landfill No. 10 - South Post Near Dixie Road. Landfill No. 10 is not a landfill but rather an abandoned quarry, about 1 acre in size, in which unwanted automobiles were illegally dumped. Ordnance and other debris were found during a recent dive into the quarry. The site is located in the South Post, about 3,000 feet west along an unnamed dirt road from the intersection of Dixie Road and Jackson Road. No records are available concerning the number of automobiles disposed of at this site.

SA 15 - Landfill No. 1 - South Post Near Helipad. Landfill No. 1 consists of a series of pits in which fuel oil, primarily heavy No. 4 and No. 6, was burned. While active between 1963 and 1966, the landfill encompassed about 3 acres and was located adjacent to the helipad on Jackson Road in the South Post. Because of the heavy POL product, the fuel had tended to coalesce within the first 6 inches of soil, visibly limiting downward migration. Additional burning of the material caused the formation of an asphalt-like cap that inhibited infiltration of water, further inhibiting downward migration.

SA 16 - Landfill No. 12 - Main Post Near Shoppette. Landfill No. 12, a small landfill about 1 acre in size, was operated for 3 weeks in 1985 to reduce the volume of material entering the sanitary landfill. It received construction debris generated at the installation. The landfill's location is reported to be in the main cantonment area southeast of the Shoppette at the intersection of Patton Road and Marne Street and west of the Boston Main Railroad tracks. During the site visit in November 1988, no surface evidence attested to the landfill's existence.

SA 17 - Landfill No. 13 - Mirror Lake. The Mirror Lake area is a major wetland, with an associated spruce-peat bog on the northeastern side. The lake is a recreational area for fishing, boating, and swimming. At an unknown time, World War II-era grenades were placed in the lake. About 200 grenades were discovered about 1970, when the water level of the lake was low. They were recovered and destroyed by the 14th Ordnance Disposal Detachment at Fort Devens.

AOC 18 - Landfill No. 1 - Asbestos Cell. The landfill contains a permitted asbestos cell that was used for disposal of asbestos construction debris from on-site activities. An estimated 6.6 tons of ACM were placed in the cell between March 1982 and November 1985. The cell is located in Section A of the Phase IV area. The cell was originally scheduled for capping in late 1989 or early 1990, and a new asbestos disposal location has been identified in the southeastern corner of the landfill. The cell was reportedly closed in late 1992.

SA 19 - WWTP. The wastewater treatment plant is located in the North Post. Built in 1942, it has a design capacity of 3.0 million gallons per day. The average daily flow is about 1.3 million gallons per day. Less than 1 percent of the flow is from industrial sources, such as vehicle washrack discharge, caustic radiator washwater, floor drains, heating plant boiler blowdown, and swimming pool filter backwash. The facility does not require a NPDES permit because it does not discharge to surface waters. The wastewater is then then pumped to three parallel Imhoff tanks, a 30,000-gallon dosing tank, 22 rapid infiltration basins of 0.8 acre each (Sa 20), and eight sludge drying beds of 0.086 acre each (SA 21). Settleable solids are anaerobically digested in the lower compartments of the Imhoff tanks; gases from the digestion process are vented to the atmosphere. The clarified (unchlorinated) primary effluent from the Imhoff tanks discharges into a dosing tank, which intermittently applies wastewater to the rapid infiltration basins.

SA 20 - Rapid Infiltration Basins. The rapid infiltration basins are used in rotation. The application rate for each rapid infiltration basin has been calculated to be about 25 to 28 meters per year. During the application, effluent may accumulate on the bed to a depth of 0.5 to 1.6 feet; it infiltrates within 2 to 3 days of the initial application period. The major operational problem noted at the WWTP has been the maintenance of the distribution troughs in the rapid infiltration basins; there has been evidence of erosion in cells with damaged distribution systems. The rapid infiltration basins are working remarkably well considering the length of their service. The Nashua River is less than 1,200 feet from the infiltration basins and is located downgradient of the system. No users are downgradient of the groundwater recharged from the bottom of the infiltration basins. It has been estimated that 100 percent of the water infiltrating from the bottom of these basins enters the Nashua River, although it is not known what effect this recharge has on the water quality of the Nashua River.

SA 21 - Sludge Drying Beds. Sludge from the WWTP's Imhoff tanks, typically about 4 to 10 percent solids, gravimetrically drain to the four uncovered sludge drying beds two to three times annually. The sludge drying beds are equipped with 4-, 8-, and 10-inch clay pipe underdrains to collect leachate. Before 1982, the leachate was discharged to an adjacent wetland area located on the east bank of the Nashua River. After 1984, leachate was collected and pumped back into a rapid infiltration basin. Because these pipes have collapsed over the years, it is likely that most of the leachate infiltrates into the permeable subsurface. Up until 1984, the leachate from the sludge drying beds was discharged through tile pipe into the flood plain adjacent to the river. Dried sludge from the sludge drying beds, typically about 70 percent solids, is removed and land-applied at Moore Army Airfield per the requirements of a state Class III Sludge application. In 1990, the sludge drying beds were completely rebuilt. An impermeable liner was added. The collection piping was replaced with PVC pipe. The beds were graded with new material. The discharge point for the leachate was rerouted from the rapid infiltration basins to the Imhoff tanks.

SA 22 - Hazardous Waste Storage Facility (Building 1650). The hazardous waste storage facility is located at Building 1650 in the northeastern area of the Main Post. It has been a storage facility since 1980 and was remodeled in 1984. Previous uses of the building include hazardous materials storage, a maintenance shop, and a stockade. It is classified as a container storage area and is a RCRA-permitted unit with the facility identification No. MA72100251541.

The building has cement floors and is approximately 6,000 square feet. It contains an office and a series of bermed storage areas. There are no floor drains, and wastes are clearly marked and segregated by the type of waste. The storage portion of the building is totally enclosed and has an exit that leads to a working and loading area. There are two loading docks, one in the rear and one on the side. No spills or releases from this facility have been reported.

SA 23 - Paper Recycling Center (Building 1650). The paper recycling center was located in Building 1650, the current hazardous waste storage facility. It was a storage and transfer facility for recycling computer paper, computer tab cards, and high-grade office paper. About 160 tons per year of paper was recycled. The period of operation was April 1984 until sometime in 1985. Operations were restricted to storage and recycling of several types of paper. There is no record of any associated liquids or releases that would endanger human health or the environment.

SA 24 - Waste Explosive Storage Bunker (Building 3644). The waste explosive storage bunker (Building 3644) is located in the magazine area, which is a restricted access area. The magazine area is in the southeastern portion of the Main Post, about 0.5 mile north of Mirror Lake. The bunker was previously known as Bunker 187. Explosives that are designated for detonation at the EOD Range are stored in the bunker. The bunker, an in-ground igloo with cement floors, has been used since 1979. Fort Devens provides disposal for the entire New England area, both civilian and military. The sources of waste explosives range from on-site finds during excavation to explosives found, confiscated, or otherwise removed by the state police. The types of explosives stored in the bunker include a broad range of materials that varies with time. The bunker is used only for storing explosive items prior to detonation at the EOD Range.

AOC 25 - EOD Range - South Post. The EOD Range, which is located in the impact area in the South Post, extends about 0.5 mile east from Firebreak Road. The disposal pits are located in an area of about 5 acres along the southeastern boundary of the range. This site was included in the Fort Devens RCRA Part A permit application as a hazardous waste thermal treatment facility. The unit operates under interim status. About 1,200 pounds per year of explosives and ammunition have been disposed of at an area in the EOD range since 1979. Small arms ammunition, smoke grenades, and pyrotechnics are covered by scrap packing materials, soaked with diesel fuel, and burned in open pits. Larger items are detonated with C-4 or TNT. Thermally treated materials disposed of at the EOD Range consist primarily of C-4, smokeless powder, PETN, and RDX. Other materials disposed of are composition B, dynamite, white phosphorus, TNT, pyrotechnics, octol, black powder, photoflash powder, lithium batteries, and lead azide.

AOC 26 - Zulu I and II Ranges - South Post. The ranges are located in the South Post on the western boundary of the impact area. The 20-acre Zulu Range includes two range areas, Zulu I and Zulu II. Zulu I is a 10-acre bowl-like area used primarily for hand grenade and demolition activity training. Although current operation does not include disposal, open detonation of high explosives has occurred. Zulu II is used for burning explosives and explosively contaminated items, such as propellants, C-4, TNT, RDX, and HMX. Blasting mats are used to cover reactions and to control the spread of fire and debris. Specialized training for cutting metals and similar objects using controlled burning is performed here. According to site personnel, there

is no ordnance disposal at Zulu II; hence, no UXO is expected there. Prior to 1979, the Zulu Range was used to dispose of explosive items. Explosives were destroyed by burning or detonation. Small-arms rounds, smoke grenades, and pyrotechnics were covered, soaked with diesel fuel, and burned in open pits. Larger explosive items were covered with tamped earth and detonated with C-4 or TNT.

AOC 27 - Hotel Range - South Post. Hotel Range covers an area of about 7 acres on the northwestern edge of the impact area in the South Post about 500 yards west of Cranberry Pond. The Hotel Range has been relocated recently, and the former area was reportedly cleared for UXO. Before 1979, this range was used for explosive ordnance disposal of old or defective high-explosive grenades and 3.5-inch rocket projectiles. Explosives were destroyed by burning or detonation. Small-arms rounds, smoke grenades, and pyrotechnics were covered, soaked with diesel fuel, and burned in open pits. Larger explosive items were covered with tamped earth and detonated with C-4 or TNT.

SA 28 - Training Area 14 - South Post. Training Area 14 is a 160-acre tactical training area in the South Post. It is bounded on the south by Slate Rock Pond, on the east by Jackson Road, on the west by Old Turnpike Road, and on the north by the South Post boundary. The site encompasses the medical litter obstacle course and a helipad; a jump tower; a Squad Automatic Weapon/M60 Machine Gun Range at the Hotel Range; and Landfill No. 11. A portion of Training Area 14 was identified as a former EOD range used in the 1940s. The range is currently a tactical training area in constant use by active and reserve units. In the 1940s, hand grenade range "J," about 6 acres in size, was established along the northern side of the range. No other weapons were used on this range, nor is there any record of burning or disposal of hazardous materials. During a review of maps in the archives at Fort Devens, it was discovered that this range was mapped as a demolition area in 1941. In the 1970s, the hand range was moved and the range cleared of UXO and EOD debris and converted to Facility 8, a medical litter obstacle course. Since it was converted, several thousand soldiers have used the course and no hazards have been reported.

SA 29 - Transformer Storage Area (Building 1438). The transformer storage area is in the northeastern part of the main cantonment area, near DEH. The storage facility, known as Building 1438, has been in use since 1980. About 33 square feet is bermed for temporary storage of PCB transformers that have been taken out of service.

SA 30 - Drum Storage Areas - MAAF. The drum storage areas at Moore Army Airfield are located in the northern part of the airfield. Three small areas were reportedly used for temporary storage of hazardous waste between 1975 and 1990. The west temporary drum storage area was an outdoor satellite accumulation point for storage of containerized hazardous waste for 90 days or less. Pallets with space for 10 to 15 55-gallon drums were positioned at the end of the aircraft defueling area. During 1990, Fort Devens constructed a prefabricated 90-day storage area at another location, and the area is no longer in use. This area was used to store materials such as alkaline cleaners, methyl ethyl ketone, contaminated JP-4 jet fuel, and paint thinners. The west temporary storage location was not bermed or sheltered. It was set apart from the airfield with railroad ties. The asphalt storage pad had several cracks, and leaks were apparent on the soil and asphalt surface. This site is located north of the runways near the

top of a hill. The Nashua River lies in the valley below the site. In the east drum storage area there is no visible evidence of previous waste storage activities.

SA 31 - Fire-Fighting Training Area - MAAF. The fire-fighting training area is located on an abandoned portion of the MAAF runway apron in the North Post. It was used between 1975 and 1986 and is located on a 50- by 50-foot asphalt-covered concrete pad that is 8 inches thick and is surrounded by a 12-inch-high by 24-inch-wide earthen containment berm. The center of the pit contained the shell of a U-8 airplane used during exercises. Remnants of fuel samples analyzed by the laboratory were openly burned about once a year. Fuels used during the training included contaminated fuel and paint thinner. The concrete portion of the pad on which the facility rests is an assemblage of concrete slabs, some of which have cracked due to age. Waste oil and JP-4 jet fuel, which were poured onto the pad for the fire-fighting exercises, could have migrated through the cracks and joints of the pad and into the subsurface soil.

AOC 32 - DRMO Yard. The DRMO Yard is in the northeastern portion of the main cantonment area near the sanitary landfill (SA 5). Records of operations are available as far back as 1964. Numerous items are stored before reuse or resale at the DRMO, including scrap metal, vehicles, batteries, tires, and used office equipment. No hazardous sites are received or stored there. The northwest corner of the yard is dedicated to storage of used lead-acid batteries. All battery acid is drained by the generator prior to arrival. Batteries are stacked on pallets, with the top of the battery turned sideways to avoid any accumulation of precipitation. About 40,000 pounds of batteries pass through the DRMO each month. On the west end of the yard, vehicles are cut and disassembled to recover usable parts. This yard is also the accumulation point for used photographic solution. The recovery of scrap precious metals (silver and platinum) from the solution is subcontracted.

SA 33 - DEH Entomology Shop (Building 262). Pesticides were stored in Building 262, which was designed to meet USAEHA and USEPA requirements. The shop is located in the main cantonment area. Completed in 1982, it was the newest pesticide storage area. On October 1, 1982, pesticides from other DEH storage areas (Buildings 245, 254, and 2728) were moved to Building 262, and all pesticide activities were consolidated at this location. Drains in the locker rooms of the building are connected to the sanitary sewer system. These drains are completely blocked off when chemicals are being mixed. Any spills are contained using clay adsorbent.

SA 34 - Former DEH Entomology Shop (Building 245). Pesticides were formerly stored and mixed in Building 245 in the main cantonment area. This building was used for pesticide storage and control during the period from 1978 to 1982. The facility, which was used to store pesticides such as Diazanone, Baygone, Dursban, boric acid, and pyrethrum did not meet USEPA guidelines. Although pesticides were no longer handled within this building, it remained under entomology control. The building was then used to store cleaning solutions.

SA 35 - Former DEH Entomology Shop (Building 254). Building 254 is located in the main cantonment area. It was used for pesticide storage and mixing during the period from 1978 to 1982. The inventory included pesticides such as Malathion, Diuron, VG Trol, and Weeder. The building did not meet USEPA guidelines. Although pesticides were no longer handled

within this building, it remained under entomology control. It was then used to store some types of equipment and dry cleaning solvents.

SA 36 - Former DEH Entomology Shop (Building 2728). Pesticides were formerly stored and mixed in Building 2728 in the main cantonment area. This building was used for pesticide storage during the period from 1968 to 1978. Pesticides and herbicides stored in Building 2728 included Diazonone, Baygone, Dursban, boric acid, pyrethrum, Malathion, Diuron, VG Trol, and Weeder.

SA 37 - Golf Course Entomology Shop (Building 3622). Pesticides were stored and mixed in Building 3622 until 1987. Building 3622 is located on the golf course in the main cantonment area. This building was used for pesticide storage and mixing between 1976 and 1987. Pesticides and fungicides such as Dursban, TGF, Daconil, and Antidrone Thinner Plus F were stored at this site.

SA 38 - Battery Repair Area (Building 3713). One of the Directorate of Logistics Maintenance Division industrial operations conducted in Building 3713 is battery repair, which generates about 106 gallons of waste battery acid each month. Building 3713 is located in the northeast corner of the Main Post along Barnum Road. Waste acid is currently stored in federally approved containers and later taken to the DEH hazardous waste storage area. Before 1978, waste electrolyte was placed in a pit northwest of Building 3713 and neutralized with sodium bicarbonate. It was reported that the pit was covered and paved over in 1981. From 1978 to August 1980, the waste battery acid was neutralized in a large tank and discharged to the sewer system. This discharge was discontinued in 1980 when a chemical analysis indicated that the waste contained cadmium in excess of the limits for EP toxicity.

SA 39 - Transformer Near Former Building 4250. The locations of two buildings (Nos. 4249 and 4250), formerly referred to as the old Sylvania buildings, are within the Oxbow National Wildlife Refuge which was formerly part of the South Post of Fort Devens. According to available information, a spill area was discovered near Building 4250 in September 1984. The oil stain, which was adjacent to a transformer (found empty), had an estimated area of 288 square feet. The entire refuge is within the Nashua River drainage basin. Site-specific information regarding soils is limited; however, because the refuge is classified as a wetland, the moderately to poorly drained soil associations known to exist in this area are the Muck-Peat-Walpole and the Winooski-Limerick-Saco. A spill report documents the cleanup action taken for the transformer and the stained soil. During December 1984, eight 85-gallon drums of PCB-contaminated soil (50 ppm or above) and the transformer were removed and taken to the hazardous waste storage facility. In January 1985, confirmation samples were taken. The analytical results revealed concentrations ranging from 15 to 20 ppm of PCBs.

AOC 40 - Cold Spring Brook Landfill. The Cold Spring Brook Landfill is in the southeastern part of the main cantonment area near the Shoppette on Patton Road. It is considered an abandoned landfill and was discovered in November 1987, when 14 55-gallon drums were uncovered along Cold Spring Brook. The waste extended about 850 feet along the edge of the brook and involved an area of 10 to 20 acres. Wastes included concrete slabs, wire, tanks, rebar, timber, and debris found at depths between 10 and 25 feet. It is possible that the area

was filled to raise the surface elevation near Patton Road. It is not known if the drums were placed in the landfill when it was first excavated or at a later date.

AOC 41 - Unauthorized Dumping Area (Site A). The unauthorized dumping area (Site A) was found in the South Post area by Fort Devens personnel. The 1-acre site is completely overgrown with trees and vegetation, and no records are available detailing when the site was used or what material was placed in it. From the appearance of the rubbish, it appears that the site was used until the 1950s for disposal of nonexplosive military and household debris. The site consists of debris scattered over a hill slope about 10 feet high. It is located between Harvard Road and new Cranberry Pond in the South Post.

SA 42 - Popping Furnace. The popping furnace is located in the southern part of Fort Devens off Trainfire Road, across from O Range. The activity conducted at the site is not documented. Facility personnel report the furnace may have been used until the early 1960s. The site consists of an old "furnace" in which small-caliber ammunition apparently was burned. Waste material (ash and casings) may have been thrown down a hillside east of the Popping Furnace.

SA 43 - Historic Gas Station Sites. Nineteen historic gas station sites are located at Fort Devens under this study area, but the only available documentation for these sites is a map (circa 1941) that shows the locations of 17 former gasoline dispensing stations and one central distribution station in the current main cantonment area. These were located in the central portion of the cantonment area. Collectively, these sites are referred to here as SA 43. The locations were inferred from present landmarks, such as the Nashua River and some of the roads. The legend of the 1941 map indicates that all of the USTs were 5,000 gallons with two different types of connections to the pumps. The central dispensing station appears to have been located near the current landfill and the DRMO. The length of time that they were in operation is not known.

SA 44 - Cannibalization Yard. The cannibalization yard is an unpaved area (about 150 by 75 feet) east of Building 3713 where vehicles were stored before dismantlement for usable parts. The storage time for vehicles varied, depending on the demand for parts. According to site personnel, the topsoil was periodically removed. The most recent removal was in 1988, when the upper 2 feet of soil was removed and disposed of in an off-site disposal facility. The cannibalization yard is also a less than 90-day RCRA hazardous waste accumulation area.

SA 45 - Wash Rack at Lake George Street. The wash rack at Lake George Street is on the the northwestern portion of the Main Post along Lake George Street. It is an open, asphalt-paved area with eight bays, previously used for washing privately owned vehicles. The bays contain drains that empty into an adjacent sump or the sewer. A new sewer connection has been installed near the sump. Facility personnel indicate that liquids entering the wash rack drain will flow through a catch basin, an oil/water separator, and into the sanitary sewer. Access to the site is open, and activities are not controlled.

SA 46 - Training Area 6d - South Post. Training Area 6d is located on the southwestern boundary of the impact area in the South Post, near the intersection of Shoefelt and Firebreak Roads. During a previous site visit, the area contained two abandoned armored vehicles and an

abundance of spent canisters that appeared to have contained tear gas. Personnel report that the site may have been used for 3.5-inch rocket launchers, LAW range, and later an M79 Range.

SA 47 - Building 3816 Leaking UST Site - MAAF. The leaking UST site is located at Building 3816, the flight control tower, on the North Post. The tank was used to store fuel for an electric generator between 1970 and 1989. Following the tank's excavation, soils were observed to be visibly contaminated and about 15 cubic yards of material was removed by Fort Devens personnel. It was determined that any further excavation or removal would endanger the foundation of the flight tower, so all of the contaminated soil could not be removed.

SA 48 - Building 202 Leaking UST Site. The Building 202 leaking UST site is near the intersection of Carey and St. Mihiel Streets. The leaking UST was a 1,000-gallon tank used between 1942 and 1989 to store waste oil from the vehicle servicing facilities. When the tank was removed, minor discolorations of the soil were noted, and elevated readings on a photoionizing detector were recorded. After the tank was removed, a separation was found in one of the seams. The tank contained 300 gallons of waste oil and about 300 gallons (by volume) of sediment. About 100 cubic yards of contaminated soil was removed and screened for total organic vapors. Soil was removed to a depth that contained less than 10 ppm total organic volatiles.

SA 49 - Building 3602 Leaking UST Site. The Building 3602 leaking UST site is north of the golf course along Sheridan Road. Two 5,000-gallon tanks were removed from the site. The tanks were originally used to store gasoline and diesel fuel for a motor pool that was located in nearby Building 3601. They were also used for in-ground bulk storage of No. 2 fuel oil. They were used by the motor pool from 1942 to 1975. When the two tanks were excavated, they were structurally sound, but there was a strong gasoline odor. The contamination was probably the result of over-filling or loose piping. About 250 cubic yards of contaminated soil was removed.

SA 50 - World War II Aircraft Fuel Points - MAAF. The World War II aircraft fuel system is on the main cantonment area near Building 3618, the flight control tower for MAAF. It is estimated that there are four locations where aviation fueling activities occurred between 1941 and 1945. This site is adjacent to the east-west runway and consists of piping, two groups of aircraft fuel tanks, fuel points, and truck fill stands. One group of fuel tanks (three 25,000-gallon tanks) is east of Building T-3803. Plans showing the details of these three tanks, a water separator pit, piping to two truck fill stands, and the truck fill stands date back to August 1942. A second group of fuel tanks (two 25,000-gallon tanks) is east of Building 3818. Plans dating back to February 1941 show the details of these tanks and the associated piping for four aircraft fuel points.

SA 51 - Building 3412, O'Neill Building Spill Site. The O'Neill building spill site is located just west of Lovell Street in the main cantonment area. This site is the location of the former Lovell Army Hospital. It was a training site for radio operators and used high frequency, diesel-powered generators to provide electricity. The generators were filled daily. About 15 gallons of fuel was spilled onto the ground when a drain valve was left open. Soil removal activities found significant contamination, indicating this was not an isolated incident.

AOC 52 - TDA Maintenance Yard. The TDA Maintenance Yard is adjacent to SA 38 and AOC 11 in the main cantonment area, in the northeast corner of Fort Devens along Barnum Road. It was an active storage area for vehicles with oil leaks that are awaiting repair. Reportedly, there are many small patches of soil visibly contaminated with motor oil or hydraulic fluid. The average size of each patch of soil is 2 to 3 feet in diameter.

SA 53 - POL Spill Areas - South Post. The South Post contains primarily ranges and training areas. The POL spill areas are located where fueling and POL storage occur as part of troop training exercises. According to site personnel, many of these areas are limited in size and primarily store fuel and oil for vehicles.

SA 55 - Shirley Housing Area Trailer Park Fuel Tanks. The Shirley Housing Area trailer park is located in the northwest portion of the Main Post along Hoff Street and Lovell Street. The trailer park includes 30 privately owned trailers on government land. Each trailer has its own 225-gallon heating fuel tank located underground. To date, 24 tanks have been pumped out. A 5-year plan for removal of the 30 tanks was proposed as trailer occupants are reassigned.

SA 56 - Building 2417 Leaking UST Site. Building 2417 is located off Givry Street in the southwest portion of the Main Post. A 1,000-gallon underground fuel oil tank was removed on 24 October 1990 from an area of the narrow strip of grass between the building and an unnamed asphalt road on the building's southeast side. No associated piping from the tank was noted during the tank's removal. When the tank was removed, a strong petroleum odor was noted, and visibly stained soils were present. The tank was found to be filled with rainwater and a residual accumulation of No. 2 fuel oil. Groundwater was 4 feet below grade; however, no free product was observed, and only several small faint petroleum sheens were noted. Contamination was excavated to the building and to the road. Full remediation of the site was prevented by the building and the water main.

AOC 57 - Building 3713 Fuel Oil Spill Site. Building 3713 housed several industrial activities, including a repair shop for large Army vehicles such as tanks. In 1978, several thousand gallons of No. 4 fuel oil were spilled. This was the result of accidentally overfilling a 30,000-gallon UST. The fuel oil entered storm drains, which discharge to Cold Spring Brook. Immediately downstream of the point where fuel oil entered the brook, an earthen dam was constructed to prevent the oil from traveling any further. According to available information, there were some cleanup activities. It is believed that some earth-type absorbents were used to soak up the oil. There is no further available information regarding the cleanup of this spill.

SA 58 - Buildings 2648 and 2650 Leaking UST Sites. Buildings 2648 and 2650 were apparently last used for storage purposes. In conjunction with the demolition of these buildings, two heating oil USTs were removed. Buildings 2648 and 2650 remediation efforts extended only to the fractured shale and bedrock.

SA 59 - Bridge 526. Bridge 526 is a structure carrying a two-lane roadway across Tail Race Brook, a small tributary of the Nashua River in the northwest corner of the Main Post at Fort Devens. In the late summer of 1990, a contractor began sandblasting and repainting Bridge 526. The contractor used a spend sandblast grit containment system during the surface preparation and drummed the contaminated waste. On 1 October 1990, rains and a possible release from

Lake Shirley Dam caused the water under the bridge to rise to the point that it washed away the scaffolding and the grit containment system, thus depositing contaminated grit into the stream. Contaminated grit may have been deposited farther downstream as channel sediments (as opposed to stream bank sediments). These sediments may be remobilized and transported farther downstream during seasonal and storm event high water flows.

AREE 60 - Training Areas and Ranges. The training areas and ranges at Fort Devens have been identified as AREE 60. Thirteen training areas were identified at Fort Devens. Training area 1 is located on the Main Post near Massachusetts Route 2. Training areas 2 and 3 are located on the North Post. The area of training area 4 has been excised to form the Oxbow National Wildlife Refuge. The remaining training areas are located on South Post. They are going to continue to be used by the U.S. Army Reserve, and are not going to be studied at this time.

AREE 61 - Maintenance and Hazardous Waste Accumulation Areas. AREE 61 addresses all known past and present maintenance and hazardous waste accumulations areas. These include satellite and 90-day hazardous waste accumulation areas; all known past and present maintenance areas; known locations with oil/water separators; and known solid waste disposal areas. AREE 61 focused on sites not already listed as IRP SAs or portions of IRP SAs not investigated during the IRP study. There are a total of 59 maintenance and hazardous waste accumulation areas.

AREE 62 - Existing USTs. USTs have been identified as AREE 62 at Fort Devens. Fort Devens has an ongoing UST management program. The majority of the USTs at Fort Devens contain heating oil, as this is the primary heating fuel used. The remaining tanks contain or contained POL-type materials, such as waste oil, gasoline, and JP-4 fuel. When possible, USTs no longer in use are removed from service, pumped out, and excavated. The excavation is then inspected for evidence of leaks or spills. Sampling, site clearance, and site characterization are coordinated with MADEP.

AREE 63 - Previously Removed USTs. Several leaking USTs have already been identified as separate AREEs (see AREEs 43, 47, 48, 49, 50, 55, 56, and 58). Previously removed tank sites that are not listed as leaking UST sites were removed and cleaned to state criteria at the time of removal. These are identified as AREE 63.

AREE 64 - Aboveground Storage Tanks. Fort Devens has a limited number of ASTs, which have been identified as AREE 64 at Fort Devens. Like the USTs, the ASTs are managed under the ongoing tank management program. ASTs containing propane and heating fuel oil may also be located at Fort Devens. No known evidence of environmental contamination from ASTs exists.

AREE 65 - Asbestos. Asbestos has been identified as AREE 65 at Fort Devens. Because of the era during which many of the buildings at Fort Devens were built, asbestos may have been used in construction. Only minor maintenance activities in areas containing asbestos are conducted by Fort Devens personnel. Contractors normally perform large-scale asbestos removal. Reports on asbestos removal and disposal are maintained at Fort Devens. An asbestos disposal cell was

maintained at the Shepley's Hill Landfill for disposal of ACM generated on-site. ACM is now disposed of off-site.

Phase I BRAC EE, AREE 66 - PCB Transformers. The AREE 66 portion of the Phase I BRAC EE consisted of a detailed review of all transformer maintenance and inspection records. During this review, locations where PCB-containing transformers were found to be leaking were identified. Based upon the level of documentation, specific sites were identified for further confirmation sampling. After confirmation sampling was performed, a recommendation for NFA or removal action was made. The AREE 66 study provides the basis for the installation-wide contaminant source identification and assessment for all potential releases from leaking PCB transformers.

AREE 67 - Radon. Radon has been identified as AREE 67 at Fort Devens. All Category I Housing at Fort Devens has been tested. The tests were based on year-long radon measurements to determine yearly averages. Some elevated radon level readings have been noted (to 10 pCi/L), and measures are being taken to address these areas. Radon level tests have also been conducted in Category II and III buildings.

AREE 68 - Lead Paint. Lead paint has been identified as AREE 68 at Fort Devens. Because of the age and construction of many of the buildings at Fort Devens, lead-based paints are a concern. Many buildings have exposed painted surfaces, and some painted surfaces have been covered by vinyl or aluminum siding. The lead-based paint report was completed April 1995.

Phase I BRAC EE, AREE 69 - Past Spill Sites. The AREE 69 portion of the Phase I BRAC EE consisted of a detailed review of the installation spill reporting and response files. All records were reviewed and assessed to determine if remediation of the spills was adequate and documented. Site inspections were also performed. Based upon this review, recommendations for NFA or further sampling to characterize the potential release (Part 2 of Phase I) were made. The AREE 69 portion of the BRAC EE serves as the basis for the installation-wide contaminant source identification and assessment for all potential releases from reported spills.

Phase II BRAC EE, AREE 70 - Storm Sewer System. The AREE 70 study (Phase II of BRAC EE) consisted of a detailed review of construction diagrams for 55 storm sewer systems, route verification, and sampling at outfalls and intermediate locations. Approximately 80 storm sewer systems exist on Fort Devens. The 55 systems studied under AREE 70 were selected according to their complexity, area drained, and potential for releases into the system. The purpose of the AREE 70 study was to use the storm sewer systems, which drain a large portion of the installation, to provide a base-wide assessment of unknown contaminant releases into the storm drain system. The result of the sampling were analyzed to determine "abnormalities" that would indicate the release of contaminants into a storm drain system. The AREE 70 study is a highly effective means of installation-wide contaminant source identification and assessment, as the storm drains studied cover a large portion of the installation land area, and releases would be identified through residual contamination in the storm sewer system.

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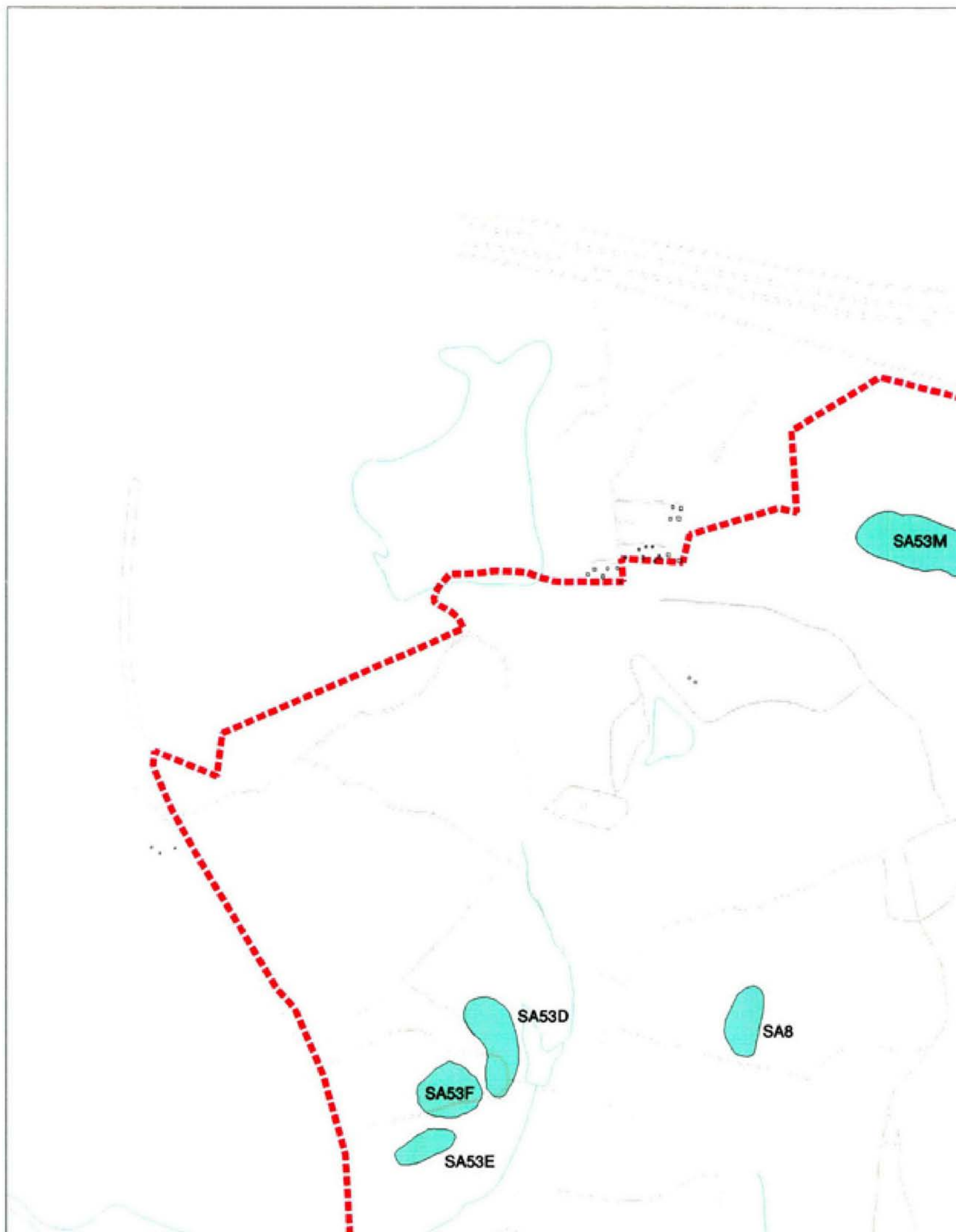
► **TABLE F-1, BCP DISTRIBUTION LIST** ◀

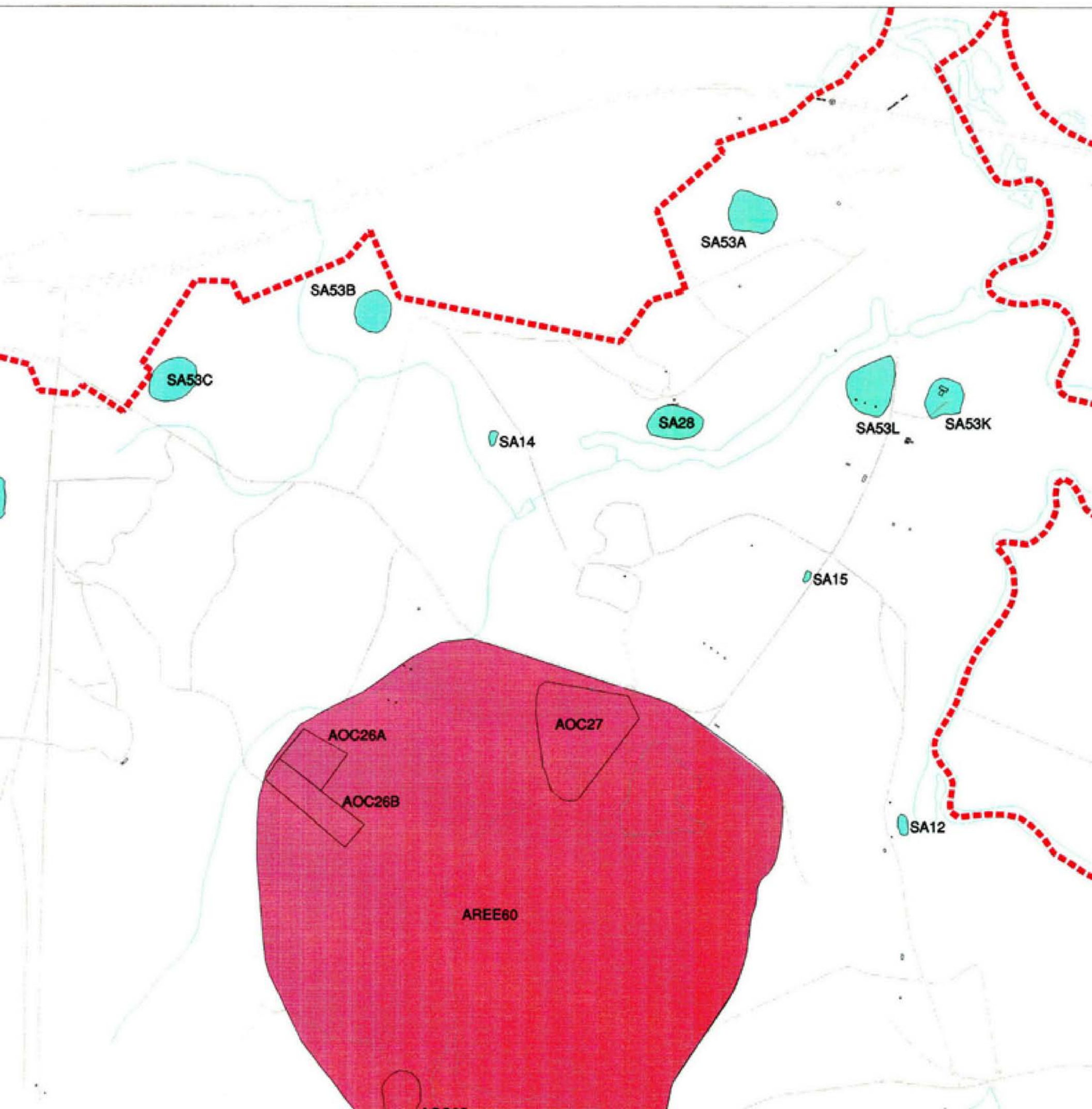
TABLE F-1. BCP DISTRIBUTION LIST

Continued

Name	Title	Address
Mr. Steven Mierzykowski	U.S. Fish and Wildlife Service Representative	U.S. Fish and Wildlife Service 1033 South Main Street Old Town, ME 04468
Ms. Trudy Coxe	Secretary of Executive Office of Environmental Affairs Representative	Secretary of Executive Office of Environmental Affairs Commonwealth of Massachusetts 100 Cambridge Street Boston, MA 02202
Ms. Laila Michaud	Assistant Director	Massachusetts Regional Planning Commissions R1427 Water Street Fitchburg, MA 01420
Ms. Carolyn Sellars	Nashua River Watershed Association Representative	Nashua River Watershed Association 609 Massachusetts Avenue Lunenburg, MA 01462
Mr. Lee Farnsworth	Conservation Commission Representative	Conservation Commission 35 Pine Hill Road Lancaster, MA 01523
Mr. John Petrin	Town Administrator	Town Administrator Town Hall, 13 Ayer Road Harvard, MA 01451
Mr. Chris Gaffney	Town Administrator	Town Administrator Town Hall, 3 Lancaster Road Shirley, MA 01464

REVISION	DATE
0	02/08/95
1	08/23/95



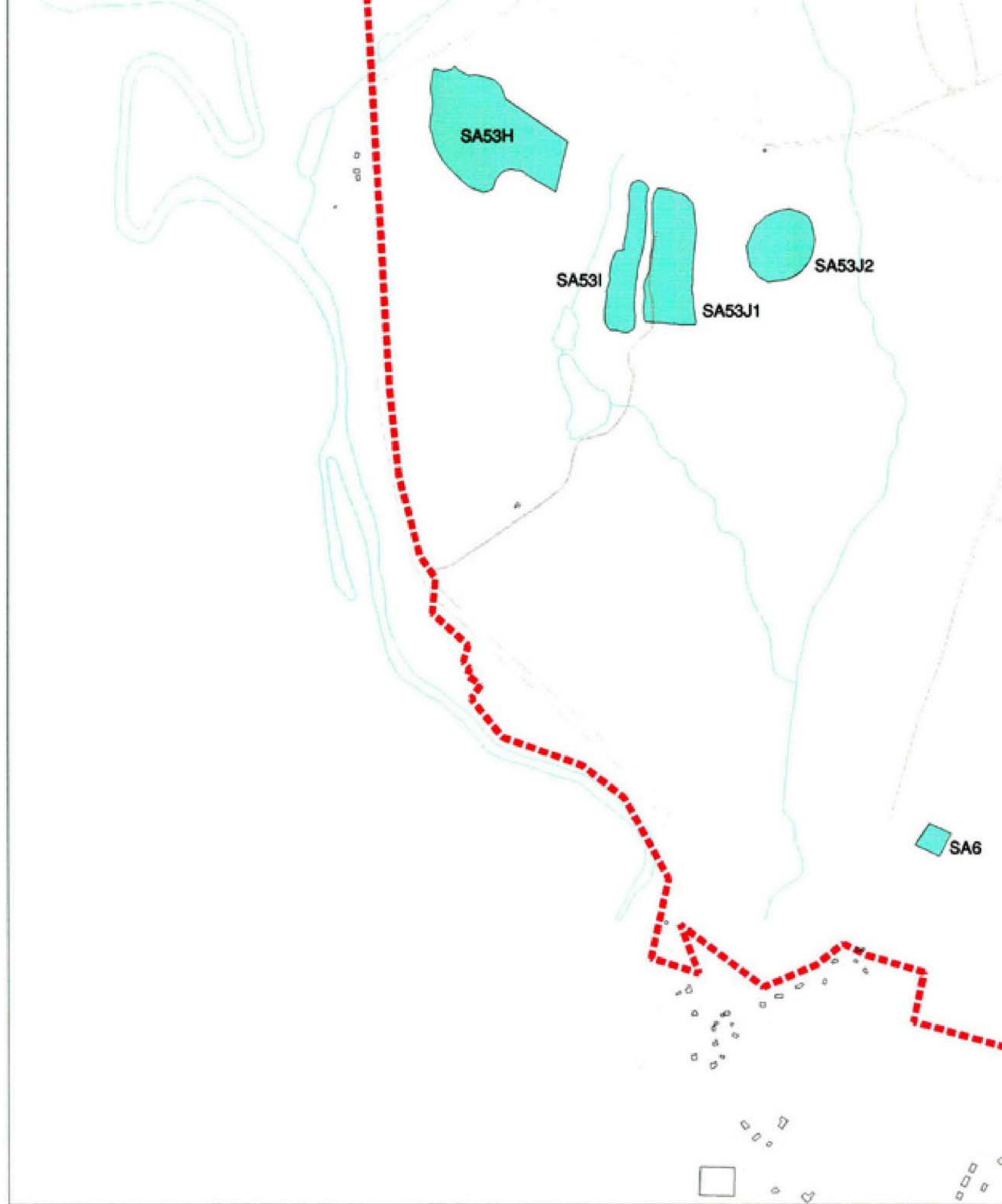


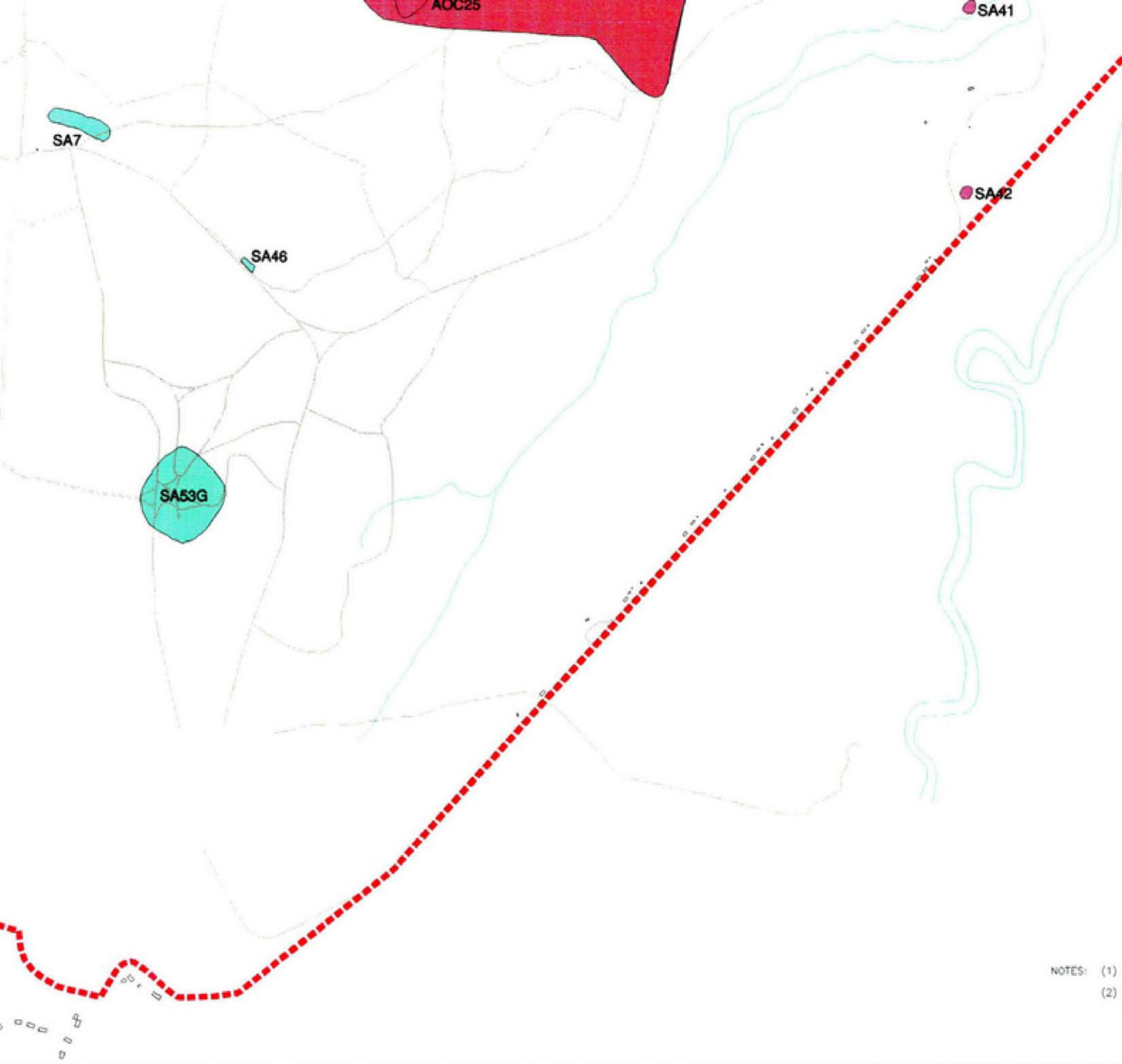


----- Installation Boundary

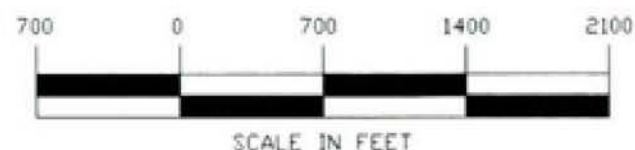
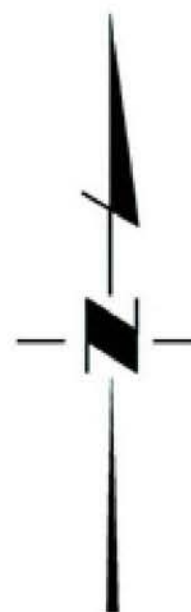
----- Site, Area, Plume Boundary

- | | |
|---|---|
|  | CATEGORY 1 PROPERTY
Property where no hazardous substance or POL storage/release has occurred |
|  | CATEGORY 2 PROPERTY
Hazardous substance or POL currently or historically stored; no release |
|  | CATEGORY 3 PROPERTY
Hazardous Substance or POL Release; below action level |
|  | CATEGORY 4 PROPERTY
Hazardous substance or POL release; all remedial actions have been taken |
|  | CATEGORY 5 PROPERTY
Hazardous substance or POL release; not all remedial actions have been taken |
|  | CATEGORY 6 PROPERTY
Hazardous substance or POL release; areas adequately evaluated; no remedial actions have been taken |
|  | CATEGORY 7 PROPERTY
Areas unevaluated or requiring additional evaluation |





NOTES: (1)
(2)



Site, Area, and Plume boundaries and UST/AST locations are approximate.

This map categorizes property based on storage and/or release of CERCLA hazardous substances and/or POL. It does not identify the presence of environmental conditions such as asbestos and lead-based paint containing structures, radionuclides, radon, or PCB containing equipment which may also affect the disposal and reuse of property. The presence of these conditions categorize property as "CERFA qualified" and are shown in the Environmental Condition of Property Map, Figure 3-2 of the BCP.

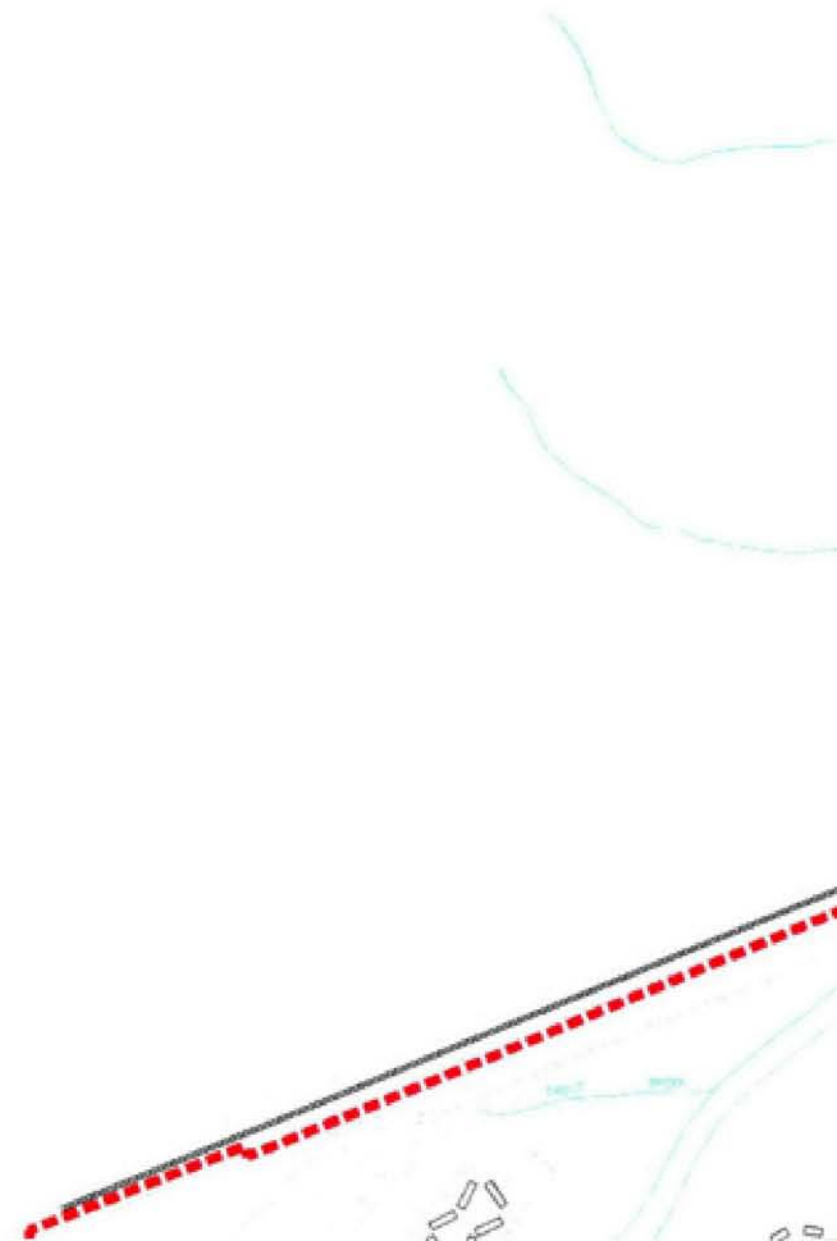


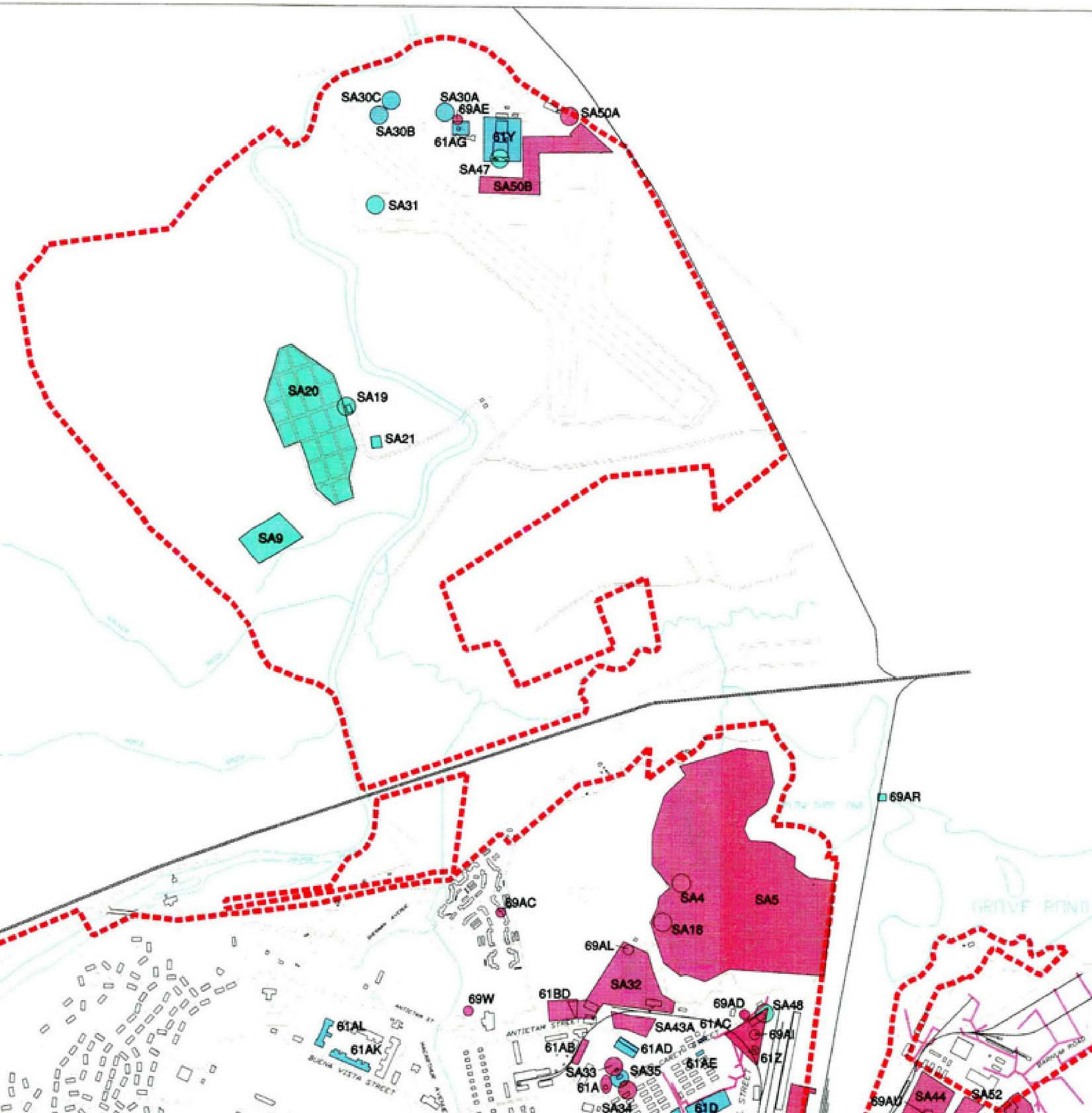
1420 KING STREET SUITE 600, ALEXANDRIA, VIRGINIA 22314

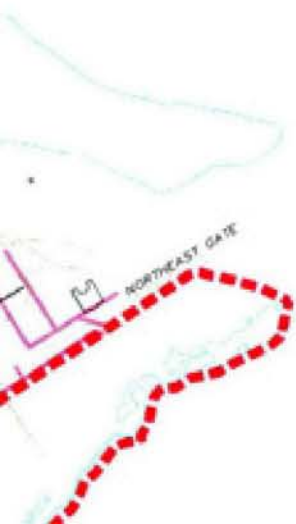
FIGURE 3-3
SUITABLE PROPERTY FOR TRANSFER MAP
FORT DEVENS - SOUTH POST
FORT DEVENS, MASSACHUSETTS

DRAWN BY: MTM	DESIGNED BY: N/A	SCALE: 1" = 700'
CHECKED BY: GC	APPROVED BY: KR	DATE: 08/23/95
ET PROJECT NUMBER 949002-20	DRAWING NUMBER SHEET 1 OF 1	REV. NO. 1

REVISION	DATE
0	02/08/95
1	08/23/95



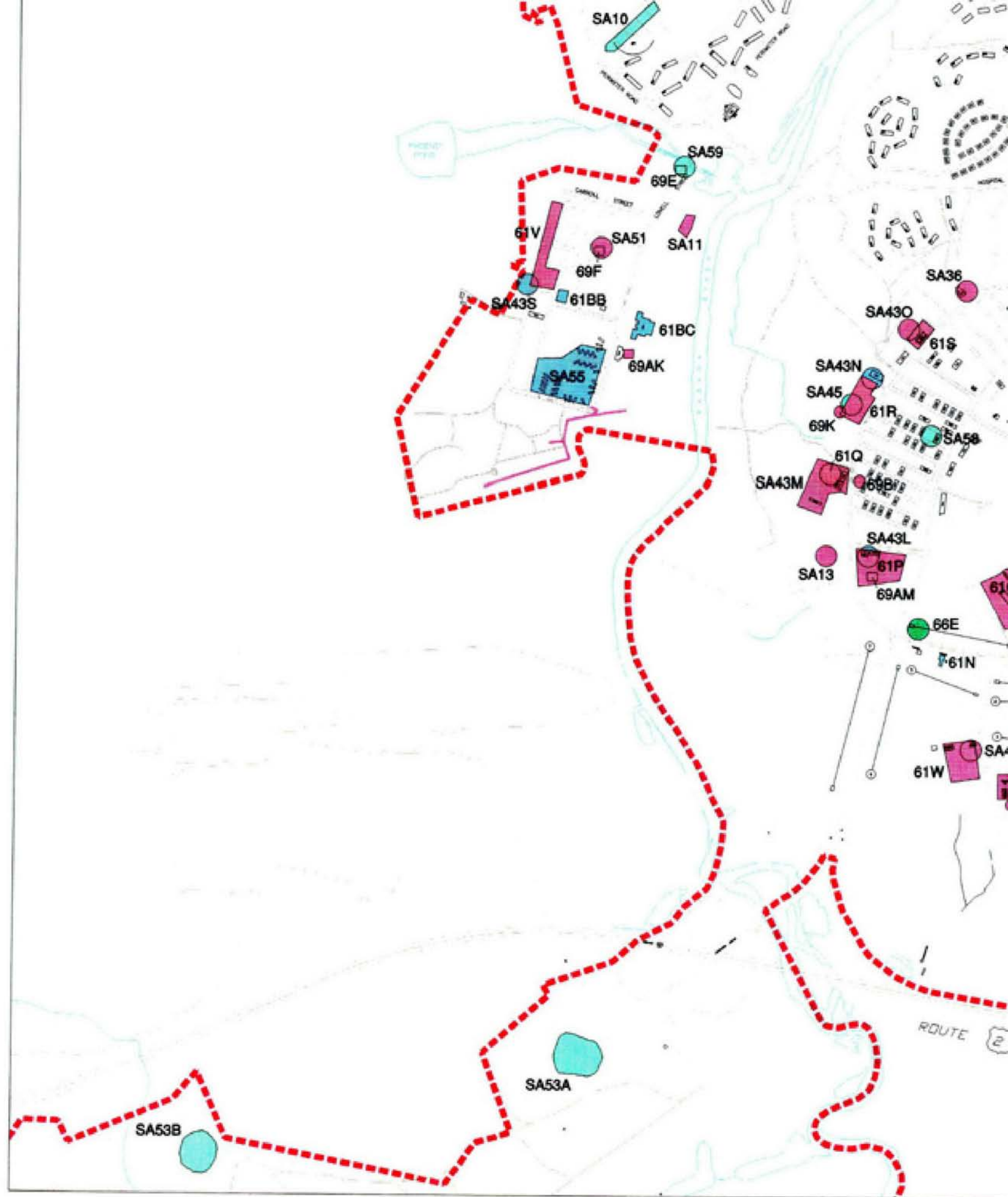




----- Installation Boundary

----- Site, Area, Plume Boundary

- | | |
|---|---|
|  | CATEGORY 1 PROPERTY
Property where no hazardous substance or POL storage/release has occurred |
|  | CATEGORY 2 PROPERTY
Hazardous substance or POL currently or historically stored; no release |
|  | CATEGORY 3 PROPERTY
Hazardous Substance or POL Release; below action level |
|  | CATEGORY 4 PROPERTY
Hazardous substance or POL release; all remedial actions have been taken |
|  | CATEGORY 5 PROPERTY
Hazardous substance or POL release; not all remedial actions have been taken |
|  | CATEGORY 6 PROPERTY
Hazardous substance or POL release; areas adequately evaluated; no remedial actions have been taken |
|  | CATEGORY 7 PROPERTY
Areas unevaluated or requiring additional evaluation |



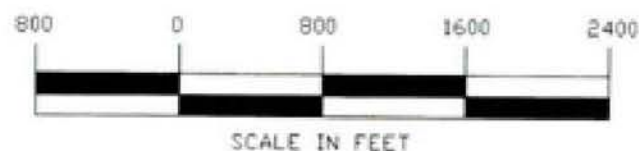
boundaries and UST/AST locations are approximate.

property based on storage and/or release of CERCLA
and/or POL. It does not identify the presence of environmental
sites and lead-based paint containing structures, radionuclides,
g equipment which may also affect the disposal and reuse of
of these conditions categorize property as "CERFA qualified" and
nmental Condition of Property Map, Figure 3-2 of the BCP.

size of a number of Past Spill Sites (AREE 69) documented
available and therefore are not included on this figure. These
e following table. Refer to the site database maintained in the
ion regarding these sites.

PAST SPILL SITES

SITE	CATEGORY
69D	2
69G	2
69H	3
69I	3
69J	3
69L	3
69M	2
69N	3
69P	3
69Q	3
69T	3
69U	3
69V	3
69X	6
69Y	3
69Z	3
69AA	3
69AB	3
69AG	3
69AH	3
69AJ	3
69AQ	3
69AQ	3



E A R T H  T E C H

1420 KING STREET SUITE 600, ALEXANDRIA, VIRGINIA 22314

FIGURE 3-3
SUITABLE PROPERTY FOR TRANSFER MAP
FORT DEVENS - NORTH & MAIN POSTS
FORT DEVENS, MASSACHUSETTS

DRAWN BY: MTM	DESIGNED BY: N/A	SCALE: 1" = 800'
CHECKED BY: GC	APPROVED BY: KR	DATE: 08/23/95
ET PROJECT NUMBER 949002-20	DRAWING NUMBER SHEET 1 OF 1	REV. NO. 1